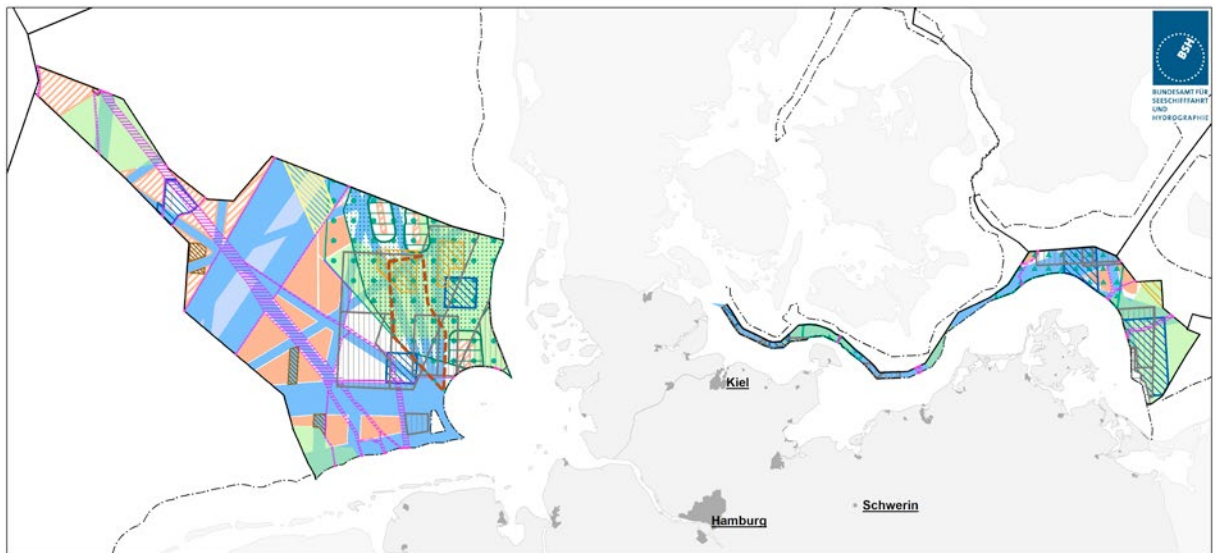




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Spatial Planning in the German Exclusive Economic Zone (EEZ)

Supporting Document to the Maritime Spatial Plan for the EEZ 2021



Hamburg, February 2023

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Foreword

If different sectors such as transport, business, and nature conservation want to access the same space, conflicts are inevitable. The task of spatial planning is to contribute to overcoming these spatial conflicts by coordinating and providing for the different demands on space. The most important instrument in this context are maritime spatial plans which allocate specific areas to spatially competing uses.

On 1 September 2021, the spatial plan for the German Exclusive Economic Zone (EEZ) in the North Sea and the Baltic Sea came into force as an ordinance of the Federal Ministry of the Interior and Community¹. The plan replaces the two previous plans for the North Sea and the Baltic Sea from 2009.

The spatial plan preserves the natural structures and functions of the seas and makes provisions for the various current and future uses of maritime space and its protection in a European context. It balances different demands and interests by considering environmental, economic, and social concerns in line with the Sustainable Development Goals of the United Nations.

This document is intended to place the spatial plan in a wider context and to explain its effect in more detail with regard to current and future spatial development.

¹ <https://www.gesetze-im-internet.de/awzrovanl/BJNR388610021.html>

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1 Introduction

Maritime spatial planning

Maritime spatial planning is the planning of the use of marine spaces. As in the case of terrestrial spatial planning, maritime spatial plans set out spatial designations and regulations as a framework for guiding activities in the sea, in particular economic activities. Sustainability in terms of ecological, economic, and social concerns should be paramount, and the carrying capacity the ecosystem should not be exceeded.

Specifically, the spatial plan for the German EEZ in the North Sea and the Baltic Sea represents the essential overarching decision-making basis for sectoral planning as well as for the approval of projects and activities at sea, in particular for the construction of fixed infrastructures. In this context, maritime spatial planning is a forward-looking planning instrument that is intended to regulate the ever-increasing intensity of use and coordinate interests of use and protection.

This objective is to be achieved by

- the coordination of current and future spatial demands
- the designation of appropriate areas, in particular for economic and scientific uses as well as for the marine environment and for other concerns
- a prioritisation of sea-specific uses and functions
- the consideration of ecological, economic, and social concerns

- the efficient and optimised use of areas allocated to uses, especially sites for fixed infrastructure; this also includes the reversibility of fixed installations
- the holistic consideration of the different activities in the sea with their interrelationships and cumulative impacts
- the application of the ecosystem approach and the precautionary principle.

Relationship between spatial planning and sectoral planning

Maritime spatial planning is a superordinate planning in the sense of an overall spatial, regulatory view. This distinguishes it from sectoral planning, which regulates specific individual concerns. In order to ensure sustainable use of the EEZ, spatial planning and sectoral planning must interact and complement each other in their respective regulatory competences. In doing so, it is important to respect the limits of spatial planning: Spatial planning should not replace sectoral planning but rather support it.

The capacity to make specific regulations for nature conservation (e. g. the designation of marine protected areas) thus lies solely with nature conservation sectoral planning. The relevant authorities designate marine protected areas (e. g. on the basis of nature conservation law). Maritime spatial planning can support this.

For example, by defining priority areas for nature conservation with the consequence that other uses incompatible with nature conservation are excluded there (i. e. the space is reserved for future nature conservation functions).

In the case of offshore wind energy, a sectoral site development plan guides where in the EEZ wind farms are to be planned and implemented and within which time frame. Maritime spatial planning can support this by identifying priority areas for offshore wind energy in which other, incompatible uses are subsequently excluded

so that these sites are kept free for future wind energy development.

Furthermore, spatial planning has the capacity to coordinate competing sectoral plans or competing uses in the area concerned. A spatial plan can therefore designate areas for two or more compatible uses (multiple uses). It can also stipulate restrictions to ensure other uses are not disproportionately affected by the construction or operation of priority uses in certain areas.



Offshore wind farm with FINO3 met mast

2. Effects/implementation of the designations in the spatial plan for the exclusive economic zone (EEZ)

2.1 General

Spatial plans lay down designations for the organisation, safeguarding, and development of space that are binding for subordinate public authorities (spatial planning objectives) or which are to be taken into account in their decisions (principles of spatial planning).

Spatial planning objectives can be defined either purely textually or shown cartographically as “priority areas”. Different concerns and demands on space have already been considered here and conclusively assessed during the preparation of the spatial plan. In the priority area for a specific use or function, other uses that are incompatible with the priority use or function are not permitted (Section 7, para. 3, sentence 2 number 1 ROG) – this means that this area is kept free for the priority use.

Principles are statements on the development, order, and safeguarding of space that are to be taken into account in the context of consideration or discretionary decisions. They can also be designated purely textually or shown cartographically as “reservation areas”. In the reservation area, in the event of a conflict of interest with other uses or functions, greater weight is attached to the designated use or function (Section 7, para. 3, sentence 2, number 2 ROG).

The designation of priority or reservation areas does not mean that the respective use or function in the planning area may not take place outside these areas. However, the use/function must assert itself against all other competing uses, whilst the priority area is reserved for it or whilst it is given greater weight in the reservation area when competing uses are considered.

