Baltic SCOPE

Towards coherence and cross-border solutions in Baltic Maritime Spatial Plans

Southwest Baltic Case

Topic Paper on Energy

(Version 18 January 2016)

This Topic paper is the working paper based on the joint Baltic SCOPE exercise and cannot be treated as the official opinion of the European Commission and Member States involved.

Swedish Agency for Marine and Water Management
BSH Bundesamt für Seeschifffahrt und Hydrographie
Ministry of Environmental Protection and Regional Development Republic of Latvia
VASAB Vision & Strategies around the Baltic Sea
HELCOM
European Union European Maritime and Fisheries Fund
NORDREGIO Nordic Centre for Spatial Development
SYKE
Danish Maritime Authority
Republic of Estonia Ministry of the Finance

Preface

This Topic paper has been developed during the first two phases of the South West Case in the Baltic Scope project. In total four topic papers have been developed in the Case, one for each of the topic dealing with Energy, Shipping, Environment and Fishing. The Case study has also produced a technical paper about Shipping and safety distances to structures like offshore windfarms. The papers have been developed generically over a period from Marsh 2015 to march 2016.

The main purpose of the topic papers was to initiate the discussions about which topics might be interesting, and why so, in a transboundary maritime spatial planning context in the region. Another aim was to create a joint knowledge's base for the planners to discuss common transboundary issues to be handled in the process of developing coherent maritime spatial planning in the region. Therefore; the papers shall be assessed in its context of the Case studies and the purpose of the Baltic Scope project and not as a full technical report stating the exact and current situation in South West Baltic.

The responsibility of developing the topic papers was a shared between the project partners with one country responsible for one topic each, Germany was topic lead for Energy, Denmark for Shipping, Poland for environment and Sweden for Fishing. In the process of developing the papers the Topic leader have had contacts with relevant authorities in the other countries to secure a comprehensive understanding and view. Earlier versions have been discussed and adjusted accordingly in the process to what is now the final version.

The topic papers have also been used to as knowledge base in stakeholder discussions and the final versions have been influenced by stakeholders input.

As the project moved on in to discussing planning solutions it was jointly decided that the topic papers has served its purpose and that it would not gain more to the project to do more work on the papers. Therefore it was decided to not spend time on layout, cross reading and updating of facts to make it in to a full Topic report. Therefore, once more, the papers should be understood as working documents and **not** technical reports as such.

Case study Coordinator for the South West Case in Baltic Scope.

Tomas Andersson

Content

Conclusion and recommendation

Limited space, with natural features and resources often shared by up to four countries, common or competing interests, but also opportunities to use and develop marine space in the most efficient and sustainable way should be a strong issue for dealing with the topic of offshore energy and the development of coherent spatial designations for offshore energy, rules and regulations across borders with regard to competing or non-compatible activities.

Energy production in those shared areas still is mainly a national issue and planned from a national perspective, while offshore energy also has a strong transnational linear spatial component when it comes to energy transport, e.g. grid connections. Also pipelines, that connect one country with another across marine areas, often pass through sea areas of third countries. There is an ambition in place to enhance the European integration of electricity grids. Thus in the future the single cable connections might develop into a Baltic offshore energy grid to feed energy produced in one country or sea area into a wider Baltic energy network.

Thus this topic would encompass mainly two aspects of offshore energy: **coordination of planning for energy production in areas being used by several countries and joint planning for energy transport corridors**.

Background

Energy and marine space – this encompasses different issues, spatial requirements and opportunities. Traditionally marine energy resources have mainly been fossil fuels, such as oil and gas. In the Baltic Sea these have never played a role as strong as in the North Sea, where gas and oil provide for large shares of national income e.g. in the UK, Norway, Denmark or the Netherlands. Other spatially relevant energy issues have been raised with energy transport, e.g. the Nord Stream pipeline, other pipeline projects and high voltage-interconnectors between countries, islands and main land etc.

Strong impetus has been given to marine energy within the last 10 to 15 years with a new focus on renewables in the Baltic Sea region, notably offshore wind energy. Offshore electricity production may become an important factor to achieve the climate protection objectives established by both the EU and the national governments. Denmark and Sweden have been forerunners in offshore wind energy development in the SWB planning area, with Germany now running up, having set national (EEZ) and regional (territorial sea) MSPs and a consecutive Spatial Offshore Grid Plan (for the EEZ) into force. In Poland there are not any turbines installed so far, but more than 70 applications have been submitted - without a maritime spatial plan in place yet.

Offshore wind has developed into an important industrial sector in Denmark and Germany, and plays a major role with regard to national and European targets for CO2 reduction and share of renewables of whole electricity production/consumption, e.g. in Germany supporting the National Change in Energy Policy, with significant economic stimulus in Northern Germany / coastal areas of both North and Baltic Sea.

Since many of the projects are situated close to national marine borders, due to certain favourable natural conditions (e.g. submarine banks of Kriegers Flak or Middle Bank), it seems quite reasonable to look at the space affected jointly.

Along with subsea cables for transport of offshore wind power pipelines could also be taken into consideration when looking for corridors for different kinds of linear infrastructure. For example, in the Bay of Greifswald in Mecklenburg-Vorpommern the Nord Stream pipeline and future cable connections from offshore wind farms in the EEZ and territorial sea will use the same “corridor” designated for linear infrastructure.

