

The Baltic Sea is a unique inland sea: It is a dynamic economic area and is at the same time characterised by special geographical and environmental conditions. The different sea uses such as shipping, fishery, wind farms or mineral extraction are increasingly competing for the limited sea space. On top of this the fragile Baltic ecosystem and the threats of climate change call for a balanced multi-sectoral approach. A wise, proactive maritime spatial planning (MSP) could not only avoid conflicts, but also create synergies and thus lay

the basis for a sustainable maritime development. So far, however, only Germany and Poland have practical experience with spatial planning on the sea. No other BSR country has adopted a legal basis for such planning, yet. This is the challenge but also the chance for the BaltSeaPlan project, which aims to create the basis for developing, introducing and implementing maritime spatial planning throughout the Baltic Sea in a coherent manner.

The German Federal Maritime and Hydrographic Agency – Lead Partner

The Federal Maritime and Hydrographic Agency (BSH) is Germany's maritime agency with a wide range of activities in the fields of

- surveys and mapping of the seafloor;
- monitoring, investigation and protection of the marine environment;
- safety of navigation;
- use and management of the oceans, including e.g. the approval for offshore activities (wind turbines, pipelines, submarine cables) in the German Exclusive Economic Zone (EEZ).

BSH provides first hand information about the oceans. In this way it supports holistic decision-making in maritime policy and ensures sustainable use of the oceans. This is especially true as BSH is active in Maritime Spatial Planning for the EEZ in the North Sea and the Baltic Sea, including large-scale analysis of geographical areas as a basis for Strategic Environmental Assessments.

BaltSeaPlan has started in early 2009 and will continue to run until late 2011.

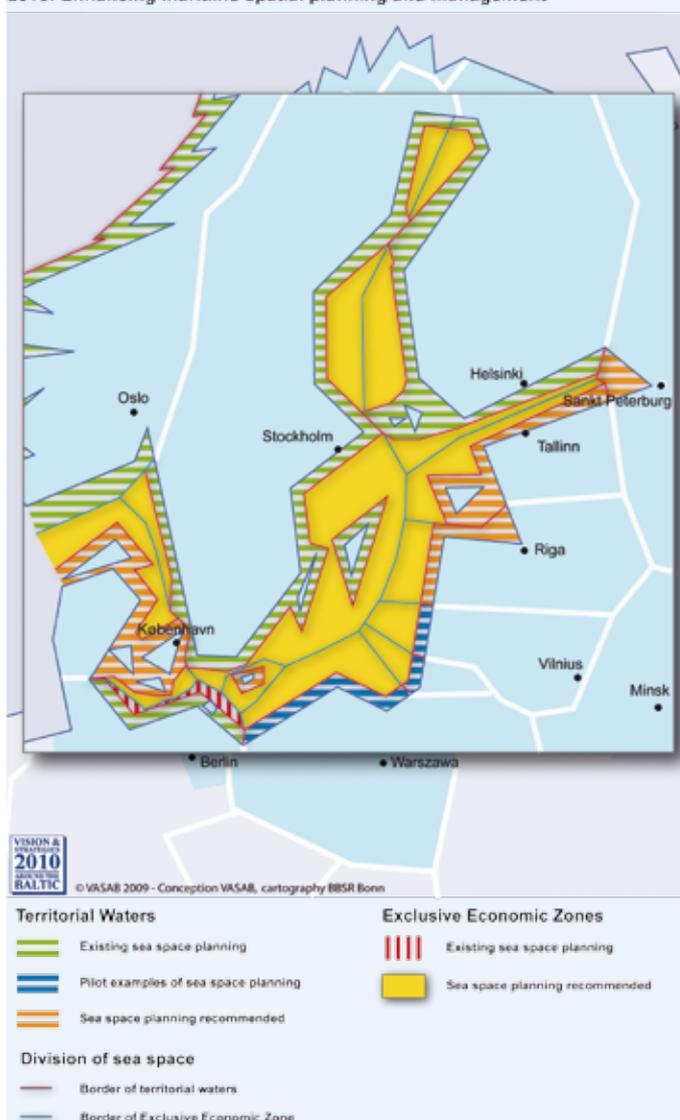
With this publication we want to introduce all those, who are interested in the development of maritime spatial planning, into the details of our projects' activities and show some of the outputs of the first year of project work.

We hope that you as a reader will get a better insight into our work through the following 16 pages. Obviously BaltSeaPlan is continuously evolving – thus this brochure can only be a snapshot of our current work. Our website provides a more detailed and updated picture of the project work. Please feel free to visit www.baltseaplan.eu and to send us your comments on any of our published work (info@sustainable-projects.eu).

Enjoy reading...

Dr. Nico Nolte, German Federal Maritime and Hydrographic Agency, Lead Partner

2010: Enhancing maritime spatial planning and management



The oceans, unique ecosystems, are subject to a multitude of human uses, which is giving rise to potential conflict of interests. For success an integrated, future-oriented spatial planning concept based on sound marine geospatial data is indispensable.

This background explains our motivation to be a lead partner for the INTERREG Project BaltSeaPlan, which promotes the introduction of Maritime Spatial Planning in the Baltic Sea in a coherent manner. The project gives us a very good opportunity to foster this tool of sustainable development in the Baltic Sea Region, exchange experience, strengthen our international ties and establish functioning networks - as MSP is by its very nature not only cross-sectoral and holistic but needs to take into account transboundary issues.

At the same time Maritime Spatial Planning is top on the political agenda. The development of broad scale Maritime Spatial Planning principles is part of the Baltic Sea Action Plan of HELCOM. The VASAB long-term perspective includes recommendations on MSP. And the European Commission issued in November 2008 a roadmap for Maritime Spatial Planning in order to achieve common principles in the EU and to motivate the Member States to use the chances offered by this tool.

BALTSEAPLAN ACTIVITIES/PILOT MSP PROJECTS

BALTSEAPLAN ACTIVITIES – A SHORT OVERVIEW

The BaltSeaPlan project covers the whole range of spatial planning steps

Improving the joint information base

Stocktaking

- Compilation of current uses, conflicts and natural values of the Baltic Sea.
- Data gaps will be filled to obtain a coherent basis for spatial planning.
- Data exchange according to the EU INSPIRE directive in order to develop a joint BSR wide database.
- Dialogue forum between spatial planners and scientists.
- Solutions for the integration of ecological data with socio-economic data sets.

More details on this can be found in chapter:
The BaltSeaPlan Geo-database and Modelling

Introducing Spatial Planning into National Maritime Strategies

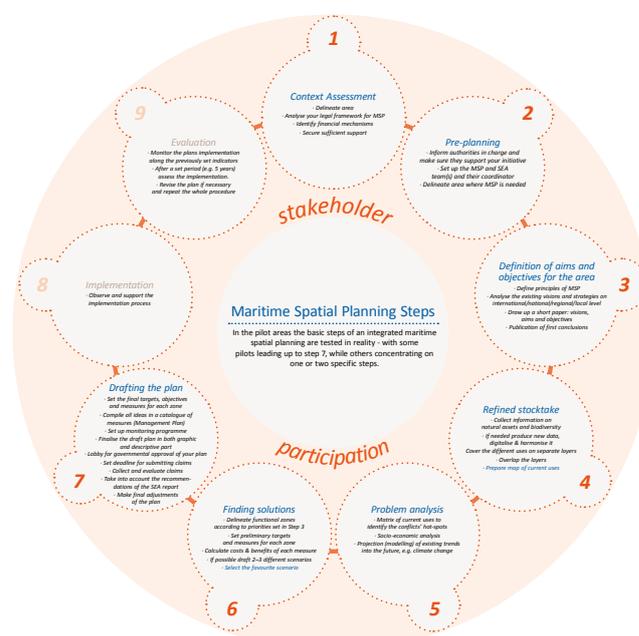
- assess national frameworks, methodologies and sectoral strategies influencing the sea space use (e.g. energy, fishery, transport, tourism, as well as nature conservation)
- prepare draft national visions for using the Baltic Sea space – recommendations on spatial issues within National Maritime Strategies
- exploit the visions to foster a national cross-sectoral debate and discuss goals and targets for using the space and filling in gaps in national sectoral policies and strategies

More details to be found in chapter: *National Strategies*

Development of a Common Spatial Vision for the Baltic Sea

- develop jointly a BSR wide vision based on the national visions and taking into account transnational interdependencies and cumulative impacts
- initiate a BSR wide campaign as to discuss the BSR wide vision developed by the BaltSeaPlan partners

More details to be found in chapter:
A Common Vision of Maritime Spatial Development for the Baltic Sea



Maritime Spatial Planning Steps

All activities of the BaltSeaPlan project are based on the basic steps of an integrated maritime spatial planning shown in figure above.