Area designations therefore facilitate the implementation of the designated uses and functions.

Designations can also be made only for a “specific period of time or until the occurrence of certain circumstances” and thus be specified as temporary or conditional (Section 7, para. 1, sentence 2 ROG). The spatial plan for the EEZ makes use of this: Some of the reservation and priority areas have been designated with a time limit depending on findings by then. For some uses, their compatibility (e.g. of fishery and wind energy, and, if necessary, the conditions for this) are still to be determined in individual procedures.

Existing projects such as wind farms already in operation or facilities for the extraction of raw materials outside of area designations continue to exist and are not covered by the designations of the spatial plan for the EEZ.

Direct addressees of the plan within the meaning of Section 4 ROG are public bodies: They must observe or take into consideration the designations of the spatial plan

- ▶ in their spatially significant planning and measures/projects
- ▶ in decisions on spatially significant planning and measures/projects of other public bodies
- ▶ in the case of decisions on spatially significant plans and measures or projects by persons under private law provided that the approval is granted by way of planning approval procedure or by way of planning permission with effect of planning approval procedure.

The plan is not directly aimed at private individuals. However, because the respective authority must observe or take into consideration the designations of the spatial plan in a planning approval procedure, the spatial plan also has an indirect effect on private individuals – in particular companies – who use the EEZ or plan projects there. The effects of the spatial plan are detailed in the following chapter.

2.2 Impacts of the spatial plan on individual uses and users

2.2.1 Shipping

The “safety and efficiency of shipping” are to be given special consideration in the spatial plan. According to the Convention on the Law of the Sea (UNCLOS), recognised traffic routes important for international shipping may not be adversely affected by artificial islands, installations, and structures as well as the safety zones surrounding them.

The basis for securing space for shipping is the current traffic and the traffic separation zones defined by the International Maritime Organisation (IMO). In addition, developments for north-bound routes expected in the course of climate change year-round ice-free shipping routes through the Arctic are taken into consideration.

The spatial designations for shipping do not directly affect shipping. However, the use of large areas by offshore wind energy can indirectly lead to an increase in traffic within the priority areas for shipping. Vessels that previously also travelled outside the main routes could be

forced to bypass large areas because they are closed to shipping. In order to mitigate this effect, possibilities to enable smaller vessels up to 24 m in length to traverse offshore wind farms are being discussed as part of the approval procedures of the respective authorities and by general ruling of the Waterways and Shipping Administration. This would also benefit fishing vessels or recreational boats. Special conditions apply to military vehicles.

Shipping is not restricted on shipping routes that run through priority areas for nature conservation.

The addressees of the review mandates in the designations for temporary priority or reservation areas for shipping or offshore wind energy are the authorities, ministries, and licensing authorities named in each case. The temporary priority area for shipping in route SN10 is a special case: Here, the situation is to be analysed by Germany with the Netherlands and Denmark on a cross-border basis, and solutions such as traffic management measures are to be worked out; these would have to be confirmed by the IMO. If the concentration of directional traffic is agreed as planned, other uses could then take



Shipping in the North Sea

(© BSH)

place in the "central dividing strip". Otherwise, this space would continue to be kept free as a reservation area for shipping.

The principle that shipping should be carried out under sustainability aspects does not directly result in any additional requirements for shipping. However, the aim is to encourage the responsible authorities to further develop shipping from the perspective of sustainability. A diverse bundle of measures is conceivable here – from environmentally friendly traffic-guiding measures to the optimisation of pollutant emissions. Such measures as well as the evolving state of science and technology from an environmental point of view will become relevant for shipping in the medium term – especially with respect to navigating in nature conservation-sensitive areas.

2.2.2 Offshore wind energy

The area designations in the spatial plan for the EEZ in the North Sea and the Baltic Sea are a basis for sectoral planning within the framework of the Site Development Plan (SDP), the revision of which began at the end of 2021.

On the basis of the Offshore Wind Energy Act (WindSeeG)², the Federal Maritime and Hydrographic Agency (BSH) performs the task of central development and, on behalf of the Federal Network Agency (FNA), the site investigation of areas for the construction and operation of offshore wind turbines. Within the framework of a central model, a staged planning and tendering process takes place. In the first step, spatial and temporal provisions for offshore wind energy sites are specified in the SDP. The next step is the site investigation of the sites desig-

nated in the SDP. After the site investigation has been carried out, the sites are auctioned off in a competitive procedure in which the information from the preliminary investigation is made available to the bidders. The successful bidder will be able to install wind turbines on the site after the approval procedure, is entitled to the market premium, and may use the connection capacity. The central model applies to the commissioning of offshore wind turbines from 2026 onwards. In the central model, the SDP is thus the controlling planning instrument for the synchronous development of offshore wind energy and its grid connections at sea.

The Waterways and Shipping Administration additionally issues general rulings with regulations on navigation in wind farm areas.

The developers of offshore wind farms are indirectly affected by the SDP because they have to comply with planning requirements, in particular those set out in the SDP, site suitability assessments and the invitation to tender for individual project sites during actual project development (only in the EEZ) and in their application documents. They also have to meet the requirements (ancillary provisions) set out in the planning



Installation vessel for offshore wind turbines with safety vessel
(© BSH)

² <https://www.gesetze-im-internet.de/windseeg/WindSeeG.pdf>.

The Offshore Wind Energy Act (WindSeeG) is currently being amended.



Figure 1: Central model for the development of wind energy

approval for construction, operation and decommissioning of turbines after the end of use.

Offshore wind energy is not limited to the defined priority areas and reservation areas. In principle, it is also possible on other sites within the EEZ. However, the construction and operation of offshore wind energy generation facilities is unlikely to be compatible with general shipping traffic on the main routes through the North Sea and the Baltic Sea and is thus excluded in the areas concerned. This is also true with regard to certain military uses such as submarine training areas.

Whether offshore wind farming is compatible with other uses and whether multiple use of an area is possible can usually be answered only after a case-by-case assessment.

In addition to the areas designated for wind energy, the maritime spatial plan contains spe-

cifications that aim to balance wind energy with other uses/functions of the EEZ:



Offshore wind turbines in the Baltic Sea with service vessel

(© BSH)

- In the North Sea, an area has been temporarily designated within the Sylt Outer Reef and in the priority area for loons in which the construction of turbines above the water surface is not permitted until 31 December 2022; any applications for the approval of wind farms on this site would have to be rejected.
- Based on the principle of sparing use of sea space, the Site Development Plan and the project approval notices will stipulate specific values for the minimum power yield to be achieved per site.
- According to the corresponding designations of the spatial plan, project approval notices for wind farms will contain ancillary provisions – in particular on the following topics:
 - ▶ Obligation to deconstruct wind turbines at the end of their use,
 - ▶ Concrete regulations to minimise the adverse effect of wind turbines on other uses,
 - ▶ Obligation to transmit the findings from the monitoring of specific wind farms to the BSH
 - ▶ The toleration of installations that are necessary from a military point of view (e. g. transmitters or receivers on wind turbines) provided that turbine operation is not impaired more than necessary as a result
 - ▶ Measures for the greatest possible reduction of noise input during the construction of wind farms,
 - ▶ Temporal coordination of construction works of wind turbines and spatially related installations
 - ▶ Concrete legal requirements/measures to exclude a significantly increased collision risk of birds with wind turbines during mass migration events up to and including the shut-down of wind turbines; this applies only to wind turbines erected in the area of the bird migration corridors designated in the spatial plan.