Analysis of the topic/sector

Requirements for the sector

Favourable areas for offshore wind farms do have an acceptable distance from the coast, good wind conditions as well as suitable geological and subsoil conditions. A limiting factor can be the water depth raising the investment and operation costs. Also technical challenges related to unfavourable seabed or subsoil conditions will contribute to the decision to plan a project in a particular area. Furthermore, proper port facilities are an important logistical condition for the development of offshore wind farms.

Distance to main shipping routes should be sufficient to secure safety and efficiency of marine traffic, and location should be chosen with a minimum negative impact on protected areas or other valuable natural features like bird migration corridors. Subsea cables are necessary to transfer the energy produced offshore to land. The type of cable chosen will depend on the distance to coast and the transmitted power capacity. Cable corridors should also be routed with a minimum negative impact on other activities and the environment.

Planning of offshore wind farms and subsea cables or grids needs to be coordinated. Rules and regulations should be set up to ensure these objectives when implementing energy projects. In addition to those more generally named requirements in the MSP for the EEZ Germany has developed further technical rules in the (sectoral) Offshore Grid Plan for the EEZ.

Current use

Primarily driven by climate protection objectives offshore wind farms have become a familiar sight in the Western Baltic Sea, in Denmark, Sweden and Germany during the last decade. Several wind farms are in operation, others are under construction, licensed or being projected.

The EU 2030 Framework for Climate and Energy has confirmed the promotion of the development of renewable energy. For 2030 the Framework set a new target at 27% share of renewable energy in the total consumption of EU electricity, including offshore wind energy.

In **Denmark** the long-term target set in the Energy Agreement 2012 is to cover the entire energy supply by renewable energy by 2050. According to the Danish Energy Agreement results for 2020 include more than 35% of final energy consumption supplied from renewable energy sources, and approximately 50% of electricity consumption supplied by wind power.

At first, small offshore wind farms had been realised close to the Danish coast, followed by some larger projects in the North (Horns Rev 1) and the Baltic Sea (e.g. Nysted 1 and 2, Rødsand). Several more extensive projects in further distance from the coast have been tendered, with Anholt having been finalised in 2013, others still pending to be implemented in the future and a number of smaller coastal projects on the timeline. In Demark currently a total offshore capacity (North and Baltic Sea) of 1271 MW has been installed (see figure 1). At the moment a tender process is in progress for 600 MW at Kriegers Flak, which is expected to be commissioned by 2022. Southwest of Bornholm a smaller wind farm (50 MW) is in the planning process. According to current plans, with additional 400 MW capacity consented at Horns Rev 3 in the North Sea and further 400 MW capacity in near shore areas, the total Danish offshore wind energy capacity will achieve app. 2700 MW by 2022.

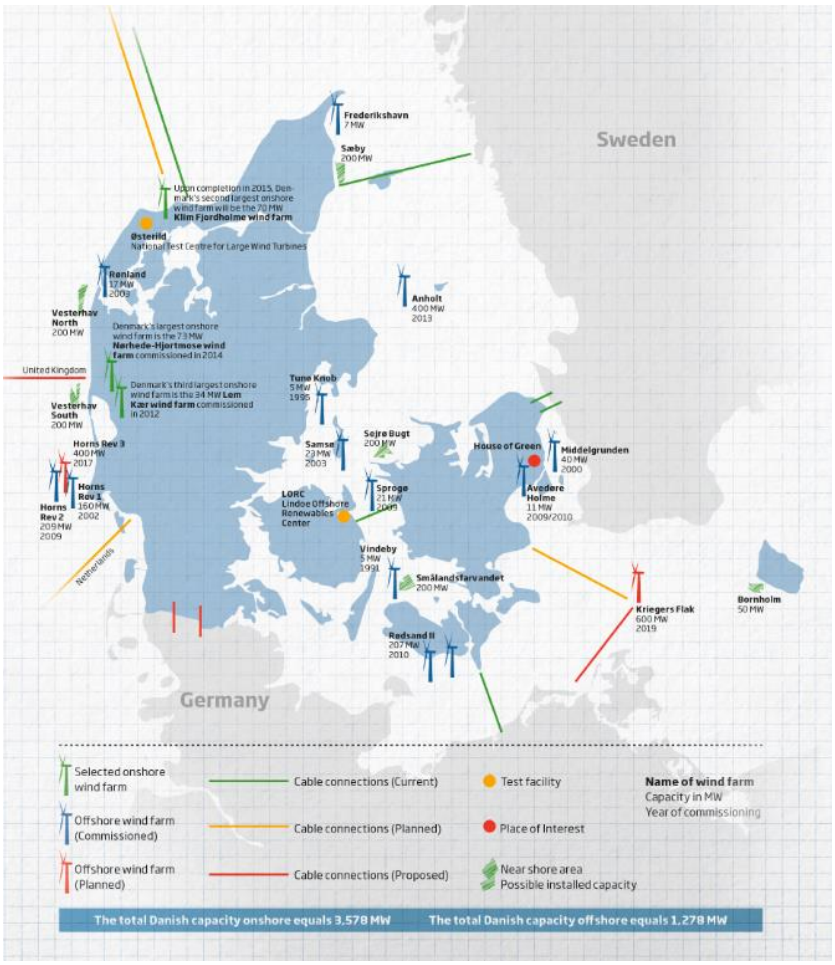

Figure 1: Location of commissioned and planned Danish offshore wind farms.