The cycle shown is mainly based on the concept developed for an integrated MSP process within the PlanCoast project, but takes also elements from similar cycles developed in other processes.

Lobbying and capacity building for MSP

- Stakeholder involvement & participative planning methods
- Workshops and conferences for decision-makers
- Discussion of the series of BaltSeaPlan guidelines & policy recommendations

More details to be found in chapter:
Stakeholders Involvement in MSP

Demonstrating Maritime Spatial Planning in Practice

Within BaltSeaPlan draft Maritime Spatial Plans are being developed for the following eight pilot areas:

Pomeranian Bight (DE/DK/SE/PL)

Middle Bank (SE/PL)

Western Gulf of Gdańsk (PL)

Danish Straits/T-Route (DK)

Pärnu Bay (EE)

Hiiumaa and Saaremaa Islands (EE)

Lithuanian Sea (LT)

Latvian Sea (LV)

More details to be found in chapter:
[Pilot Maritime Spatial Planning Projects](#)



PILOT N°1: POMERANIAN BIGHT

The first transboundary proposal for a maritime spatial plan on the Baltic Sea will cover the area of Pomeranian Bight/Arkona Basin between Poland, Germany, Denmark and Sweden, west of the island of Bornholm. The international working group will propose solutions for crossborder issues such as shipping routes, offshore windfarms, nature protection and fishery. The bottom-up initiative shall show how such problems can be addressed and solved.

Approach/Activities

The approach of the Pomeranian Bight pilot project is a reflection of the BaltSeaPlan 9-Step MSP cycle. Implementation (Step 8) is envisaged in at least some of the participating countries. Until now the following steps have been carried out:

- Defining legal framework and responsibilities
- Compilation of general MSP principles (from the case of Western Gulf of Gdańsk)
- Development of general principles for pilot project as preamble for further work:
 - a) criteria to be met, use by use, considering existing rules and b) recommendations following sectoral analysis (considering strategies, criteria, parameters)
- Overview of types/formats of designations in German Maritime Spatial Plans
- Start of data collection and compilation in the central database
- Identification of main stakeholders for the area and their interrogation via a questionnaire.

(see also chapter [Stakeholders Involvement in MSP](#))

- Area: 14.100 km²
- Both EEZ and 12sm Zone
- 4 countries: DE, PL, DK and SE
- Main issues: shipping, fishery, wind energy, nature conservation

Main issues/conflicts

The area is subject to a wide range of topics, problems and conflicts which can be addressed and potentially solved by means of Maritime Spatial Planning:

- heavy maritime traffic – transit as well as to port destinations in the area and ferry links, i.e. to and from Stralsund, Sassnitz/Mukran, Swinoujscie, Ystad and Rönne;
- steadily increasing demand and claims for uses such as offshore wind energy, sand and gravel extraction, mining, laying of pipelines and submarine cables (data and energy)
- set in a fragile natural environment with large Special Areas of Conservation and Protection already designated under the EU Habitats and Birds Directives
- a strong tourism sector in all coastal areas and
- attempts to push industrial development (i.e. port development, industry related to energy production and fuel transports)

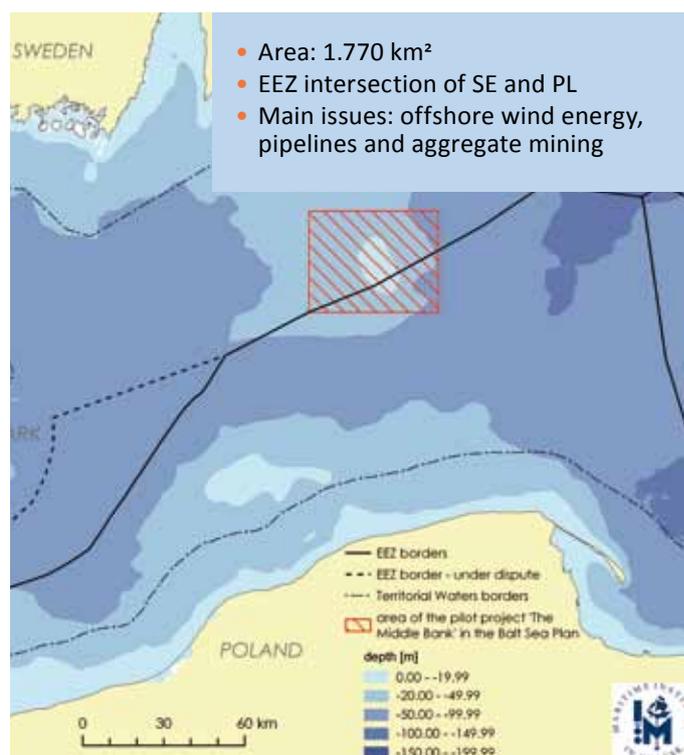


PILOT N°2: MIDDLE BANK

The Southern Middle Bank is a dynamically growing area for offshore activities, in particular offshore wind energy, pipelines and aggregate mining. At the same time it is a marine protected area and lies on the border between the two exclusive economical zones: Poland and Sweden. A Maritime Spatial Plan (MSP) is urgently needed in order to clarify limitations on potential uses and avoid transboundary conflicts: A draft plan will be prepared by the Maritime Institute Gdańsk, who already has experience with the first Polish maritime spatial plan in the Western Gulf of Gdańsk. Swedish cooperation will comprise of data provision and carrying out the stakeholder participation. Based on the experience from the Coastman project, KTH will carry out stakeholder workshops focusing on conflicts in the Middle Bank area.

Main issues/conflicts

The main issues/conflict which will be addressed by the pilot plan are: nature protection, sand and gravel extraction, mining, offshore wind energy development, fishery, shipping, pipelines and submarine cables.



PILOT N°3: WESTERN GULF OF GDAŃSK



In the framework of BaltSeaPlan, the Maritime Institute in Gdańsk and the Maritime Office in Gdynia shall produce a Strategic Environmental Assessment (SEA) of the maritime spatial plan for the Western part of the Gulf of Gdańsk, which was developed within the Interreg III B CADSES project PlanCoast. The forecast shall fulfil the requirements of Directive 2001/42/EC(Annex I) and the requirements of Polish legislation. The SEA will be developed based on the findings of the »Report on environment for the maritime spatial plan of the German EEZ in the Baltic Sea« and the SEA for the draft of the Polish National Spatial Development Concept for 2008–2033.

It will be the first SEA procedure of a maritime spatial plan in Poland, and the second in Europe (after Germany), therefore the Gdańsk Bay SEA makers will draw on the German experience. However, there are still many knowledge and methodology gaps, which BaltSeaPlan project is bound to figure out.

Main issues/conflicts

Possible uses of the Gulf of Gdańsk sea area as described in the draft MSP for the West Part of the Gulf of Gdańsk include: navigation, sand extraction, pipelines and cables, fishing, wrecks, dumping, military areas, tourism, Natura 2000, habitats, cultural heritage. The basic conflicts in that sea area result from economic & touristic pressure and the need to protect the natural values of the Gulf.

- Area: 410 km²
- PL
- Strategic Environmental Assessment (SEA) procedure for the Maritime Spatial Plan (drafted 2008)
- Main issues: harbour development, tourism, nature protection

PILOT N°4: DANISH STRAITS

On the call of the International Maritime Organisation (IMO) the Danish government is currently considering modifications of the major Western Baltic shipping route, the so-called T-Route. The deepening is advocated to raise shipping safety for big tankers and container ships. NERI would like to examine the impact of these different scenarios on the marine ecosystem and NATURA 2000 network connectivity.

Main issues/conflicts

The Danish Straits area of the Western Baltic lies in the transition zone between high and low salinity waters. It is therefore characterised by a high variety of benthic ecosystems (e.g. boulder reefs), some of which are protected with a marine NATURA 2000 status.

At the same time it is the area of the most intensive usage of the whole Baltic Sea, and one of highest in the world. Ship traffic with high risk of collision, high eutrophication and over-exploited fish stocks are only examples of problems encountered here.

