

Assessment of the Maritime Spatial Plan of Germany

Alignment of Germany's Maritime Spatial Plan with EU Environmental Objectives

June 2022







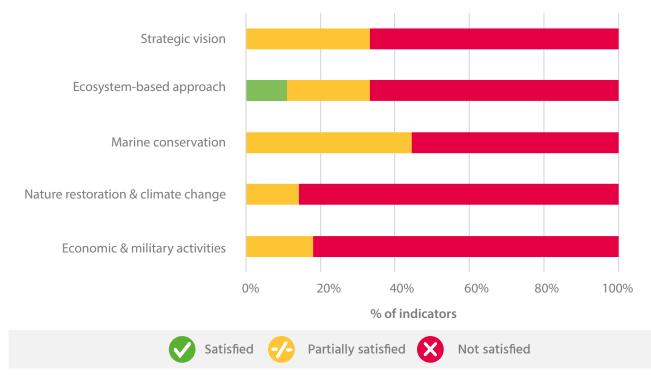
Simplified representation of Germany's Maritime Spatial Plan



Summary of the assessment

ermany's maritime spatial plan is strongly focused on the expansion of offshore renewable energy. The maritime spatial plan follows a narrowly defined understanding of the role of spatial planning at sea, primarily focused on the spatial coordination of individual uses of and claims on marine space, rather than acting as a framework for strategic, cross-sectoral decision-making or resolving anticipated conflicts between sectoral objectives. It does not place effective constraints on shipping, fishing or resource extraction activities or effective limits on the volume or intensity of offshore wind energy development. Although the maritime spatial plan makes explicit reference to the application of the 'ecosystem approach', it makes provision for a high volume and intensity of activity at sea, without due regard for the carrying capacity of the marine ecosystems and the cumulative and synergetic

impact of offshore wind, shipping, fishing, extractive industries and military activities. In several cases, there are clear indications that the precautionary principle has not been applied, and indeed substantial adverse impacts on the marine ecosystem must be anticipated. The scientifically informed advice of the Federal Agency for Nature Protection, concerning fundamental aspects of the plan has not been given sufficient consideration. The Strategic Environmental Assessment does not provide a thorough, systematic assessment of the likely cumulative of the levels and types of economic uses provided for within the plan nor an assessment of meaningful alternative scenarios. Against this background, it must be concluded that the German maritime spatial plan does not follow an ecosystem-based approach and does not support the achievement and maintenance of Good Environmental Status.



Percentage of indicators under each area of the assessment that are satisfied/partially satisfied/not satisfied by the Maritime Spatial Plan

About this assessment

This assessment of the alignment of Germany's Maritime Spatial Plan (MSP) with EU environmental objectives was commissioned by BirdLife Europe and Central Asia (BL ECA) and conducted by Dr Cormac Walsh Research and Consulting (independent consultant) with inputs from Aline Kuehl-Stenzel (NABU) and Daniel Mitchell (BL ECA). The assessment follows the methodology detailed in the report *Are EU Member State's Maritime Spatial Plans fit for nature and climate? Technical Report – Approach and Main Findings.* The assessment is indicator-based with each indicator accorded a 'traffic light' score.

Scoring system





Documents¹ included in the assessment

- MSP: Annex to the Spatial Planning Ordinance for the German exclusive economic zone in the North Sea and in the Baltic Sea, dated 19 August 2021 (unofficial translation) Spatial Plan for the German Exclusive Economic Zone in the North Sea and in the Baltic Sea (DE_MSP).
- SEA North Sea: Umweltbericht zum Raumordnungsplan f
 ür die deutsche ausschlie
 ßliche Wirtschaftszone in der Nordsee (DE_ENV_NS).
- SEA Baltic Sea: Umweltbericht zum Raumordnungsplan für die deutsche ausschließliche Wirtschaftszone in der Ostsee (DE_ENV_BS).

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^{1.} References to these documents in the assessment include the document reference shown above in brackets followed by the page number(s)