Sweden also features some existing smaller coastal wind farms in the project area, mainly in the Kattegat and Öresund region. Others have been licensed, and several large areas, including one on Middle Bank, have been marked as National Interest Areas for offshore energy.

Swedish energy policy aims at a share of 50% renewable energy by 2020 and 40% reduction in emissions of climate gases (compared with 1990) for the non-trades sector. The government has also decided on a planning framework for wind power of 30 TWh by 2020, of which 10 TWh is to be produced at sea and 20 TWh onshore. The planning framework is not a production objective; instead, it means that there should be the scope to make the production of 10 TWh of offshore wind power possible. At present, the production from offshore wind farms only represents a small proportion of the Swedish electricity production and in 2013 amounted to approximately 0.4% of the total energy production. Recently, five sea-based wind farms with 81 turbines in total are in operation. Six additional offshore or nearshore wind farms hold all permits, but are not constructed yet.

However, there are several permits for the installation of offshore wind farms that have not been used due to inadequate market conditions. These permits correspond to a total annual electricity production of around 8.8 TWh, which should be set against the planning framework of 10 TWh by 2020. In addition, there are ongoing permit applications corresponding to several TWh of installed power.

The Swedish Energy Agency has reported national interests in offshore wind farms based on criteria such as average annual wind, depth and size of area. These national interests largely correspond to existing and planned wind power projects. A larger pilot plant for wave power is under construction on the west coast. The plant is being built in stages and is expected to be completed by 2020.

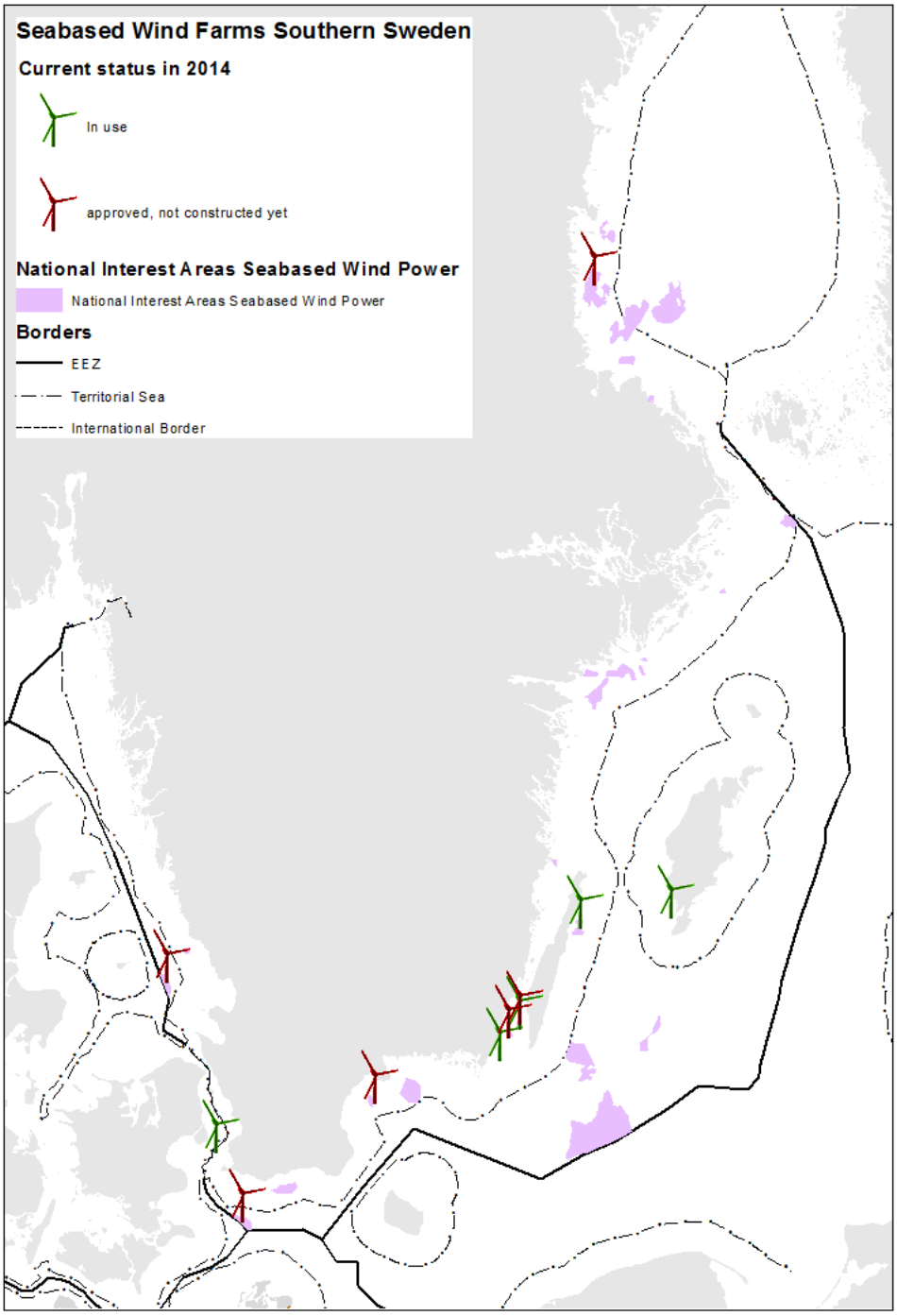

Figure 2: Map of Swedish offshore wind farm sites and National Interest Areas (map by BSH based on GIS data provided by SwAM).