Effects of shipping noise on harbour porpoise

The Western Baltic Sea has one of the highest intensity of ship traffic in the world. At the same time, it is a habitat for the only Baltic whale species: The endangered harbour porpoise is highly sensitive to noise and under the highest protective status (e.g. Habitats Directive lists II and IV).

No information exists on the effect of ship traffic on harbour porpoises. Simultaneous monitoring of ship traffic (AIS), measurements of shipping noise and recordings of harbour porpoise echolocation activity will give a unique and novel opportunity of studying habitat exclusion. The harbour porpoise and noise data loggers will be placed in the shipping lanes and fast ferry routes and up to 14 km in a perpendicular direction. As a result, noise-sensitivity maps will be made for the target species.

- Area: 1.880 km²
- DK
- Main issues: shipping and collision risk, endangered species, overfishing



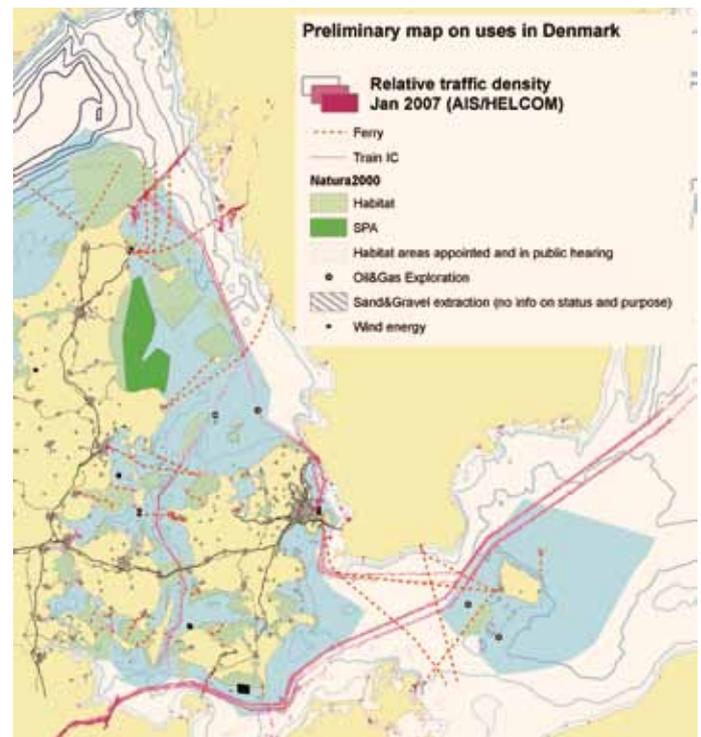
Photo: WWF Germany

The result, an environmental report similar to the one required by the Strategic Environmental Assessment procedure, will serve as a help for decision-making for the envisaged T-route planning. NERI's role is to provide scientific background information and robust assessments to support the MSP process. The field works will be conducted in the Danish Belt Seas in 2009–2010.

Ecosystem modelling

Modelling of patterns and variability of important ecosystem parameters in MSP pilot area:

- Baltic-wide vulnerability index based on multi-year variability patterns of oceanographic key parameters (T, S, u, v)
- Basin-wide biological particle connectivity (reefs, wind farms), impact of a warming climate on oxygen.
- Impact of flow dynamics and ship traffic on particle dispersal and settling at Hatter Barn



PILOT N°5 AND N°6: PÄRNU BAY/SAAREMAA-HIUMAA ISLANDS

Pärnu Bay and the area around Saaremaa-Hiiumaa Islands in Estonia are both environmentally sensitive and under growing human use pressure. Therefore, they were chosen as Estonian BaltSeaPlan MSP pilot cases. It is expected that these pilot projects will contribute to development of the practical MSP implementation skills in Estonia. Around Hiiumaa and Saaremaa there is

currently reasonable access to data on different human uses. However, the nature values remain practically unknown, except for some recent mapping exercises in the Natura 2000 areas. Therefore, the aim of the modelling is to provide up-to-date information on the valuable habitats according to the EU Habitat Directive.

Modelling

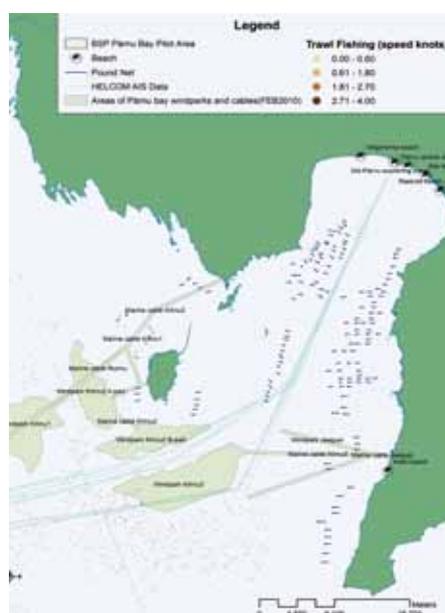
The spatial modelling activity is divided into several subtasks:

- Gathering contextual data on valuable habitats and potential prediction layers (salinity, bathymetry, wind and wave condition, etc.)
- Modelling of sediment types using remote sensing data
- Spatial modelling of the keystone species associated to the valuable habitats
- Spatial modelling of the valuable habitats

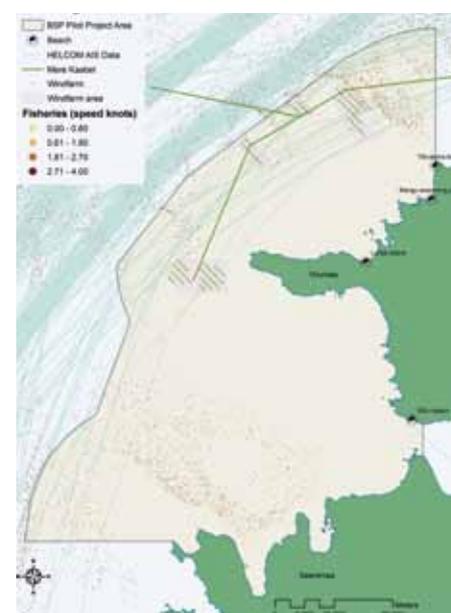
Activities/Approach

The maritime spatial plan, including such uses as recreation, fisheries, offshore wind energy, marine aggregates mining and

- Area: 5.630 km²
- Estonia
- Main issues: tourism, fisheries, offshore wind energy, marine aggregates mining and sea transport



Pärnu Bay



Saaremaa-Hiiumaa Islands

sea transport will be prepared by experts from the Marine Institute of University of Tartu.

Stakeholder participation is carried out by Baltic Environmental Forum (BEF) Estonia.

The first stakeholder meeting, with the goal of involving the key stakeholders into the planning process was held on 27th November 2009 in Tallinn, back to back with the 3rd BaltSea-Plan conference.

The next stakeholder meeting will be held at the Ministry of the Environment in Tallinn on 30th April 2010. Registered participants represent the ministries, county governments, tourism industry, maritime transport, fisheries, wind park developers and scientists.

PILOT N°7: LITHUANIAN SEA

The area of Lithuanian maritime space is not more than 7000 km² including the part of Curonian Lagoon. This relatively small area accommodates multipurpose, universal, deep-water port of Klaipeda, World Heritage sites, oil terminals, military polygons. Recently certain areas have been reserved for offshore wind energy developments and sand extraction purposes. All these activities together with the new planned high voltage energy link to Sweden intersect with fishery areas, traverse the area of dumped chemical weapons and Natura 2000 sites. Maritime Planning has not yet been introduced for the Lithuanian marine area (territorial sea and EEZ). The demand for planning is however increasing due to ongoing activities such as sand extraction, management of dumped sediments and plans for offshore wind energy sector and their conflicts with Natura 2000 and fishing as well as navigation. All these issues are »near door« in Lithuania. But no responsible body/authorized agency

(»one stop« service) exists which could coordinate and advise while managing existing and potential conflicts among different sea users.