2.2.3 Subsea cables and pipelines

Subsea cables and pipelines within the meaning of Chapter 2.2.3 of the maritime spatial plan include energy and telecommunications cables as well as pipelines. It does not include cabling within offshore wind farms.

The designations of the spatial plan on subsea cables and pipelines in the EEZ are primarily directed at planning and approval authorities for subsequent planning and approval procedures. For power cables that transport electricity from wind farms in the EEZ, this is the BSH; for interconnectors, telecommunications lines, and pipelines, this is the BSH and the state mining offices in Lower Saxony or Mecklenburg-Vorpommern. Separate approval procedures are conducted for sections of subsea cables and pipelines that run in the territorial sea.

Indirectly affected are the respective project developers, who must observe or take into consideration the designations of the spatial plan and, if applicable, subsequent procedures (e. g.



Cable laying ship

(© BSH/Dominic Plug)

for power lines from the EEZ of the site development plan) in project development and implement the resulting ancillary provisions in the approval notices.

In these procedures, the routing to be approved must be coordinated according to the corresponding designations in the spatial plan. This concerns routing through the pipeline corridors and to the gates, the distances to be observed and, if necessary, parallel routing to other installations. It also concerns the location of cables and pipelines in shipping routes, the crossing of shipping routes, and avoidance of routing through protected areas or particularly sensitive habitats.

Accordingly, ancillary provisions in the approval notices can include specific regulations to minimise the adverse effect of subsea cables and pipelines on other uses (e. g. with regard to shipping and fishery) as well as on the marine environment:

- ▶ Designations for the cable laying procedure, the burial depth and the overlap,
- ▶ Designations for required crossing structures,

- ▶ Temporal coordination of laying work for subsea cables and pipelines in spatial proximity to each other,
- ▶ Legal requirements for preventive and mitigation measures during the construction and operation of the installations with regard to adverse effects on the marine environment as well as any possibly affected conservation objectives of nature conservation areas in the vicinity,
- ▶ Obligation to deconstruct after termination of operation,
- ▶ Obligation to transmit the findings from situation monitoring.

2.2.4 Raw material extraction

The extraction of raw materials is subject to approval according to mining law. The designations of the plan are thus directed in particular at the mining authorities responsible for this. Coordination with the concerns of shipping (represented by the shipping administration) for a possible stationary production facility for gas extraction is carried out within the framework of the respective approval procedure according to mining law. If such an installation is located in a reservation area for wind energy, the BSH must be involved; this means that spatial planning concerns must be taken into consideration in downstream planning and approval procedures. Further requirements result from nature conservation legislation for sand and gravel extraction in the reservation areas for sand and gravel extraction.

On the basis of the spatial plan, the following ancillary provisions are to be expected when granting a permit as well as when granting approval for an operating plan:



Trailing suction hopper dredger (© DEME Building Materials NV)

- ▶ Measures to minimise disruption to other affected uses, including shipping, fishery, and submarine cables and pipelines.
- ▶ Temporal or spatial restrictions on operations according to the sensitivity of the species and habitats present. In the priority and reservation areas for loons, the period from 1 March to 15 May of any given year must not be adversely affected by sand and gravel extraction.
- ▶ Legal requirements for extraction methodology and other conditions that may be required for sand and gravel extraction in order to preserve protected areas free for the regeneration of benthic habitats.
- ▶ Obligation to dismantle conveyor systems after termination of operation.

2.2.5 Fishery/aquaculture

In the Member States of the European Union, there is no national competence for the direct regulation of fishery. It has been transferred to the Common Fisheries Policy of the EU. Thus, no corresponding designations are made in the maritime spatial plan.

Possibilities as to whether and how fishery can take place within wind farms while still ensuring plant and operational safety are to be worked out in a scientific study by the end of 2023. The results can serve as a basis for the examination of co-uses within planning procedures downstream of spatial planning as well as for concrete ancillary provisions in the planning approval notices for individual wind farm projects.

The designation of the reservation area for Nephrops fishery has no direct regulatory effect on fisheries; however, in the event of competition between Nephrops fisheries and other spatially significant uses, fishing interests are to be given greater weight in this area.

In the context of planning and approval procedures for wind farms, the affected fishery can draw attention to the fact that, in accordance with the designations of the spatial plan, corresponding passage regulations are to be included as ancillary provisions in the decision.

There are currently no projects or applications for aquaculture in the EEZ of the North Sea and the Baltic Sea. However, the principle in the spatial plan has created an approach for examining the feasibility of future projects in the context of existing or planned wind farms.

2.2.6 Strategic uses

The reservation areas for scientific research identified in the plan are used primarily for fishery research by the Thünen Institutes. For this, towed stretches and sampling are carried out, and safe passage and access to regularly sampled stretches must therefore be safeguarded.

Where overlaps with areas for wind energy are defined in the spatial plan, research projects should provide findings on the extent to which the (new) site layout is suitable for fishery research (FoN3). Furthermore, in the case of joint



Measuring station North Sea II

(© BSH)

use with offshore wind energy, it must be possible to carry out fishery research to the same extent as before (FoN3, FoO3).

The designations on requirements for conducting research activities in the EEZ are directed at the respective public research institutions. In the case of projects requiring approval, conditions for measures are to be imposed, if necessary, according to the corresponding designations of the spatial plan:

- ▶ to ensure the safety and efficiency of shipping,
- ▶ to avoid adverse effects during the construction and operation of wind turbines
- ▶ to avoid the obstruction of military uses

- ▶ to coordinate the evaluation and protection of cultural assets with the responsible monument authorities.

The safeguarding of fixed research facilities and monitoring sites and regularly sampled areas that may be adversely affected by other uses must be taken into consideration by planning and licensing authorities in the procedures they carry out. If subsea cables and pipelines that run through the research areas are planned, the concerns of the affected Thünen Institutes must be given special consideration when weighing them against other concerns.

2.2.7 Military

In the EEZ of the North Sea and the Baltic Sea, large exercise areas have been established for use by the German Armed Forces and their NATO partners.

The training areas safeguarded in the spatial plan by the corresponding reservation areas are to be taken into consideration by the respective authorities – in particular in the context of planning and approval procedures for fixed infrastructures such as wind turbines, platforms, subsea cables and pipelines – and the military interests are to be given special weight. These differ depending on the type of exercise under water, on the water surface, or in the air.



A Federal Navy mine hunter during a military exercise

(© 2020 Bundeswehr/Friedrich Weishaupt)

3. Coherence of the designations in the spatial plan for the EEZ with the adjacent marine areas

The spatial plans for the German territorial seas and for the German EEZ in the North Sea and the Baltic Sea have the same legal system – in particular, the instruments such as spatial planning objectives and principles as well as prio-

riety and reservation areas with their different legal effects for subsequent planning and measures. Neighbouring states have different legal systems for spatial planning which is reflected in their spatial plans.