In **Germany** in 2002 the Federal government adopted a Strategy Paper on Offshore Wind Energy including a development objective of 25 GW offshore wind energy by 2030. This objective has been confirmed by the Energy Strategy Paper of 2010. In 2014 offshore wind development targets for 2030 have been reduced from 25 GW to 15 GW to better reflect progress to date and to reduce costs to consumers. The previous target of 10 GW by 2020 has also been scaled back to 6.5 GW. The majority of German offshore wind farms will be realized in the German North Sea EEZ. By the end of 2015 approx. 700 turbines with a capacity of 3,000 MW have been installed, 90% in the German North Sea and 10% in the Baltic Sea.

So far, in Germany two offshore wind farms have been implemented in the Baltic Sea. One small project, Baltic 1, with 21 turbines and an installed capacity of 48 MW (7 km²) has been realized in the territorial sea in 2011. The second one, EnBW Baltic 2 with 80 turbines and a capacity of 288 MW (27 km²), with respective cable connections has been set into operation in September 2015 in the Kriegers Flak area. There are two additional licensed projects in Western Adlergrund (which like Kriegers Flak is an MSP priority area for offshore wind energy). But also outside these priority areas several more project applications, mainly in the area west of Adlergrund, have been submitted. In the territorial sea of Mecklenburg-Vorpommern (M-V) another project, Arcadis Ost 1, on the border to the German EEZ has been licensed. In the 2nd draft version of the revised Spatial Development Plan for the territorial sea of M-V two large areas in the Western part of the territorial sea have been designated as priority areas for offshore wind energy along with a small reservation area.

With the Combined Grid Solution project in the Kriegers Flak area, a project of common interest (PCI) partly financed by the EU, the first connection of three wind farms in two countries (DE and DK) with links to both main land grid connection points will be implemented, providing also for connection of a Swedish wind farm should the approved project be resumed.

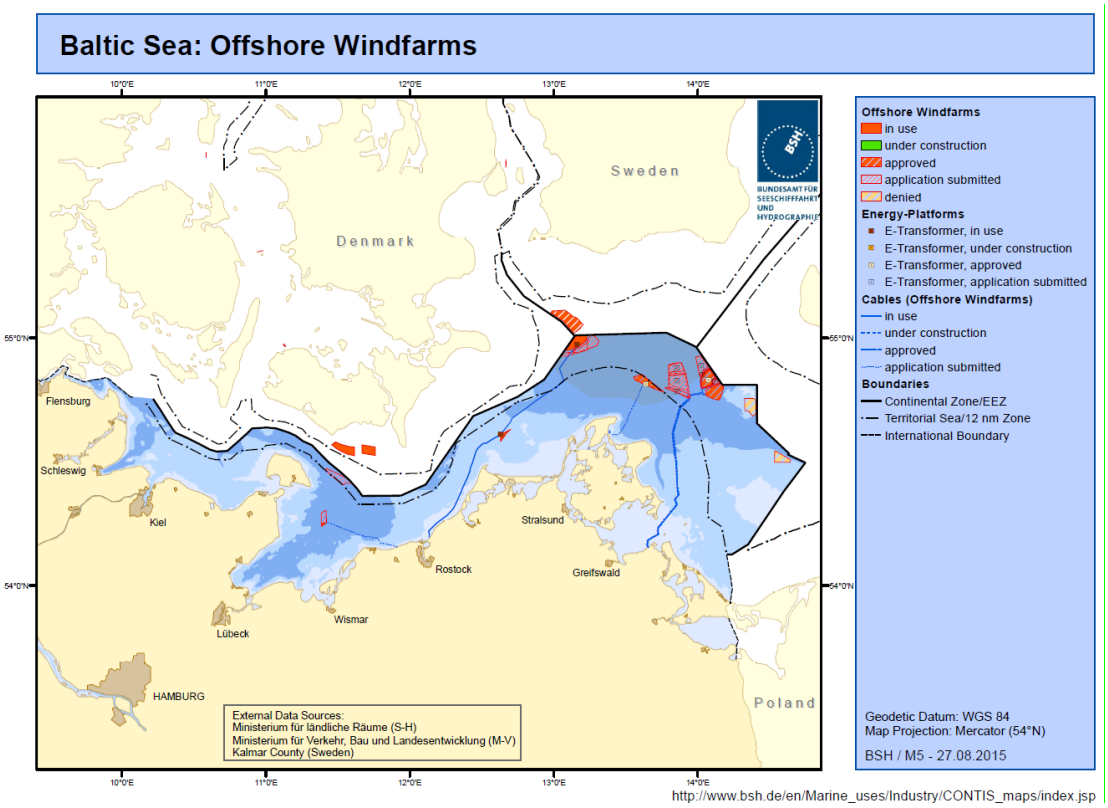

Figure 3: Offshore Windfarms in German waters by status (source: BSH).