Approach/Activities

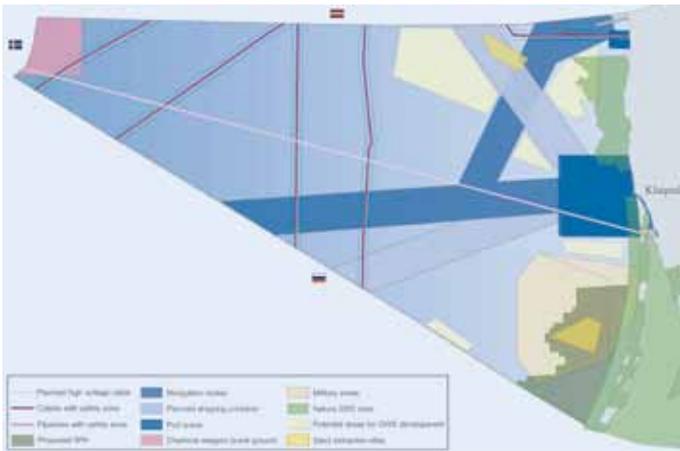
- Analysis of current Sea Use in Lithuanian EEZ.

The activity will show what usage exists nowadays and in what spatial extent. The overlapping of the different usage layers will reveal the existing and potential conflict areas. The overview of the main criterions used in order to locate the activities or restriction zones in the particular place will show the legislative background existing in the country and probably the need of improvement or clarification.

- Demand analysis for current and near future usage.

Samples:

- » areas to be allocated for offshore wind farms due to the commitments to EU to increase the renewable energy sector up to 20 % by 2020;



- » area of sand (million tonnes) for beach nourishment due to the confirmed coastal zone management strategy for year 2008–2013
- » deep sea port development and others
- Demand of re-planning/inventory of existing sea uses including
 - » environmental sensitivity assessment (habitat maps, integrated sensitivity mapping & others)
 - » evaluation of socio-economic parameters (fishing intensity, navigation intensity, forecast of development of recreational navigation & other)
 - » overlapping of existing sea uses with layers of introduced environmental sensitivity and socio-economic value

- Area: 6.480 km²
- Lithuania
- Main Conflicts/Issues: sand extraction, dumping areas, offshore wind energy plans, fishing, Natura 2000, navigation

Expected results

- To set (propose) minimum standards for MS planning;
- Vision for administrative organization with regards to MSP, e.g. vision of »one stop« principle implementation and tender system for offshore activities

PILOT N°8: LATVIAN SEA

The first Latvian maritime spatial plan will cover the Western coast of Latvia and the adjacent waters (without the Gulf of Riga). The Baltic Environmental Forum (BEF) will carry out the whole MSP process as a show case to initiate the creation of a MSP legal framework in Latvia. The management requirements of the NATURA 2000 sites will be taken into consideration.

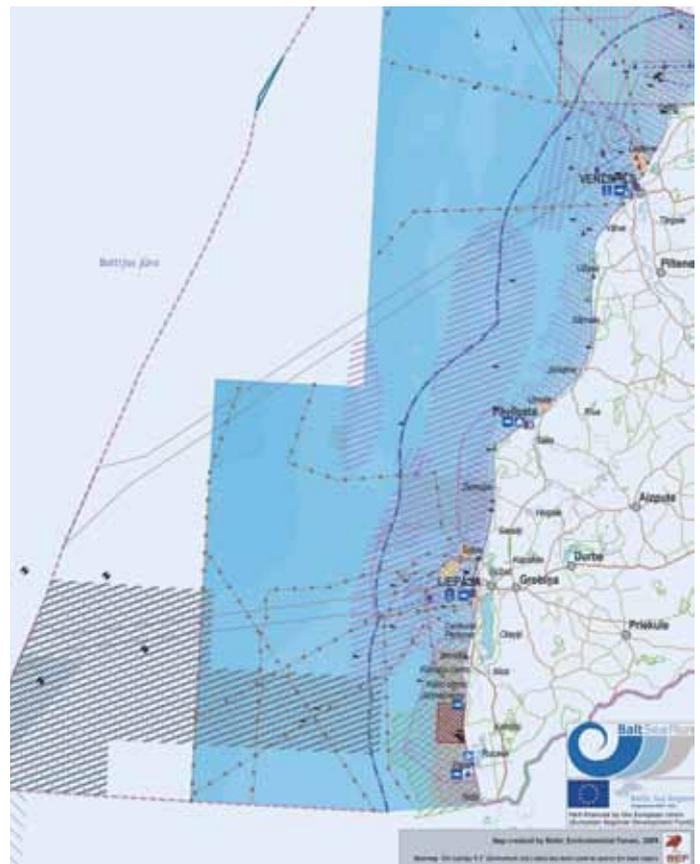
Main issues/conflicts

The pilot area covers three protected areas. Two further marine protected areas (NATURA 2000 sites) of 62.581 ha are proposed for the protection of reefs, goosander (*Mergus mergamser*), little gull (*Larus minutus*) and divers (*Gavia sp.*).

The two large cargo harbours Ventspils and Liepāja (with total turnover 28,5 and 4,2 thous. t in 2008) are strong economic players in the region.

There is also a fishing and yacht port – Pāvilosta. At the moment the fishery sector is not economically viable: the fishing fleet is too big and too old for the available fish resources. Coastal fishery has, however, historical heritage value. Tourism is an important activity along all the coastline. Recreation infrastructure is more targeted at nature, active and rural tourism. During the last years several tourism activities related to the sea have become more popular: e.g. yacht tourism, diving, windsurfing and kite-boarding.

Moreover, there are large areas of mine searching and clearance especially in waters around Liepāja, as well as military trainings.



- Area: 20.210 km²
- Latvia
- Main issues: NATURA 2000 sites, cargo transport and harbours, tourism

On top, in future the following uses are expected to play a role in the Latvian sea:

- Wind farms – an area of 100 km² has to be reserved according to national strategies.
- Oil extraction – in the south part of the territory studies from the 1970-ties indicated potential oil fields. Some permits for investigation and oil extraction are already issued, but the actual extraction has not yet started.
- Measures for decrease of erosion risk – the biggest part of the coastline is under coastal erosion impact. Some municipalities consider possibilities to protect their coastline.

Activities/Approach

A meeting for Latvian MSP stakeholders was organised in Jurmala on 1st February 2010. Numerous representatives from ministries (and other competent authorities, local municipalities, public organisations and different stakeholder groups took part in this event.

BEF has formed a Coordination Group which will meet regularly to ensure the effectiveness of the MSP development and to supervise this process in the Latvian BaltSeaPlan project pilot. The group comprises of representatives from Ministry of the Regional Development and Local Government; Ministry of Transport; Ministry of Economics; Ministry of the Environment; Ministry of Agriculture and Riga planning region.

BEF Latvia is also taking part in the working group organised by the Ministry of Traffic on implementation of the EU Integrated Maritime Policy, established by the Cabinet of Ministers on 16th February 2010. This will provide possibility to follow the policy development with regard to maritime issues in Latvia and ensure promotion of the BaltSeaPlan activities and results to the national competent authorities.

STAKEHOLDER INVOLVEMENT IN MSP

Integrated Maritime Spatial Planning is a participatory process. Stakeholders should be involved as early as possible if the spatial plan is to be widely accepted and successfully implemented.

In order to achieve a truly integrated approach, IMSP needs to involve a wide range of stakeholders and interests. In line with demands made in ICZM, more participatory approaches of decision-making need to be considered. This is related to questions of equal representation of stakeholders and involving 'quiet' stakeholders that are underrepresented in current decision-making processes.

Traditionally, spatial plans and other policy documents have been produced through an essentially linear process. Plans go through several stages of consultation with specialists. Stakeholder consultation usually takes place towards the end of the planning process. In contrast, participative planning means that the entire process of drafting the plan, and the stages leading up to it, are shared by all those interested in or affected by it. Although more time-consuming initially, participative planning can lead to savings in the long term. Close cooperation with stakeholders yields the following considerable advantages:

- *The added value of insider knowledge to a frequently narrow expert view*
- *Cost and time efficiency by avoiding possible disputes and trials*
- *Increased the transparency of the planning process*
- *Improved publicity and policy acceptance*

Stakeholder involvement in BaltSeaPlan

As mentioned, BaltSeaPlan partners have to operate on the basis, where most countries throughout the BSR have not yet adopted Maritime Spatial Planning as a requirement within



Cartoon: WWF Germany, Illustration: Erik Liebermann

their national law. Stakeholder involvement is therefore even more crucial to be a part of the pilot cases developed within BaltSeaPlan as the implementation of the plan's measures will largely depend on the stakeholders willingness to co-operate.