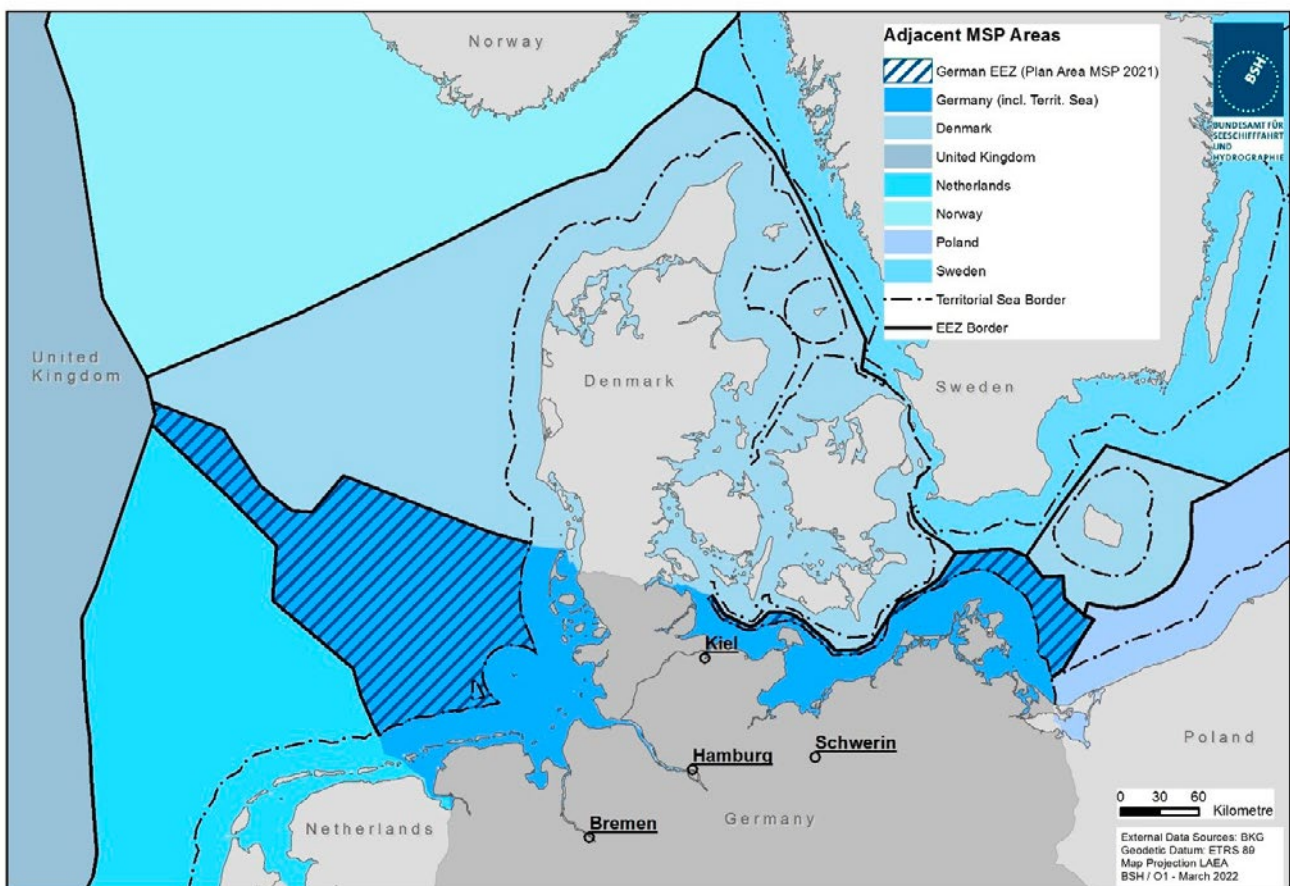


Figure 2: Overview of the exclusive economic zones and territorial seas in the North Sea and Baltic Sea

3.1 Status of planning in the German territorial sea

Lower Saxony

The currently valid State Spatial Planning Programme (LROP) of Lower Saxony dated 26 September 2017 has been in force since 2017 (Lower Saxony Law and Ordinance Gazette No. 20/2017, p. 378). In November 2019, the general planning intention for an amendment

procedure was announced. Following the cabinet resolution of 16 May 2022 on the draft LROP, the amendment ordinance was adopted by the state Cabinet on 30 August 2022 in accordance with Section 4, para. 2, sentence 1 NROG. The plan is scheduled to come into force at the end of September/beginning of October 2022.

With regard to offshore wind energy, Annex 1, Section 4.2 of the Ordinance on the LROP of Lower Saxony contains, among other things,

regulations on offshore wind energy use for the territorial sea of Lower Saxony as well as on the grid connection of installations for wind energy use from offshore wind farms in the exclusive economic zone.

Schleswig-Holstein

The current Land Development Plan (LDP) of Schleswig-Holstein of 25 November 2021 (Schleswig-Holstein Law and Ordinance Gazette No. 16/2021, p. 1409) came into force on 17 December 2021. Chapter 4.5 “Energy supply” of the LDP Schleswig-Holstein 2021 sets out principles and objectives for energy, including for subsea cables in the territorial sea for the grid connection of offshore wind farms in the EEZ.

Mecklenburg-Vorpommern

The current Land Spatial Development Programme (LEP) of 27 May 2016 (Mecklenburg-Vorpommern Gazette of Laws and Ordinances No. 11/2016, p. 322) came into force on 9 June 2016. Chapter 5.3 “Energy” contains designations on the expansion of renewable energies and the use and expansion of electricity grids. With regard to offshore wind energy, Chapter 8 “Spatial Planning in the Territorial Sea and Integrated Coastal Zone Management” contains, among other things, designations concerning wind farms and subsea cables and pipelines.

3.2 Status of planning in the exclusive economic zones of the littoral states

Denmark

On 31 March 2021, a first draft of the spatial plan for internal marine waters, the territorial sea, and the EEZ³ entered into force. Consultation is currently taking place on this draft, which is set to be adopted in 2022.

Four categories of spatial designations are identified in the draft plan: “General use zones”, “development zones”, “special purpose zones” and “nature and environmental protection zones”.

The sectors of offshore wind energy, maritime shipping, transport infrastructure, fishery and aquaculture, raw materials extraction, and the conservation, preservation, and enhancement of the marine environment are included.

By default, all Danish marine areas fall first into the general use zone, which includes all activities that do not require fixed installations or structures. These include uses such as fishery, recreation, and tourism.

The development zone category includes renewable energies, oil and gas extraction, new infrastructure, aquaculture, and raw material extraction as well as parts of the energy and transport infrastructure. Permits are issued for these activities only in this zone.

The special purpose zones where certain uses have priority include maritime transport, power cables, land reclamation, pipelines, and air traffic. However, the uses mentioned are not limited to this zone.

³ https://www.msp-platform.eu/sites/default/files/download/denmark_october_2021_0.pdf

The category of nature and environmental protection includes areas designated in the Danish Marine Strategy, Natura 2000 sites, protected areas, and nature and wildlife conservation areas.

The marine spatial plans also indicate which functions are to be preserved and developed. They are intended as guidelines to provide flexibility for authorities and operators in relation to future changes.

The Netherlands

The Dutch North Sea Programme 2022–2027 includes the maritime spatial plan. This was published on 22 March 2022.

The spatial plan contains designations on off-shore wind energy, nature conservation areas, fishery, aquaculture, sand extraction, shipping, oil and gas extraction, cables and pipelines, military training areas, tourism, and underwater cultural heritage.