In **Poland** there are not any offshore wind farms operating or under construction yet. The main strategic document with regards to the development of the energy sector in Poland is the Strategy of Power Safety and Environment. The strategy indicates among others that the share of renewable energy sources will increase - mainly by wind power plants (by 2030 installed capacity will amount to approx. 8,900 MW). The National Action Plan in the field of renewable energy is so far the only government document including estimates for the development of this sector. According to this, the total expected installed capacity of offshore wind projects in 2020 may reach 500 MW.

Until November 2014, 75 applications were submitted in order to obtain the location permit. 37 permits were issued, 23 of them remained in force. Development areas with projects holding permits reserving space for further research and subsequent construction in the Polish EEZ are situated northeast of the Odra Bank (227 km²), northeast of Slupsk Bank (1,081 km²) and on the

Southern Middle Bank (568 km²). The Polish Association of Wind Energy (2013) predicts up to 6 GW installed capacity in a fast growing scenario.

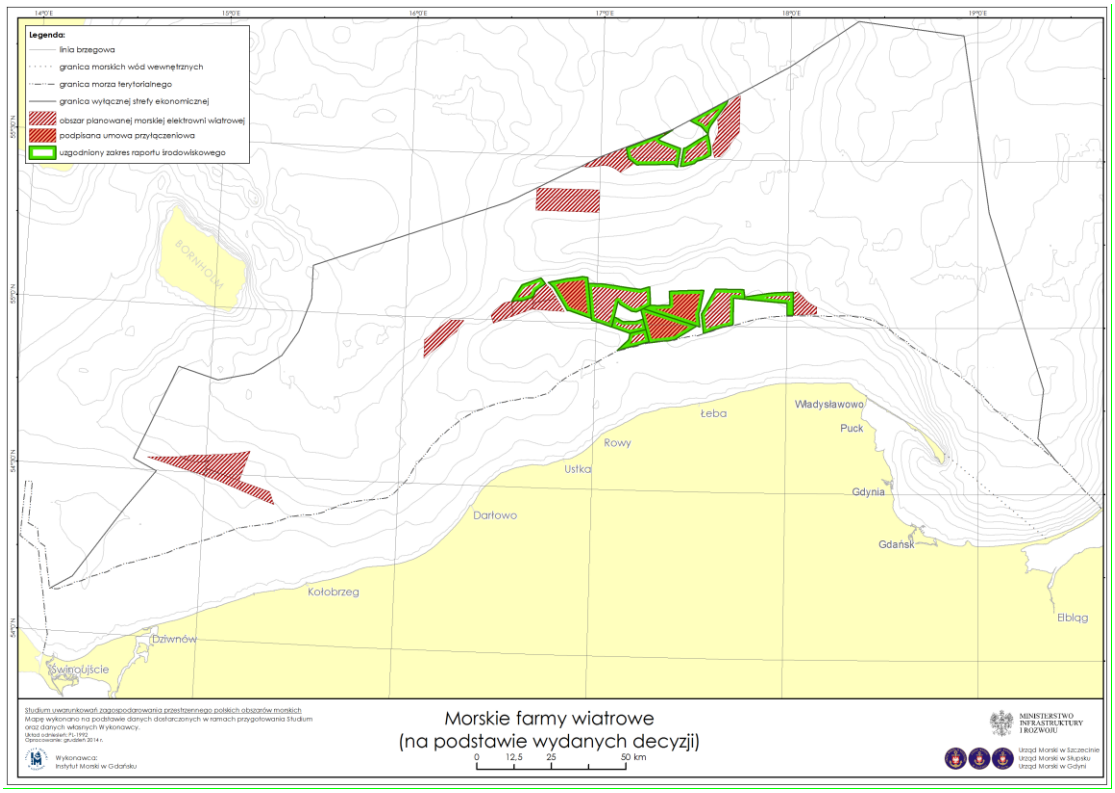

Figure 4: Current location decisions for offshore wind farms in the Polish EEZ (green lines show the projects with environmental procedure in place), 2015.

Until now only Germany has designated areas for offshore wind energy in their respective spatial plans for the territorial sea and the EEZ. But applications may also and have been made for areas outside of these areas - save for the Natura2000 areas. Denmark has no MSP implemented yet, but has done sectoral planning and respective political decisions, with new sites now being / having been on tender and further detailed planning within these areas by the successful tenderer. Sweden has identified National Interest Areas for Offshore Wind Energy in their preparation for MSP, to be further assessed and planned in detail at a later stage. Poland has given out location permits for offshore wind energy plants based on mainly sectoral planning, with only some restricting and limiting criteria considered –with corridors for cable connections to the terrestrial grid and an initial marine grid.

Regulations to be considered

The key international legal agreement for the marine area is the UN Convention on the Law of the Sea (UNCLOS) that aims at ensuring safety and efficiency of maritime traffic. But UNCLOS only provides general rules, no detailed regulations. So far there is no specific international legal framework containing explicit provisions or regulations for renewable offshore installations.