Stakeholder Questionnaire

BaltSeaPlan partners agreed to prepare and use a more-or-less unified Stakeholder Questionnaire to involve the maritime stakeholders within the BaltSeaPlan pilot planning areas.

The questionnaire should help to:

- alert stakeholders about the MSP process in the area
- win their acceptance
- prepare ground for co-operation and the upcoming stakeholder meeting
- identify additional stakeholders, problems and conflicts

The basic version can be supplemented by additional questions, if appropriate, and then translated it into national languages. Together with a project flyer and a map of the area,

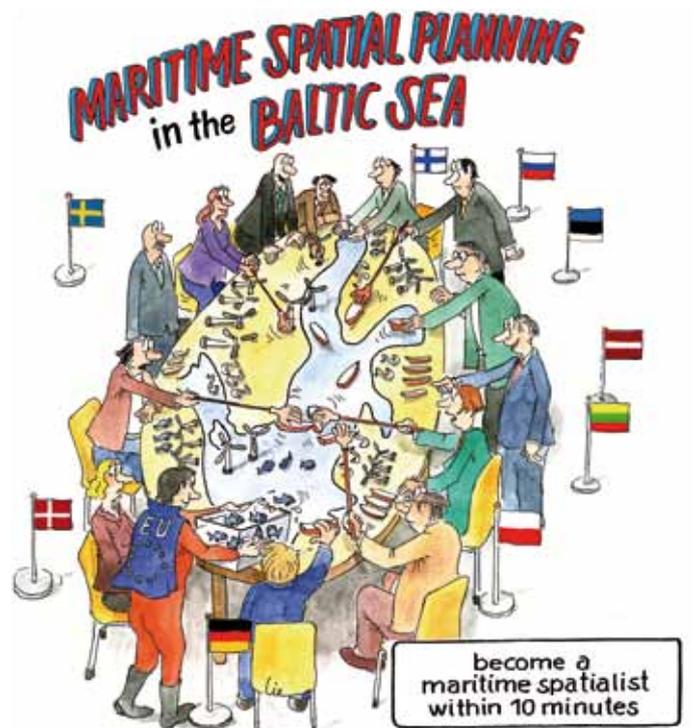
the questionnaires will be distributed in May 2010 to the relevant key maritime stakeholders of the BaltSeaPlan pilot areas.

Drawing on this experience joint methodology guidelines for stakeholders' participation in the MSP process will be produced at the end of the BaltSeaPlan project.

Easy-to-understand MSP brochure

Maritime Spatial Planning is a complex topic, which is difficult to explain to non-specialists. Getting stakeholders involved in the maritime spatial planning process is, however, one of the key success factors. It is therefore important to get the issues at stake across to all of them, including local fishermen, hotel owners, nature protection groups, etc. The Baltic Sea office of the WWF / Germany has therefore produced a non-scientific brochure, which depicts issues in an easy-to-understand, humorous, user friendly way.

The comics shown in this brochure can be ordered in English/German directly from the WWF office (please contact: michele.stoltz@wwf.de)



Cartoon: WWF Germany,
Illustration: Erik Liebermann

DATA/INFORMATION FOR MSP

THE BALTSEAPLAN GEO-DATABASE AND MODELLING

Maritime Spatial Planning (MSP) has to be based on sound, consistent, comparable and complete information about human activities and the marine and coastal environment by means of the most advanced tools and technology (Geographic Information System (GIS) and Modelling). A geographic information system is essential to the regional planning process as it enables to store current and future data and display it in a visual geographical output that can be easily adapted to the needs at any time. This facilitates the integration of different sources of information. At the same time its visual output makes it easier to identify conflicts, challenges and synergies. In contrast to »mapping«

Maritime Spatial Planning is about the future development. Thus the use of GIS is also important as it helps to produce simulations of scenarios of the future based on the expectations of development of the Baltic Sea and its uses without having to redesign all the plans. Modelling is an important element in obtaining information for the Maritime Spatial Planning process as it helps to deal with data gaps, identify areas of spatial relevance (based on future expectations) as well as providing background information for the Strategic Environmental Assessment (SEA) – showing potential impacts of specific uses in given areas.

The Baltic Sea Geo-database

In order to create a basis for planning in the Baltic Sea the BaltSeaPlan project is in the process of setting up a Baltic Sea wide geo-database with special regard to the pilot project areas. The geo-database is to be hosted at the German Federal Maritime and Hydrographic Agency/BSH at least until five years after the end of the project. It will contain the following content layers:

- Available information on existing and planned sea uses and natural resources for the whole Baltic Sea
- Areas where more detailed information is available, usually where the pilot maritime spatial plans are situated
- Existing plans and regulations (e.g. the German MSP, shipping routes), as well as future development concepts, projects and other visions

In addition, the geo-database will make it easier to identify data gaps and conflicts that have to be addressed in order to create a coherent basis for maritime spatial planning.

Knowledge of the Baltic Sea exists – but for different purposes

Lots of data and models already exist for the extensive area of the Baltic Sea. Nonetheless this data and models are not adequate or are not in adequate format to put the planning process of this water structure into practice. For instance the information provided by scientific experts often does not support the work of planners, as it was not developed for the purpose of planning. Or: ecological data is difficult to be combined with socio-economic information. Or: data is not organised in same formats across institutions or countries. Thus, special efforts have to be undertaken in order to coordinate the work as to come to a picture, which is as clear as possible.

Compatibility of data

Within BaltSeaPlan project 7 different transnational partners actively take part in the construction of its database. Thus special efforts were required in order to make the information compatible, easy to access and understandable between the partners. As a first step BaltSeaPlan partners agreed on a framework that rules the construction of the database based on the EU Directive Inspire (see Text Box).

The EU Directive Inspire deals with this issue by prescribing that, by the creation of spatial information infrastructures in the European Union, every produced dataset should be described by Metadata with specific elements.

The need to use Metadata according the EU Directive Inspire

In conformity with the EU Directive INSPIRE, a Spatial Information Infrastructure is functioning well when the user is able to find spatial datasets and services and to establish whether these may be used and for what purpose. Therefore, each dataset and service created must have a description enriched with metadata information (structured information that describes, explains, locates, or otherwise makes it easier to retrieve, use, or manage an information resource).

In order to allow the identification of the information resource for which metadata is created the Directive defines the following set of essential elements, which do not rule out other elements important for specific projects:

- resource title
- resource abstract
- resource type
- resource locator
- unique resource identifier
- coupled resource
- resource language

Additionally, for specific contents such as Nature Conservation, Offshore Wind Energy, Sand and Gravel Extraction, Pipelines, Submarine Cables and Platforms specific data collection templates were set up that indicate which attributes should be addressed in each dataset. This helps the partners to stay inside of the defined framework. Another important step for the coordination of data was the definition of the World Geodesic System 84 as geographical reference. Arrangements concerning layout and legends of output plans are also important but still have to be agreed. Based on the established framework the data inventory and exchange of data has already been stated.

Modelling activities within BaltSeaPlan

Not only coordinated data collection is important to the Baltic Sea planning process, but it also can not be forgotten that in a complex system as the Baltic Sea it is impossible to have a complete picture of the current and future situation. Scientists need to develop simplified models of the reality (modelling).

Modelling and planning a living structure as the Baltic Sea, where so many activities take place, is not an easy task, but an important one. Only by applying such techniques it will be possible to take a view of the future and use this incredible natural structure best for human activities without damaging it. On top: similar to the data collection process special care has to be taken also in data modelling in order to go into the direction of the needs of the planning process. It is on this process, that BaltSeaPlan focuses its work:

1. At first a guidance document was created to foster exchange of data models.
2. This guidance suggests that in a first stage researchers will collect, present and explain advantages of the techniques used until today concerning the modelling of the Baltic Sea area. At the same time planners have to put together questions that have to be answered in order to develop maritime spatial planning.
3. At the moment the experts of the German Federal Maritime and Hydrographic Agency (BSH) are analysing which kind of models are available, how they can address the questions of the maritime spatial planning and which gaps are not addressed by the existent models.
4. The achievements will be presented in a document that should stimulate the discussion between scientific experts and planners and result in recommendations on how to use the right models in the process of maritime spatial planning and how to address the existent model gaps.
5. Afterwards the models will be tested by applying them to the maritime spatial planning process of the Pilot Areas of BaltSeaPlan.