Priority activities of national interest in maritime spatial planning are oil and gas exploration, shipping, sand extraction, renewable energy, defence and CO₂ storage.

Other spatial challenges included in the plan are the preservation of the coastal foreshore (coastal area up to 20 m water depth), implementation of the area-based sub-programmes “Coast” and “Wadden Sea”, marine nature conservation, preservation of an uninterrupted view of the horizon up to a distance of 12 nautical miles, securing space for pipelines, and protection of the underwater cultural heritage.

The maritime spatial plan is used to regulate activities through a permit system. This sets rules for the different uses and determines how possible conflicting interrelationships should be handled.

The focus is on cooperation with neighbouring countries, sustainable use of the oceans, applying an area-based approach to key resources, developing a species protection policy, and creating opportunities for active ecosystem recovery.

Poland

The Polish spatial plan for the internal marine waters, the territorial sea, and the EEZ entered into force on 22 May 2021⁴.

It includes the area categories “Priority use”, “Permitted use”, “Restricted use”, and “Prohibited use”. The following uses are assigned to these area categories: Transport, defence and national security, technical infrastructure, resource extraction, coastal protection, environmental and nature conservation, renewable energy production and storage, space reserved for future use, multifunctional economic growth, environmentally sustainable local development, artificial islands, facilities and structures, cultural heritage, fishery, aquaculture, tourism, and sports and recreation.

The Polish maritime spatial planning stipulates the following:

- the basic and permitted functions for each of the areas identified in the plans

⁴ <https://www.msp-platform.eu/countries/poland>

- the prohibitions or restrictions of a use, taking into consideration the requirements of nature conservation
- locations for public investments
- the direction of the development of transport and technical infrastructure
- the sites and regulations for the protection of the environment and cultural heritage, fishery and aquaculture, and renewable energies as well as exploration and resource extraction.

Sweden

The spatial plan for the Swedish EEZ came into force on 10 February 2022.

The plan includes designations for power transmission, energy generation, defence, general use, culture, nature, recreation, sand extraction, shipping, and commercial fishery.

Suitable sites for commercial fishery, culture, defence, energy transmission, energy generation, nature, recreation, sand extraction, and shipping are identified. The topics of aquaculture, infrastructure, and carbon capture and storage are included textually in the draft plan but without area designations.

The maritime spatial plans of Sweden are general guidelines issued by the government to authorities, municipalities, and regions for planning activities and functions of the sea. They are strategic and long-term but not legally binding. In the context of marine spatial planning, the overall suitability of marine areas for different uses is assessed.

United Kingdom

The Marine Management Organisation (MMO) draws up maritime spatial plans for eleven sub-areas in England, each of which is valid for 20 years and subject to review every three years. The two plans “North East Offshore” and “East Offshore” border the German EEZ⁵.

The English plans contain objectives assigned to overarching economic, social and ecological development goals for the planning area.

Concrete objectives of maritime spatial planning are: “Development of a sustainable maritime economy”; “Ensuring a strong, healthy, and just society”; “Living within environmental limits”; “Promoting good governance”, and “Responsible use of sound science”.

When applying for projects and programmes, applicants must take into account the designations on the following topics: infrastructure, co-use, sand and gravel extraction, aquaculture, subsea cables and pipelines, dredging and entry, oil and gas, ports and shipping, renewable energy, cultural heritage, seascape, fishery, employment, climate change resilience and adaptation, carbon capture, use and storage, air quality and emissions, marine litter, water quality, access, leisure and recreation, knowledge, understanding and appreciation of the marine environment, defence, marine nature conservation, biodiversity, invasive non-native species, disturbance, underwater noise, cumulative effects, and transboundary cooperation.

The plans are intended to help reduce the regulatory burden on applicants and users and to assist in spatial decisions on marine investments. The plans are intended to provide promoters and developers with information on where activities and projects can best be carried out spatially.

⁵ https://www.msp-platform.eu/sites/default/files/download/uk_11.10.2018.pdf

3.3 Cooperation in the national and international framework

For coherent planning of the EEZ and consideration of land-sea interrelationships, the plans of the coastal federal states were taken into account in the revision of the spatial plan for the EEZ. This concerned, in particular, the designation of linear infrastructures (e. g. shipping routes, subsea cables and pipelines, and their transition areas into the territorial sea) as well as designations for wind energy and the protection and improvement of the marine environment in the border areas.

In the EU Directive establishing a framework for maritime spatial planning (MSP Directive) (OJ L 257, 28 August 2015, p. 135), minimum requirements for maritime spatial planning are formulated in Article 6 in order to ensure cross-border cooperation between Member States. In accordance with Article 11, cooperation between states should be achieved through regional institutional cooperation structures (e. g. regional seas conventions or networks/structures of authorities responsible for marine spatial planning).

In the Baltic Sea Region, VASAB (Vision and Strategies Around the Baltic Sea) creates a framework for intergovernmental and multilate-

ral cooperation with counterparts in Germany, Estonia, Finland, Latvia, Lithuania, Poland, Russia, Belarus, and Sweden. In 2009, a common approach to maritime spatial planning in the Baltic area as well as the development of tools and methods were discussed. Close cooperation with HELCOM (Helsinki Commission; Baltic Marine Environment Protection Commission) was sought to integrate environmental aspects. This led to the establishment of a joint working group on maritime spatial planning chaired by HELCOM and VASAB (HELCOM-VASAB MSP WG). In addition to the VASAB countries, the EU is also represented in HELCOM. In 2019, the EU Interreg project NorthSEE initiated the launch of a North Seas MSP Collaboration Group as a permanent macro-regional mechanism for crossborder cooperation in the North Sea. The countries represented in the group are Belgium, Denmark, England, France, Germany, Iceland, Ireland, the Netherlands, Northern Ireland, Norway, Scotland, Sweden, and Wales as well as the North Sea Commission.

Further international cooperation takes place in specially created groups on shipping (North Sea Shipping Group, Trilateral Shipping Group). During the process of revising the spatial plan for the EEZ, exchanges with the planning authorities of the neighbouring states took place in these working groups in order to ensure the coherence of plan specifications.