On the other hand several international instruments can impact the deployment of offshore wind energy and influence the location of offshore wind installations or the licensing procedures.

- With respect to UNCLOS the coastal state is allowed to deploy offshore renewable energy projects anywhere within its EEZ. The coastal state cannot control the laying of cables by other states passing through its EEZ. UNCLOS also contains a general obligation for states to protect and preserve the marine environment.
- IMO: Sea-lanes and traffic separation schemes are considered as excluded zones in the sea. In 1989 IMO adopted standards for the removal of offshore installations in the EEZ.
- Convention on Biological Diversity (CBD), Birds and Habitats Directive: the designation of marine protected areas under CBD, Special Areas of Conservations according to Habitats Directive or Special Protected Areas under the Birds Directive can influence the location of energy infrastructure. Both directives do not explicitly exclude energy installations within protected areas. However both directives require an assessment of plans or projects that may significantly impact Natura2000 sites.
- European and national energy policies with regard to increase of share of renewables and share of “clean energy” of entire electricity consumption
- EU MSP Directive
- EU SEA and EIA Directive
- Existing national MSPs and sectoral plans for spatial development of “green energy”, sectoral plans (DE) for offshore grid connections (Spatial Offshore Grid Plan)
- DE: Marine Facilities Ordinance , Maritime Spatial Plans (EEZ and TS), Spatial Offshore Grid Plan (EEZ), Environmental Impact Assessment Act (EIA Act) and other technical regulations, standards and requirements
- DK: Renewable Energy Act; establishment of offshore wind turbines can follow two different procedures: a government tender procedure run by the Danish Energy Agency; or an open-door procedure.

- SE: Exclusive Economic Zone Act, Continental Shelf Act, Planning and Building Act, Environmental Code and associated ordinances, Heritage Conservation Act, fishing legislation; Construction of wind farms in the EEZ requires permission according to the Exclusive Economic Zone Act. When the application is examined, certain parts of the Environmental Code are also applied. Permission can also be required according to the Continental Shelf Act for seabed investigations of wind farm sites and cable routes.
- PL: Act on Polish maritime areas and maritime administration, Act on access to environmental information and environmental impact assessment, Building Act, Energy Law Act; Polish Maritime Administration is issuing body for permits for offshore wind farms, subsea cables and pipelines (location decisions). Development of the OWF is mainly regulated by the Act on maritime areas. Due to the Act offshore wind farms can only be erected in the Polish EEZ.

Main actors in this sector

- Public / licencing authorities (sectoral, spatial planning)
- Wind farm developers;
- transmission system operators (TSOs);
- pipeline developers and operators
- oil and gas industry
- business associations
- NGOs;

Spatial needs

According to DG Mare (2015) one offshore wind turbine needs more or less 1 km² of space to another one depending on its size and wing span (6 MW/km²; cf. DG Mare, 2015: Energy sectors and the implementation of the MSP Directive: Information for stakeholders and planners). The German Spatial Offshore Grid Plan for the Baltic Sea EEZ also includes a calculation method for determining the expected offshore wind capacity for single wind farm clusters. This so called “area approach” is based on average capacity values of all applications for offshore wind farm projects in the German Baltic Sea EEZ. The grid plan takes 2 turbines (7 MW) per km² as a basis (the average value of all approved North Sea projects amounts to 1.9 turbines per km²). This illustrates the relatively large area consumption of offshore wind farms (BSH, 2014).

Offshore wind farms can only be realized in areas outside of main shipping routes. These areas need to be accepted by shipping administration for marine safety and efficiency issues. The distance to main shipping routes should be sufficient to secure safety and efficiency of

marine traffic as well. A limiting factor can be the water depth raising the investment and operation costs. The acceptable depth is up to 40–45 m, preferably less. As described above also seabed and ground conditions will contribute to the decision to plan a project in a particular area due to potential technical challenges.

In comparison to wind turbines the cables laid beneath the seabed only affect the area above the seabed during construction or repair work. Grid connections need to be planned on acceptable routes with regard to shipping routes, sand and gravel extraction areas and other competing/non-compatible activities or environmental issues.

Conflicting Issues/Synergetic Issues

Offshore energy production and transport, with its large-scale permanent and fixed infrastructure newly introduced into the marine environment, with additional ship traffic, non-compatible activities, a wide range of emissions and disturbances, faces many potential and factual (spatial) conflicts with existing activities and conservation objectives. Along the EEZ borders in the SWB case area these are mainly:

- shipping → probability of ship collisions may increase
- fishery → important fishing areas may be reduced → potential socio-economic losses
- tourism/ recreation → disturbance of the natural landscape
- sand and gravel extraction
- defence/ military uses
- existing subsea cables, incl. data cables, pipelines etc.
- nature protection and conservation areas (see below)

Environmental impacts from current use

Although offshore wind energy is an important renewable energy source, there are some concerns about the environmental impacts of offshore wind farms.