STRATEGIES/VISIONS FOR MSP

NATIONAL STRATEGIES

Recommendations: MSP issues in National Maritime Strategies

According to the EU, all coastal member states should develop their own national integrated maritime policies. The goal is to enhance and facilitate cooperation at all levels of maritime governance. The national integrated maritime policies should thus be based on the recognition that all matters relating to the sea are interlinked – i.e. taking into account land-sea integration, institutional integration, economic, social and ecological issues – and should be dealt with as a whole. Thus – just like the EU's

Integrated Maritime Policy, integrated national policies should also be guided by the principles of subsidiarity, competitiveness and economic development, the ecosystem approach and the principle of stakeholder participation. Even though each government will have own priorities for its maritime policy – all should work towards shared goals. In order to set these, the EC issued on 26th June 2008 the general Guidelines for an Integrated Approach to Maritime Policy.

The BaltSeaPlan activities related to National Maritime Strategies are guided by Prof. Jacek Zaucha on behalf of the Maritime Institute in Gdańsk. Jacek Zaucha is professor for spatial planning at the University of Gdańsk and was until 2007 head of the VASAB Secretariat. Together with Magdalena Matczak he has developed the methodological approach within WP4 which is then discussed, refined and used by all BaltSeaPlan partners. The Maritime Institute team also provides the »Blue Prints« (samples) and gives expert advice to the Balt SeaPlan partners.

BaltSeaPlan contributions

Within BaltSeaPlan the partners are developing recommendations of how such an integrated maritime policy could look like in their given country with regard to spatially related issues.

The work is divided into the following distinctive steps:

National Reports No 1: Review of relevant policies for MSP

Review of existing policies affecting the coastal and sea area (i.e. ICZM strategies, EU directives, national SD, renewable energy, biodiversity strategies, transport strategies – port extensions, etc.) in each country and showing what kind of impact these are likely to have on MSP.

National Reports No 2: Compatibility assessment of national policies

The purpose of this is to identify the aims, objectives and targets that have already been set out for the coast and the sea and which planners need to take into account (i.e. objectives for water quality, economic development, energy and nature conservation). This helps to:

- Identify the main driving forces for sea space development in the BSR countries which need spatial planning support or even transnational or cross-border co-operation
- Assess/evaluate whether all those trends and policies are coherent and where they are leading to spatial conflicts and what response from the side of spatial planning do such conflicts require
- Identify potential/issues/development factors not covered by the policies and explaining why.

National Reports No 3: Recommendations to national maritime policies

On the basis of the former considerations suggestions/recommendations will be formulated for each BSR country for a national strategy for integrated offshore development, i.e. for national maritime policies in order to make them spatially consistent.

Report 1: Review of relevant policies

National Reports showing the impact of the various policies/strategies affecting the coastal and sea space have been prepared for Poland (Blue Print), Denmark, Germany, Sweden, Lithuania, Latvia and Estonia.

Step 1: Policies considered

Even though the detailed policy documents analysed obviously vary between each country, each report is based on a similar choice of policies, which had been identified under the previous BaltCoast project to be of direct and strong influence on the use of the sea space.

Policy Sample Latvia

I. Socio-economic strategies for development of the country

- Sustainable Development Strategy of Latvia up to 2030
- National development plan of Latvia (2007–2013)
- Regional policy frameworks (2004–2014)

II. National spatial policy

- Development concept of spatial planning system (2009)
- Land policy frameworks (2008–2014)
- Spatial plans

III. Structural Funds/Cohesion Policy of EU (national strands)

- Operational programme »Infrastructure and Services« (2007–2013)
- Latvian – Lithuanian Cross-border Cooperation Programme (2007–2013)
- Estonian – Latvian Cross-border Cooperation Programme (2007–2013)

IV. Environment protection

- Environment Policy Framework (2009–2015)
- Policy Framework for Environment Monitoring Programme (2009–2012)
- National biodiversity programme
- National Programme for Assessment and Management of Flood Risks (2008–2015)
- State waste management plan (2006–2012)

V. Transport an policy and telecommunication

- Policy Framework for transport development (2007–2013)

VI. Fishery

- Fisheries Strategic Plan (2007–2013)
- Operational Programme for the Implementation of the European Fisheries Fund Support in Latvia(2007–2013)

VII. Energy

- Energy development policy framework (2007–2016)
- Policy frameworks on use the renewable energy resources (2006–2013)

VIII. External policies

- EU Strategy for the Baltic Sea Region
- VASAB Long Term Development Policy
- EU Maritime policy
- Helcom BSAP

Step 2: Classification of their policy impacts

For each of these policies a classification was made showing the extend of their impact on maritime spatial planning issues:

- **Direct** versus **indirect** impact shows to what extend the implementation of the objectives/priorities of the given document will influence the use of the sea space
- **Strong** versus **weak** impact assesses the probability of their implementation

Step 3: Consequences for MSP

The consequences of implementation of the given policy for MSP are highlighted, esp. with regard to the new tasks for MSP stemming from the given document; i.e. development of renewable energy as an important policy of the country might assign on MSP the task for reserving sea space for wind-farms etc.

Sweden – National Action Plan for the Marine Environment 2006 (SEPA 2006 Aktionsplan för Havsmiljön)

Description, content

Lead: In 2005, against the background of multiple international initiatives in the EU and the Baltic Sea area, the Swedish Government commissioned the EPA to draft a comprehensive action plan for the marine environment in consultation with 15 other authorities.

Issues: The resulting action plan (SEPA 2006 Aktionsplan för Havsmiljön) comprises 30 goals and tasks to improve the marine environment grouped into four areas. Only tasks that were not already commissioned and under way were included. The most important spatially relevant points are:

- A. Eutrophication (7 tasks): most MSP relevant are
 1. Identification of most eutrophicated areas
 7. Reduction of emissions from shipping
- B. Fisheries & biodiversity (6 tasks including measures in fisheries economy):
 9. Protection of endangered deep sea fish species
 11. Reserving areas for passive fishing gear
- C. Hazardous substances (5 tasks):
 18. Better monitoring of shipping
- D. Knowledge and coordination (12 tasks):
 19. Improved coordination of monitoring
 20. De-classify sea depth information
 21. Improve availability of environmental data
 22. Improve sea depth information
 23. Survey geology & chemistry of sea beds
 24. Describe submerged biological values
 26. Research on trophic interactions
 27. Scientific support for decision-making (establish Baltic Nest Institute)
 28. Assignment of responsibility for the open sea to an authority
 29. Set up a marine environmental council & a coordination group
 30. Create a pro-active international agenda.

Status: 25 tasks are presently under way, whereof two tasks are completed (scientific advice, council for coordination and active coordination group), two are almost implemented (ecological boat fuel, ban of phosphates in detergents). Amount and quality of marine data and access to it is increasing, the appointment of a coordination authority is under way.

Impacts table & summary

	Direct Impact	Strong indirect impact	Weak indirect impact
strong implementation	9, 11, 28, 29	1, 7, 18, 30	Data-related points
weak implementation			

The implementation is considered to be strong, as the document is well anchored in all responsible authorities and the tasks are clearly defined.

Consequences for MSP

- The Action Plan does not have so much of a spatial perspective in itself, as it has to cover environmental problems of the Baltic Sea area at large. However, conservation- and fisheries planning affects MSP directly. Measures with regard to eutrophication and pollution are more related to coastal and onshore-infrastructure or to working with the enterprises active in a certain area, and to some extent infrastructure related (ports, sewage treatment).
- The data produced and coordinated in 19.–26. are highly relevant for MSP. The secrecy problem remains unsolved so far.
- The coordination-points are important for developing a working system for maritime spatial planning.

Report 2: Compatibility Assessment of National Policies

Step 1: Which policies are missing?

The results of Report 1 are summarised in a table of policies potentially affecting the development of the sea space.

It shows which policies exist and do not exist in each BSR country and thus also the differences among the BSR countries. Most importantly the table is concluded with comments on the issues neglected by the policies or hardly considered.