Transboundary effects and coherence of the EEZ plans

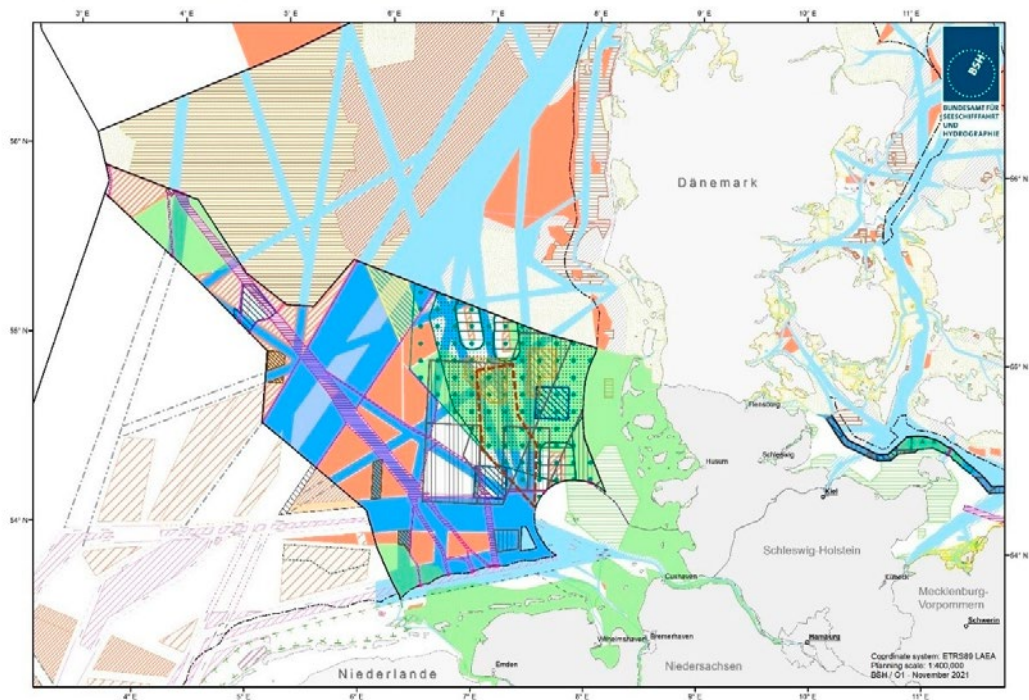


Figure 3: North Sea Sea EEZ spatial plan and designations of adjacent spatial plans

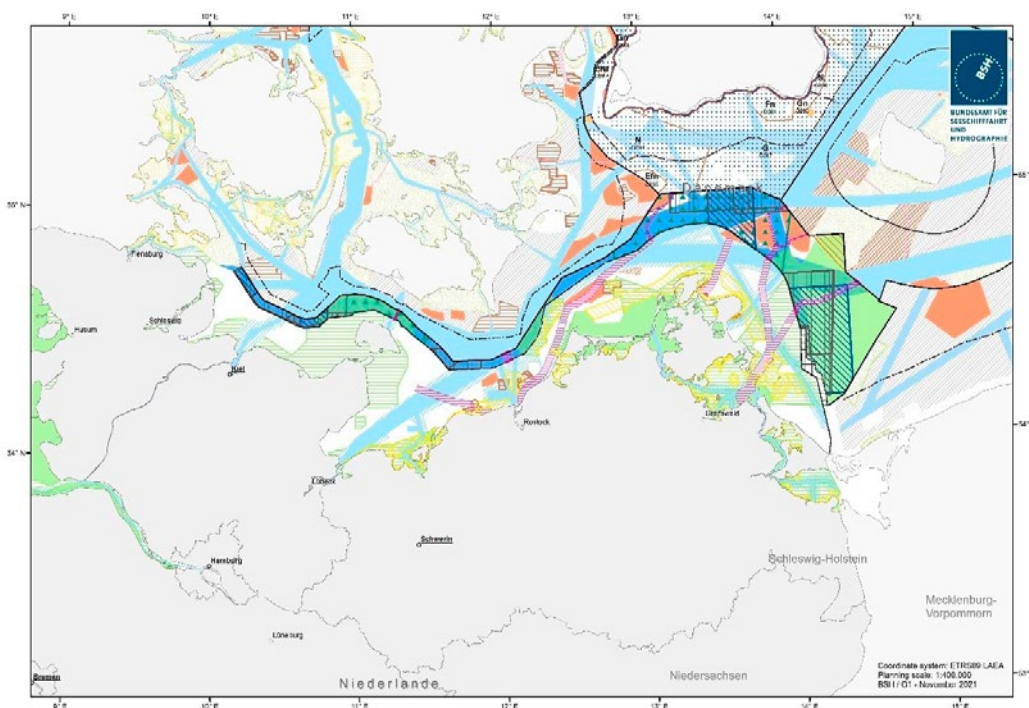


Figure 4: Baltic Sea EEZ spatial plan and designations of adjacent spatial plans

3.4 Coherence of the designations of the spatial plan for the German EEZ

Shipping routes

The plan safeguards important transit routes through the EEZ and links them to comparable spatial designations in neighbouring marine areas.

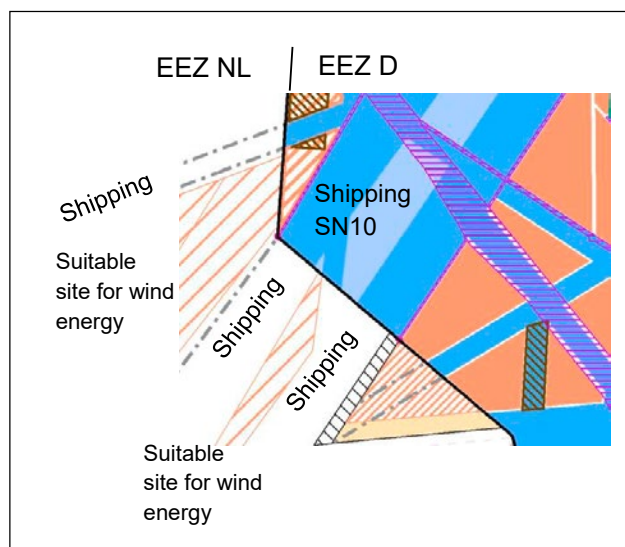


Figure 5: Coherent designations on shipping on both sides of the EEZ boundaries between Germany and the Netherlands.

With regard to the transit route secured with the priority area for shipping SN10, the current Dutch draft plan intends to safeguard it through defined shipping corridors. These corridors are comparable to priority areas in the German plan in terms of their regulatory effect.

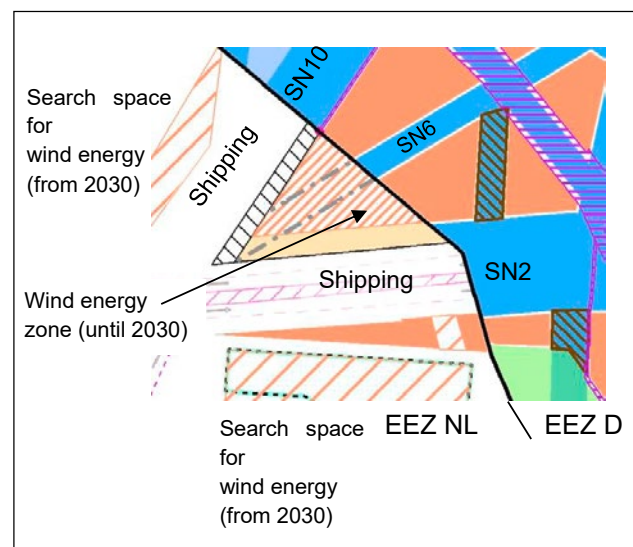


Figure 6: Designations on shipping and wind energy on both sides of the EEZ border between Germany and the Netherlands in the area of shipping routes SN6 and SN2.

In the Dutch draft plan, passage options for vehicles up to 46 m in length through offshore wind farms are generally envisaged. These are based on existing traffic, among other things. For these options, specific regulations and spatial designations are to be made in each case. However, in the adopted plan, the concrete continuation of shipping route SN6 (“Esbjerg route”) through the Dutch wind energy area 5-o for general shipping traffic was omitted. In this

respect, there is a need to adapt the German spatial plan in a future revision.