One of the most severe effects relates to the impact of pile-driving noise during construction of wind turbines on marine mammals and most notably harbour porpoises. The sound levels from pile-driving, when the single foundation piles are hammered to the seabed, are well above the tolerance limits identified by scientists for these animals and can cause temporary hearing impairment or even severe injury. At greater distances – up to 20 km or more for pile driving without noise mitigation – the sound pulses trigger stress and behavioural response resulting in short or longer term avoidance of the area. That is why in the German EEZ pile-driving is only allowed by implementing noise mitigation measures.

The Baltic Sea provides a resting, feeding and wintering habitat for numerous seabirds. Responses to offshore wind farms vary from species to species. While some gull species appear to be attracted to wind farms, other seabird species occur less frequently in wind farm areas after construction than before. Disturbance-sensitive divers in particular largely avoid the area of offshore wind farms. The risk of displacement from the area causes loss of quality habitat and changes in migration routes due to barrier effects. Apart from displacement effects offshore wind turbines can increase the risk of death from direct collisions for birds and bats.

Construction activities at the wind farm site and the installation of subsea cables can have direct effects on the seabed and sediments. Disturbance of the seafloor may also increase turbidity, which can affect the abundance and diversity of benthic organisms. Construction and presence of foundations can also lead to changes of current dynamics and sediment conditions. A further potential negative impact relates to pollution through potential fuel spills, chemical residues from scour protection or anti-corrosive protection.

Appropriate siting of wind turbines and power cable routes along with effective mitigation strategies can help to reduce negative environmental impacts.

There are also potentially some environmental benefits of offshore wind farms. The turbines may act as “artificial reefs” and increase biological productivity in the vicinity. The presence of hard structures can provide habitat for particular species. Fishing is likely to be prohibited around the turbines for safety, which may locally increase fish abundance. These processes can consequently result in attracting predators.

Future needs and use

As offshore wind energy represents a quite new development in the marine area a number of future projects are planned close or along the border:

- Kriegers Flak (DE, DK, SE): in addition to the already operating German wind farm plans in the Danish and Swedish EEZ to construct wind farms; application submitted for Combined Grid Solution that is supposed to interconnect German and Danish wind farms.
- Adlergrund (DE, DK, SE): three licensed wind farms in German EEZ and territorial sea starting construction in 2016/2017 as well as several applications in German EEZ; no current plans to utilize the Danish Adlergrund area for offshore wind energy development.
- Middle Bank (SE, PL): future plans to build offshore wind farms on both sides

- North of Odra Bank (PL, DE, DK): applications for offshore wind farms
- Pipeline projects: plans for Baltic Pipe to connect PL to DK, plans for additional Nord Stream pipeline

Development trends and risks depend on general sector development, technical progress as well as changing political framework. With increasing maritime traffic, and trend towards larger vessels, shipping routes may need wider safety buffers to offshore installations. With more and more fixed infrastructure it becomes more and more difficult to identify acceptable routes for additional linear infrastructure such as pipelines and cables. On the basis of technical progress turbines become bigger and higher and their wingspan larger. That results in larger wind farm areas because the necessary area between the single turbines increases and may lead to major impact on migrating birds. Technology is also being developed for placement at greater depths than is possible today. Also development of alternative foundations, e.g. floating wind turbines or gravity foundations, continues.

Potential future conflicts may arise from

- growing and cumulative environmental impact
- growing impact on shipping due to increasing risk of collisions and spatial restrictions
    - need for detours
- growing impact on fisheries, leisure traffic due to spatial restrictions
- conflicts with sand and gravel extraction due to spatial restrictions

Potential opportunities can be seen in developing a common offshore grid.

Trans-boundary implications

Trans-boundary implications and potential conflicting areas of the energy sectors current and future uses include

- Shared natural features and resources such as sandbanks with similar planning objectives in neighbouring states
- Cross-border grid connections
- Windfarms close to national borders with impact on neighbouring marine protected areas

- Windfarms impacting international shipping routes

Relevant geographical areas

In order to identify geographical areas to focus on within the project the project partners collected comprehensive data and illustrated by map and table which (sectoral) interests exist in the single areas. Seven focus areas have been selected that are of special interest for the project and will be further examined. Several of the relevant focus areas include energy issues.

On the one hand areas like Middle Bank (PL/SE) have been selected that show quite common interests/ synergies on both sites of the border. On the Middle Bank offshore wind energy development is a common interest both in Poland and Sweden. Also the analysis of the Kriegers Flak (SE/DK/DE) area shows quite common interests among the neighbouring countries.

On the other hand areas with conflicting interests have been selected, such as Adlergrund (DE/DK/PL) or Odra Bank (PL/DK). In the German Adlergrund area there are some licences for wind farms and grid connections, whereas in the bordering Danish area former plans for wind energy development have not been pursued. Both in the German EEZ as well as the Danish EEZ there are located large nature conservation areas that may be affected by the offshore wind development. In the Odra Bank large parts of the area are of great importance for nature conservation. Thus in the German EEZ two applications for offshore wind farms have been denied, whereas on the Polish side still some applications for offshore wind farms exist.