POLICY	Existing at					non-existent
	National level	Interregional co-operation	Regional level	Municipal co-operation	Municipal level	
Cross sectoral socio-economic strategies*	x	x	x		x	
Sustainable development strategies*	x		x?	x	x	
ERDF/Lisbon Gothenburg strategies*	x		x			
Spatial policy*	x		x		x	
Environmental policy*	x	x	x		x	
Port development*	x		x			
Maritime and multimodal transport development*	x		x			
Fishery*	x		x			
Aquaculture	x					
Energy*	x		x			
Tourism*	x		x	x	x	
Coastal protection	x		x		x	
Mining and extraction of minerals	?		x			x
Climate change policy*	x					x
R&D collection policy related to maritime issues*	?					x
Surveillance policy*						x
Maritime employment policy*	?					x
Maritime cluster policy*						x
Cultural heritage policy						x
Maritime Defence policy						x

*actions related to EU Commission Action Plan

Step 2: MSP driving forces: Which policies are most important?

On the basis of the former analysis each country partner puts together those policies with an important spatial impact – i.e. those with direct and strong impact.

Step 3: Coherence between policies and possible conflicts

In the MOST IMPORTANT part the MSP driving forces (Step 2) are examined

- against each other and
- against other important development factors NOT covered by the policies (Step 1)

On the basis of this analysis partners can formulate observations for national maritime policy responses, where spatial planning intervention is necessary.

Sample from Polish Blue Print Analysis

Policy Area:

Mining and extraction of minerals

Potentially spatial planning conflicts:

Conflicts with national defence, nature protection, sea transport, technical infrastructure, cultural heritage and energy production and to some extent also with fishery

Response of spatial planning to the conflicts:

- MSP should have information on mineral deposits
- MSP should have analysis on different possible impacts of mining and mineral extractions.
- Planning for mineral extraction should obey precautionary principle
- MSP should have ready to use solutions for connecting (by transmission infrastructure) the areas of oil or gas mining (combination of location of technical infrastructure corridors and oil/gas extraction areas)
- The clear policy on use of the sea space for national defence purposes should be agreed at the national level to minimise conflicts between mining and the national defence.
- Separation zones between intensively used transport corridors and areas of oil and gas extraction should be planned.
- MSP should have clear national priorities to decide on conflicting uses

Step 4: Recommendations

The other partners are currently still undertaking the described analytical work. For Poland a first set of recommendations has already been developed.

Step 5: Use recommendations!

The recommendations are not an end to themselves. The reports developed (1st drafts expected for Summer 2010) will be used by BaltSeaPlan partners as to

- foster cross-sectoral national debate on the development of an INTEGRATED national maritime strategy
- carry out cross-country comparison among the BSR and use reports as basis for development of a »common spatial BSR vision« (see following chapter)
- find common recommendations for other EU countries on how to integrated the spatial dimension into the development of the National Maritime Strategies

Extract from recommendations for Polish national maritime strategy

- Several activities requiring some type of public intervention do not have proper policy coverage in Poland. Maritime Policy should pay special attention to them.
Samples: Underwater cultural heritage/National Defence policy
- Some policies are insufficiently maritime oriented or they are run on strictly sectoral basis. The national maritime policy should initiate their reformulation or extension in order to properly address maritime questions and specificity.
Samples: transmission infrastructure development/maritime mining.
- Harmonize national tourism policy, local and regional development programmes with regard to proper tourism infrastructure development in order to take pressure from land, encourage tourists to use sea space and calculate correspondence between coastal development and sea space necessary to serve this process.
- Weak attention is also paid by different policies to important maritime questions such as innovation fostering, research, education and cluster development. Therefore all those questions should find a proper place in the maritime policy which should initiate national cross-sectoral debate on them.

A COMMON VISION OF MARITIME SPATIAL DEVELOPMENT FOR THE BALTIC SEA

In May 2010, work will begin to draw up a spatial vision for the Baltic Sea. Guided by a team from the GKSS Research Centre, and led by the Maritime Institute Gdańsk together with a smaller group of BaltSeaPlan partners, developing the vision is a gradual process that will take the better part of 2010. The work will be based on the results of the previous process leading to recommendations on National Integrated Maritime Policies. The COMMON BSR wide vision will go a step further and

take into account transnational interdependencies and BSR wide cumulative impacts. The vision will not be a lengthy report or written document. It will predominantly be visual, depicting what the Baltic Sea might be like in 2030. As such, the vision will not only help guide decision-making, but also act as a communication tool – something that can be used to engender public and political debate during the later stages of the project.

Why is a vision needed?

Integrated Maritime Spatial Planning needs to be guided by a clear goal. Given the limits of ecological and spatial carrying capacity, choices need to be made: what type of sea use is acceptable, and what type of sea use is to be given priority over others in which space? A clear goal is particularly important to take account of new developments: sea use does not stand

still, and new trends can emerge quite quickly. The role of the spatial vision for the Baltic Sea is to enable such choices to be made. For this, the vision will need to stipulate what kind of development is acceptable and where the limits of sea use lie. It will also need to be translated into specific goals and targets for BSR sea space: for instance BSR wide targets for the exploitation of resources (i.e. indicative percentage of sea space to be protected, traffic route separation, types of maritime land-

scapes to be preserved), international energy transfer lines and for curbing pollution loads. This would permit maritime spatial planning to take into consideration BSR as well as national interests. All this will take time – and need the involvement of the BaltSeaPlan partners.

Why yet another vision for the Baltic Sea?

Plenty of ›visions‹ already exist for the Baltic Sea, such as the EU Baltic Sea Strategy or the Baltic 21 Strategy, the HELCOM Action Plan, 2007–2021, the VASAB Long Term Perspective, or scenarios (e.g. the SIDA scenarios for 2048). Thus it might surprise that BaltSeaPlan partners still feel the need to develop ›yet another‹ vision.

Actually the BaltSeaPlan vision will not be drawn on an ›empty canvas‹. All existing BSR wide as well as national visions will be taken into account by the common BaltSeaPlan vision as they represent a framework for the development and protection of the Baltic Sea. However, none of these visions lay out concrete scenarios for how the maritime SPACE of the Baltic Sea shall look like in the coming future and are therefore not a sufficient basis for the preparation for a BSR wide convention on MSP. The first job is therefore to take a closer look at these existing national and international ›visions‹. Do they actually fit together, or are there any inherent contradictions in their aims? What spatial impacts would they have? To illustrate various spatial development options, it will be useful to sketch out selected scenarios: What would the Baltic Sea space be like if transport, or energy generation, or nature conservation were given priority, for example? Another question is whether the Baltic Sea is capable of delivering the various targets, and what spatial conflicts might be expected, in particular when the cumulative impacts of Baltic Sea region trends are considered.

Based on information made available by the partners, and working together as a group, the visioning process will then need to establish the spatial choices that need to be made in order to:

- meet the objectives of the international policy framework,
- meet objectives at the national level,
- avoid conflicts of use,
- maintain the ecological integrity of the Baltic Sea.

Developing the common BaltSeaPlan vision

The actual vision will be developed based on this using the year 2030 as a target year. It can be imagined as an agreed view of what BSR space should be like in twenty years time. Rather than an ›idealized‹ vision or explorative scenario, it will be grounded in current sea uses, expected developments and

desired management outcomes for the BSR. This is why input from the partners and factual information on spatial trends and developments is important throughout. The vision will look at how to make best use of synergies, minimise the overall spatial impact of uses (in order to leave room for future developments), and encourage efficiency of spatial use (e.g. explore the potential for co-use).

The vision will then need to be broken down into targets that can guide spatial use in the Baltic Sea. These could be to set aside a certain percentage of space for certain uses, or to agree on the siting for certain uses (e.g. transport corridors). We do not envisage the vision itself to be spatially prescriptive in terms of locating or siting certain uses; rather, it should provide the basis for doing so in a next step.

In order to make sure the vision is a living entity, ways of implementation have to be considered right from the beginning. The vision will therefore describe some tools and mechanisms to facilitate spatial co-ordination, in particular at the transnational level. At this point, the MSP roadmap, the Marine Strategy Directive, and existing IMSP suggestions (PlanCoast, Balance etc) will be taken into account. The ›visioning process‹ may also throw up issues that cannot be resolved by IMSP.