During the revision of the spatial plan for the EEZ, the “Northern Sea Route Concept” for a polar route was developed together with the Netherlands, Denmark, and Norway and taken into consideration in the respective national plans. In the German plan, shipping area SN18 in the Northwestern region of the German EEZ

was identified for this purpose. Further coordination with Denmark on the course of shipping routes is planned.

In the Baltic Sea, the designations for shipping in the EEZ fit with the designations of the neighbouring states as well as those of Mecklenburg-Vorpommern and Schleswig-Holstein.

With the designation of shipping route SO4 in the Kriegers Flak area north of Rügen, the plan created a link to the routes identified in the Swedish spatial plan.



Figure 7: Coherent designations on shipping on both sides of the EEZ boundaries between Germany and Sweden.

Gates for subsea cables and pipelines

In the North Sea, seven gates to the territorial sea and 12 to neighbouring states have been defined. In the Baltic Sea, there are five corridors to the territorial sea and seven to neighbouring countries.

Transition points are thus provided for cross-border pipelines; these control the course of the pipelines in the German EEZ and thus increase planning certainty – even if no transfer areas (gates) for subsea cables and pipelines or spatial designations for subsea cables and pipelines towards the boundary of the German EEZ are defined in the plans of the neighbouring countries. The corridors define clear transition areas between the German and neighbouring exclusive economic zones.

Marine nature conservation

Because of the extensive character of the ecosystems, the littoral states must also take into account the natural distribution of species and habitats across borders when coordinating maritime spatial planning. The priority areas for



Red throated diver (*Gavia stellata*)

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nature conservation and the designations for the protection of divers, harbour porpoises and migratory birds as well as the designations of neighbouring states for nature conservation and environmental protection contribute to this.

The priority areas for nature conservation secure the national nature conservation areas according to their conservation objectives. In addition, priority and reservation areas for divers have been defined based on their main concentration areas. The temporary reservation area for harbour porpoise has also been defined based on their main concentration areas in the North Sea. In the Danish draft plan, an existing Natura 2000 site 'Sydlige Nordsø' directly adjacent to the north of these area designations is safeguarded by designation in the spatial plan. The protected species of this FFH and Special Protection Area are loons and the harbour porpoise⁸. Coherent designations for the protection of species and habitats are thus made on both sides of the EEZ boundary.

With the designation of the bird migration corridors "Fehmarn–Lolland" and "Rügen–Skåne", regulations are made on the German side. These contribute to the protection of migrating birds. In the "Fehmarn–Lolland" corridor (bird flight line), areas for nature conservation and general use zones are essentially designated on the Danish side so that no wind farms can be built there because these are planned in development zones. The Schleswig-Holstein State Development Plan designates reservation areas for nature conservation and seascape as well as a priority area for tourism and recreation. This means that the Fehmarn-Lolland bird migration corridor remains free of obstacles and coherent in its function even without being specifically designated as a migration corridor.

In the Rügen–Skåne corridor, the Danish draft plan designates development zones for renewable energy as well as a general use zone. Existing regulations under environmental and nature conservation law are taken into consideration in the approval procedure. In the Swedish plan, there are general use areas in the adjacent area where no use has priority but where wind farm plans as well as area designations for nature conservation exist. In the state spatial development programme of Mecklenburg-Vorpommern the bird migration corridor is designated for tourism, nature conservation, landscape management, and wind energy. For the bird migration corridor between Rügen and Skåne, the general rule is that the use of wind energy in this area is not excluded. In order to avoid a significant adverse effect on bird migration, the impacts are examined in the approval procedure, and necessary measures are taken. Although no explicit designations for the pro-

⁶ Position paper of the division of the Federal Ministry on the cumulative assessment of loon habitat loss as a result of offshore wind farms in the German EEZ of the North Sea and Baltic Sea as a basis for an agreement between the Federal Agency for Nature Conservation (BfN) and the BSH (2009).

⁷ BMUB 2013 Concept for the protection of harbour porpoises from noise pollution during the construction of offshore wind farms in the German North Sea.

⁸ <https://natura2000.eea.europa.eu/natura2000/SDF.aspx?site=DK00VA347>

tection of migratory birds, divers or harbour porpoises are included in the spatial plans of the neighbouring countries and the coastal federal states, functional coherence is established in the broader sense via the nature conser-



Harbour porpoise (*phocoena phocoena*)

(© BSH/Benedikt Niesterok)

vation provisions at the spatial development level and the species protection assessment requirement in the respective planning approval procedures. In the downstream planning and approval procedures, environmental concerns (e.g. bird migration, species protection) are taken into consideration in greater depth. In addition to the spatially specific assessment of impacts, monitoring and, if necessary, avoidance measures such as noise protection or restrictions on the operation of wind turbines during times that are sensitive for the fauna can be included at this level. The conflict between the interests of use and protection claims can thus be resolved appropriately.

Military training areas

The military training areas secured in the spatial plan as reservation areas for defence also include crossborder training areas under NATO administration such as the Bravo submarine search areas in the Baltic Sea. They are located proportionately in the German EEZ and in the Swedish and Danish planning areas. Even though Denmark and Sweden have not defined any spatial designations for defence, the plan is drawn up in consultation with the ministries responsible for defence in order to take into consideration national and alliance defence concerns. As a result, no designations incompatible with the concerns of defence are made.

Infrastructure projects

In the Danish draft plan, a separate development zone is designated for the construction of the Fehmarn Belt crossing in order to exclude obstacles on the planned route. In the German plan, the Fehmarn Belt crossing is shown for information purposes because it is a project that has already been approved and does not require any further spatial safeguarding.

4. Monitoring and evaluation

In order to achieve the objectives of maritime spatial planning, the task of the Member States in accordance with the MSP Directive includes the preparation and revision of spatial plans as well as the monitoring of their implementation. This requires a monitoring and evaluation concept.

Monitoring means the ongoing examination (“supervision”) of the development of uses and functions in the planning area with regard to the question of whether it corresponds to the guiding principle and the purpose of the designations of the spatial plan. This ongoing assessment must be carried out using indicators that allow statements to be made on whether the designations of the plan achieve the intended steering effect with regard to the development of the planning area. Evaluation means the retrospective analysis of the effects of the spatial plan, including the forward-looking control intended therein as well as the investigation of processes or process steps used.

Through monitoring and evaluation, insights are gained on how the plan is achieving its objectives and how it should be adjusted and improved in the next revision cycle.

In monitoring and evaluating the EEZ spatial plan, particular challenges will arise from the fact that concrete developments can rarely be attributed monocausally to the designations of the spatial plan. Thus, in many cases, it will not be possible to clearly determine how strong the steering effect of the plan is.

According to the German legal system, Section 7, para. 1, sentence 1 ROG, the designations in spatial plans are made for a regular medium-term period (i. e. a period of 10–15 years). The medium-term nature has two objectives: On one hand, it is intended to create planning and investment security (i. e. to protect against constant changes in the planning basis). On the other hand, the medium-term – in contrast to a conceivable “long term nature” or “indefiniteness” – is intended to prevent spatial plans from not being adaptable to future developments in time. Therefore, according to Section 7, para. 8 ROG, spatial plans for the marine area must be reviewed at least every 10 years.