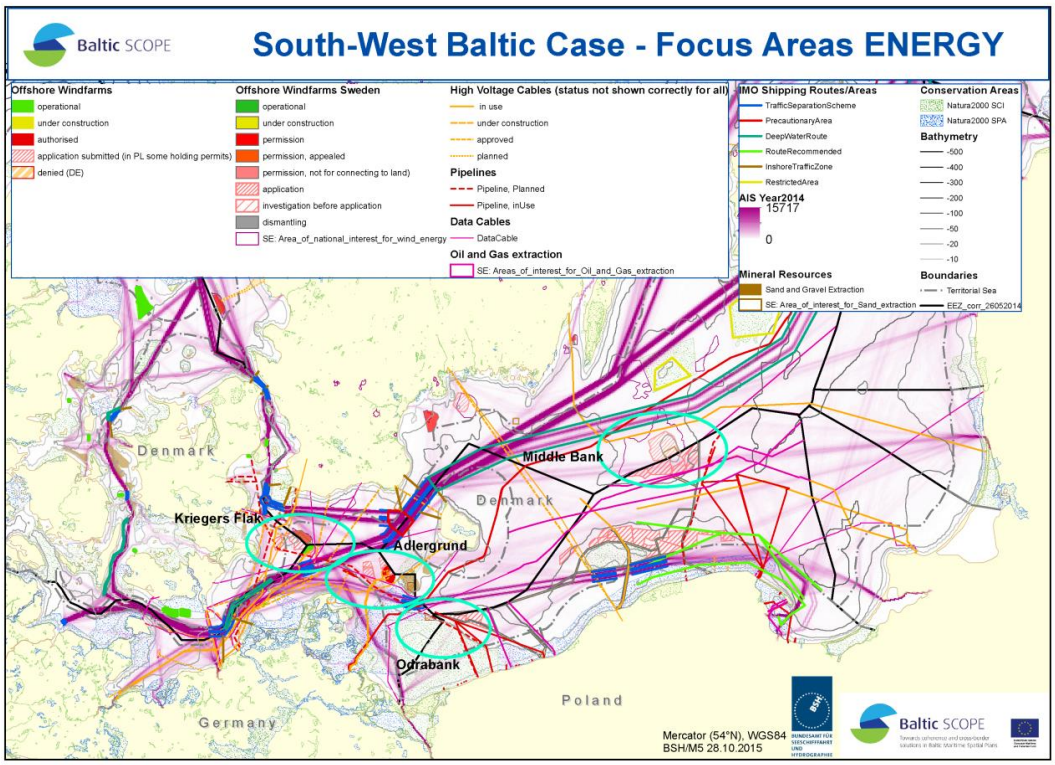

Figure 5: Identified Focus Areas with regard to the energy topic.

Planning evidence

During the first period of the project comprehensive data and information have been collected. The information obtained comprises maps or GIS data and information from authorities on offshore wind energy, power cables, pipelines, oil and gas rigs, potential oil fields etc. Especially data from licensing procedures for infrastructure projects form an important knowledge base.

Additionally existing MSPs and sectoral plans as well as respective plans under development (drafts) represent important planning evidence.

Some information is still lacking. In particular more detailed information on the situation in focus areas is missing. For example, project outlines, planning regulations, shipping density and sensibility and environmental aspects need to be identified in more detail. Best way to compile the missing information is to contact authorities, data centres or gather relevant information from

publicly accessible sources (industry), current windfarm and cable projects, pipeline developers or oil and gas industry.

Motive/discussion for including this topic/sector in the project

In particular the Western part of the project area is very fragmented in terms of countries involved, distribution of islands and straits. Sometimes there are only narrow strips of EEZ, sometimes territorial sea is bordering territorial sea directly. Countries share certain natural features that seem to be suitable for offshore development, such as shallow areas, or encompass the same resources (e.g. oil and gas, sand and gravel extraction). Energy links compete with other cross-border and transnational activities such as shipping or fisheries. In the Eastern part of the project area – mainly along the Swedish-Polish border, interest areas are more extensive, with less direct competition of other activities, but sometimes with adverse planning targets on either side.

The planning area as a whole and again in particular the Western part sees a lot of major and very highly frequented shipping routes – both transit traffic along the main Pan-Baltic routes and secured by IMO traffic separation schemes, and cross-connections, often maintained by regular ferry lines both for passengers and cargo. Available space for spatially competing or incompatible activities such as fixed wind energy installations is rare – and needs to be identified, outlined and used very carefully.

Since energy production and transport inevitably needs linear infrastructure to connect to the coast, or from one country to another, ideally “matching” spatial designations, rules and regulations need to be set, that do not impede on other important activities such as shipping in an unacceptable way. Spatial designations or regulations might even provide for - with respective essential economic and regulatory issues in place - future developments such as a transnational / Pan-Baltic offshore grid.

Thus it seems most advisable to address cross-border energy planning issues bi- or multilaterally, and seek to reconcile interests and find satisfactory solutions.

The discussion on focus areas that should be addressed within the project has already been conducted. Several focus areas include energy issues, e.g. Kriegers Flak, Adlergrund or Middle

Bank (see map above). The next step is to decide which topics should be discussed in more detail in those areas.

Thematic working groups should be based on national input (information and data gathering) but preferably be conducted with representatives from all countries affected. Stakeholders to be invited and/or consulted should be relevant within their field of work with regard to the focus area and directly involved in these areas, and not so much representatives from Pan-Baltic or European networks (grid operators, offshore wind farm and pipeline developers, shipping representatives, etc.).