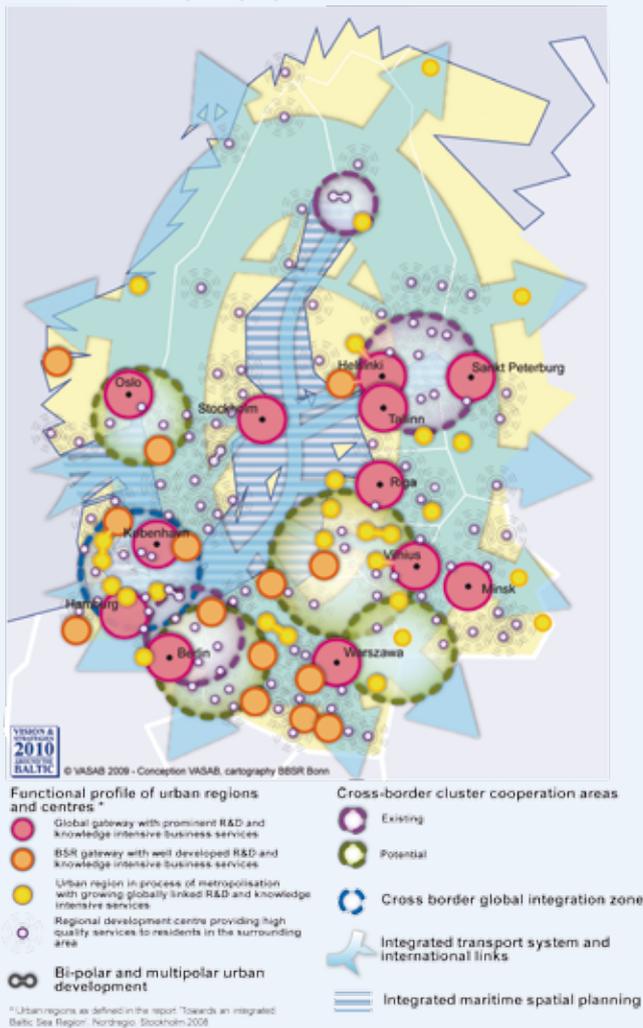
The last step will be to draw up suggestions for communicating the vision to other stakeholders, planners, the public and not least politicians. This is where visualisation will play an important role.

In summary, the vision aims to be:

- practical, based on the results of bottom-up work completed by the BaltSeaPlan partners,
- realistic, showing the actual plans and strategies of all BSR countries,
- integrated, combining national and international strategies into one,
- visual, accessible and easy to understand,
- implemented through existing spatial planning systems and management contexts,
- complemented by agreement on MSP principles to be used in all BSR countries.

As a participative and organic process, the outcome of the visioning process is not entirely predictable. Whilst the early analytical stages of the process can be planned in some detail, the precise nature of the later stages will need to emerge from the previous steps. What will emerge, however, is a vision statement and a graphic illustration of the vision – together with suggestions for implementation and communication. The BaltSeaPlan Meeting in Klaipeda will be the start of the process, with the next meeting in Stockholm hopefully seeing some results.

2030: Territorial development perspective



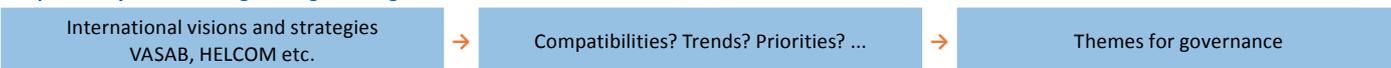
The GKSS Team

- Dr. Andreas Kannen – Deputy Head of Department Human Dimensions of Coastal Areas/GKSS, Project Leader »Coastal Futures research project«, WP Leader EU project »KnowSeas«, special areas of interest: ICZM, changes of marine use patterns, scenario development & governance structures
- Kira Gee – Researcher, Project Experience in »CoastNET«, Germany ICZM strategy, co-author PlanCoast MSP Handbook, special areas of interest: stakeholder assessment, ecosystem services & maritime spatial planning,
- Dr. Bernhard Heinrichs – former General Director of state planning department of Mecklenburg-Vorpommern, responsible for developing first MSP for 12sm zone of MV, VASAB representative, Project Lead Partner of »BaltCoast«, »SuPortNet« & »PlanCoast«.

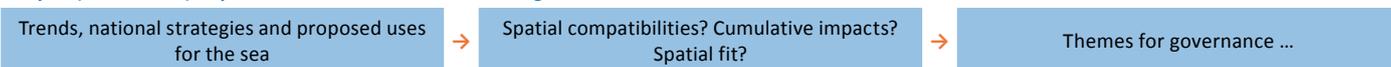
Developing the vision

Operationalising and communicating the vision

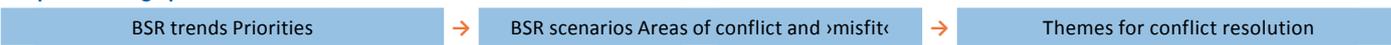
Step 1: Analysis of existing strategies and general visions for the Baltic Sea



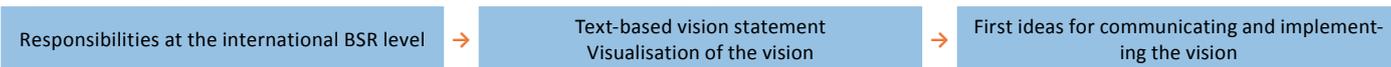
Step 2: (Cumulative) impact assessment of national strategies on the sea areas of the Baltic Sea



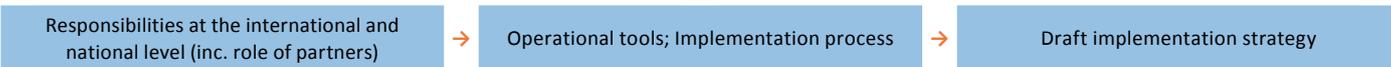
Step 3: Drawing up scenarios for the BSR



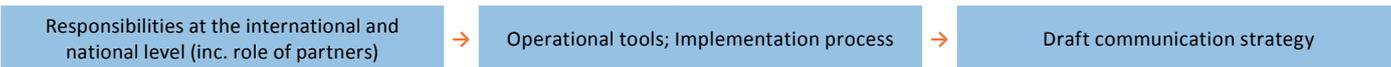
Step 4: Developing a joint vision for IMSP in the Baltic Sea



Step 5: Complementing the joint vision by appropriate governance instruments (spatial policy recommendations with emphasis on operational forms of transnational cooperation)



Step 6: Develop ideas for communication of the vision



Germany

- Federal Maritime and Hydrographic Agency (BSH), Lead Partner
- Ministry of Transport, Building and Regional Development of Mecklenburg-Vorpommern
- WWF Germany, Baltic Sea Unit

Poland

- Maritime Office in Szczecin
- Maritime Office in Gdynia
- Maritime Institute in Gdańsk

Denmark

- National Environmental Research Institute (NERI) of Aarhus University

Sweden

- Royal Institute of Technology (KTH)
- Swedish Environmental Protection Agency

Estonia

- Estonian Marine Institute of University of Tartu
- Baltic Environmental Forum Estonia

Lithuania

- Klaipėda University Coastal Research and Planning Institute (CORPI)
- Baltic Environmental Forum Lithuania

Latvia

- Baltic Environmental Forum Latvia

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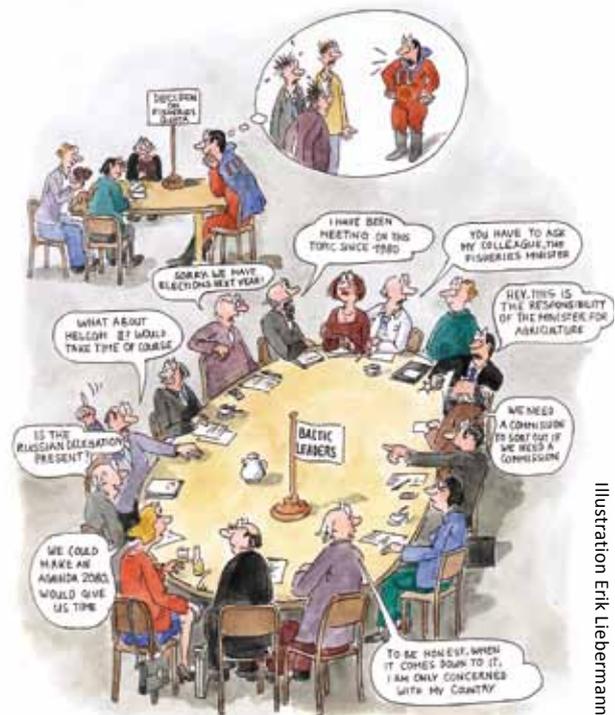
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