The following also applies to the specific spatial plan for the EEZ:

The spatial plan as a whole is to be evaluated and, if necessary, updated every five years. This reflects the medium-term effect of spatial planning as laid down in the Spatial Planning Act and allows for an adjustment of the designations should this become necessary. The evaluation should be carried out on the basis of a possibly changed energy law expansion path for wind power and for other offshore renewable energies, or any other changed framework conditions that require the plan to be adapted.

Independently of this, all sectoral concerns affected by individual planning designations in the spatial plan are to be evaluated on an ongoing basis.



Offshore substation Windpark Meerwind Süd/Ost

(© BSH)

The Federal Maritime and Hydrographic Agency is currently developing a basic concept for monitoring the effects of the plan's specifications and the extent to which the impacts of plan implementation on the marine environment can be documented in a monitoring system. Existing monitoring systems at the

project level should be used as much as possible.

Based on the information obtained from monitoring and evaluation, a decision will then be made on whether and how the spatial plan needs to be revised.

5. Outlook

Marine space is currently experiencing extremely dynamic development.

The COVID-19 pandemic caused a reduction in global maritime traffic. However, in the medium to long term, an increase in maritime transport and generally the expansion of maritime value creation in Germany and Europe can be expected.

The Northern Sea Route Concept responds to new opportunities for shipping traffic through seasonally ice free North Pole. This opens up new shipping routes, which must be taken into account in the maritime spatial plans of the countries in the North Sea.

The planned expansion of renewable energies to achieve future energy and climate policy goals necessitates large areas for offshore wind

energy. The spatial plan for the EEZ designates sites for offshore wind power, which – with optimised power density – allow an installed capacity of around 55 GW. The spatial plan also describes tests and developments for the subsequent use of further sites; these could lead to an additional capacity of up to 20 GW of offshore wind energy.

These developments as well as developments in other sectors will intensify competition between maritime uses and increase pressure on the marine environment. Maritime spatial planning will continue to create a suitable planning framework for this as an overarching instrument. The goal remains the sustainable use of the EEZ for all sectors involved, taking into consideration the natural capacity of the marine ecosystem.



Backlit buoys in the North Sea

Glossary

General ruling

A general ruling is an administrative act which is addressed to a group of persons determined or determinable according to general characteristics or which concerns the public-law property of a thing or its use by the general public. An administrative act is a sovereign measure taken by an authority to regulate an individual case in the area of public law and which is intended to have a direct legal effect externally.

Exclusive economic zone

The exclusive economic zone (EEZ) is the area of sea beyond the 12 nautical mile zone (also known as the territorial sea) up to a maximum distance of 200 nautical miles (up to 370 km) from the coast. The EEZ is not part of the territory of the adjacent coastal state; however, the latter has exclusive rights of use. This includes the exploration and exploitation, conservation, and management of living and non-living natural resources. The rights and obligations of coastal states in the EEZ are governed by the United Nations Convention on the Law of the Sea of 10 December 1982, which entered into force on 16 November 1994.

Coherence

Cross-border coherence means that adjacent plans should be naturally or meaningfully linked across boundaries and build on each other. Two aspects are considered when assessing coherence. One is the coherence of the presentation of spatial plans on maps. The other aspect is the textual plan specifications.⁹

International Maritime Organisation

The International Maritime Organization (IMO) is a specialised agency of the United Nations. Its primary role as the global standard-setting authority for the safety, security, and environmental performance of international shipping is to provide a fair and effective regulatory framework for the shipping industry that is adopted and implemented worldwide.¹⁰

Cumulative impacts

Cumulative impacts arise from the interrelationship and interaction of various independent individual effects, which either add up as a result of their interaction (cumulative effects) or reinforce each other and thus generate more than the sum of their individual effects (synergistic effects). Both cumulative and synergistic impacts can be caused by both the temporal and spatial coincidence of effects. The effect can be increased by similar uses or different uses with the same effect, thereby increasing the impact on one or more protected assets.^{11 12}

Natura 2000 sites

Natura 2000 sites consist of protected sites under the Birds Directive (Directive 2009/147/EC) and protected areas under the Habitats Directive (Directive 92/43/EEC). Together they form an EU-wide network of protected sites for the conservation of endangered or typical habitats and species.¹³

⁹ HELCOM-VASAB, Draft report of the cross-border coherence task force, 22.03.2021

¹⁰ <https://www.imo.org/en>

¹¹ Schomerus et al. (2006) Strategische Umweltprüfung für die Offshore-Windenergienutzung. Grundlagen ökologischer Planung beim Ausbau der Offshore-Windenergie in der deutschen Ausschließlichen Wirtschaftszone

¹² BSH (2021) Environmental Report on the spatial plan for the German Exclusive Economic Zone in the North Sea

¹³ <https://www.bmu.de/themen/naturschutz-artenvielfalt/naturschutz-biologische-vielfalt/gebietsschutz-und-vernetzung/natura-2000>

Ecosystem approach

The ecosystem approach represents a comprehensive integrated management of human activities based on the best available scientific knowledge of the ecosystem and its dynamics. The aim is sustainable use of the goods and services of the ecosystem and preservation of the integrity of the ecosystem. To do this, effects on marine ecosystems must be recognised and measures taken in order to maintain the integrity of the ecosystem. The application of the precautionary principle is also a central component of the ecosystem approach.¹⁴

Spatial Planning Act

The Spatial Planning Act (ROG) is a German federal law that sets out requirements on the conditions, tasks and guiding principles for spatial planning.¹⁵ The basic aim of spatial planning is to ensure the balanced development of the overall area of the Federal Republic of Germany; this should also take into consideration the functional capacity of the natural environment. The German Exclusive Economic Zone in the North Sea and the Baltic Sea was included in the ROG for the first time in 2004. With the amendment of the ROG 2017, the requirements from the EU Maritime Spatial Planning Directive, among others, were included.

Convention on the Law of the Sea

The United Nations Convention on the Law of the Sea entered into force on 16 November 1994. The convention introduces the Exclusive Economic Zone, with special rights for coastal

states, an international regime for the seabed and its subsoil beyond the boundaries of the continental shelf, and archipelagic waters. It also regulates the protection and conservation of the marine environment and marine scientific research as well as the development and transfer of marine technology.

Traffic separation zone

Traffic separation zones consist of zones allocated for each direction of travel as well as a dividing line or separation zone in the middle, the use of which is prohibited. They are used to channel shipping traffic at narrow points and to create as homogeneous a flow of traffic as possible in order to reduce the risk of collisions. Traffic separation zones are set by the International Maritime Organization (IMO). An overview of the traffic separation zones in the German EEZ is provided by the Waterways and Shipping Administration (wsv).¹⁶

Precautionary principle

Far-sighted, anticipatory, and preventive planning should promote sustainable use in marine areas and eliminate risks and hazards of human activities to the marine ecosystem. Those activities that, on the basis of current scientific knowledge, may lead to significant or irreversible impacts on the marine ecosystem and the effects of which, in whole or in part, may not be sufficiently foreseeable at present, require particularly careful investigation and weighting of the risks".¹⁷

¹⁴ HELCOM/VASAB (2016) Guideline for the implementation of ecosystem-based approach in MSP in the Baltic Sea area

¹⁵ https://www.gesetze-im-internet.de/rog_2008/ROG.pdf

¹⁶ www.wsv.de

¹⁷ HELCOM/VASAB (2016) Guideline for the implementation of ecosystem-based approach in MSP in the Baltic Sea area