Detailed Assessment

1. Strategic Vision

1.1 Strategic Vision & Long-term Objectives

Criterion	1.1a Does the MSP set out a future vision with long-term objectives?
Score	Assessment
	A brief future vision under the title "Using and Preserving the Sea in all its Diversity" is set out in the first chapter of the MSP. The vision statement is wide-ranging en- compassing aspects of biodiversity, climate change, economy and cultural exchange. The vision statement is characterised by a very high level of generality and does not include concrete objectives. The vision statement neglects to reference the imperative of achieving and maintaining Good Environmental Status (GES), as required under the Marine Strategy Framework Directive (MSFD) (Federal Agency for Nature Protection, BfN 2021 ²). The sea is a special space that combines many different functions. Healthy seas provide space for biodiversity, make an important contribution to climate protection, and offer a wide range of ecosystem services. The responsible use of maritime resources is the basis of a sustainable marine economy that contributes to prosperity for present and future generations. The sea with its diverse uses connects people, living spaces, and markets and creates opportunities for an open-minded exchange between countries and cultures ³ (DE_MSP, 5). A more detailed strategic vision is lacking. There is no indication of how the various sectoral objectives and principles of the German MSP are intended to work together.
Criterion	1.1b Is the time period of the plan (usually 5 or 10 years)⁴ positioned within a longer timeframe?
Score	Assessment
	There is no overall long-term vision or scenario with reference to specific years. A number of measures are time-limited until 2035 or 2040 (e.g., shipping and offshore wind energy). This is, in part, in reference to sector-specific scenarios and targets: The WindSeeG [offshore wind energy law] sets an expansion target of 40 GW by 2040. Similarly, the scenario framework 2021–2035/2040 of the transmission system operators approved by the Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway (FNA) on 26 June 2020 provides for an installed generation capacity from offshore wind energy of 28 to 34 GW by 2035 and 40 GW by 2040 depending on the scenario (DE_MSP, 12).

^{2.} BfN (2021) Stellungnahme des BfN zu Änderungen im vorgelegten 2. Planentwurf des BSH vom 03.06.2021.

^{3.} Sections of text in italics are direct quotes from the MSP documents. The references to the MSP / SEA texts are indicative rather than comprehensive.

^{4.} The time period of the plan refers to the period of validity (before the next revision/update is required). The longer timeframe refers to period of usually multiple decades within which the objectives of the plan may be set out. Not all plans will make reference to longer time frame.

Criterion	1.1c Does the MSP allow for the future expansion of Marine Protected Areas (MPAs) to meet the targets ⁵ set out in the EU Biodiversity Strategy for 2030?
Score	Assessment
⊗	There is no mention of the possible future expansion of marine protected areas and no indication of how the target of 10% strict protection will be reached. Scope for expansion is curtailed by the presence of major shipping routes.

2. Ecosystem-based Approach

2.1 Precautionary Principle

Criterion	2.1a Does the MSP make explicit reference to the precautionary principle as the basis of decision-making?
Score	Assessment
•	The MSP and Environmental Reports make multiple references to the precautionary principle. These references are of a general nature. The precautionary principle is in a number of cases referenced, together with the application of an ecosystem-based approach, as providing the basis for decision-making. The application of the precautionary principle is not further specified: The EEZ should be permanently safeguarded and developed as a natural area for the conservation of biological diversity, in consideration of its typical natural features, ecological relations and interrelationships. Natural assets should be used sparingly and carefully in accordance with the guiding principle of sustainability in spatial planning. Adverse effects on the natural balance are to be avoided and mitigated as far as possible taking into consideration the objectives of the BNatSchG ⁶ , the precautionary principle and the ecosystem approach (DE_MSP, 18).
Criterion	2.1b Has the precautionary principle been applied to relevant MSP provisions?
Score	Assessment
	The precautionary principle is interpreted as a holistic approach, to be applied in conjunction with 'ecosystem approach'. The MSP vision is stated to be founded "on the precautionary principle and the ecosystem approach, which enables a holistic view of the different activities in the sea with their interrelationships and cumulative effects" (DE_MSP, 5). Its application is not further specified. Indeed, in some instances, there is direct evidence that it has not been applied. This applies to risks posed by specific shipping routes and increased shipping activity to the marine ecosystem. Studies evaluating such risks were not published until a late stage in the process (details below), but it must be concluded that these possible risks were disregarded in the preparation of the plan, in contravention of the precautionary principle.

^{5.} Protection of 30% of the sea in the EU with at least one third of protected areas being strictly protected.

^{6.} Act concerning nature conservation and landscape management (Federal Nature Conservation Act)

Criterion	2.1c Is there evidence that MSP zoning decisions and/or spatial policies have been substantially informed by the precautionary principle?
Score	Assessment
×	There is no direct evidence of the precautionary principle informing zoning decisions. The designation of areas for nature conservation is considered to support the precautionary principle (DE_ENV_NS, 47). The designation of such areas can only be considered as a precautionary measure in a very limited sense. The designation of priority and reservation areas of nature conservation can also serve to strengthen the resilience of ecosystems and thus support the precautionary principle. (DE_ENV_NS, 47).

2.2 Cumulative Impact Assessment

Criterion	2.2a Was a cumulative impact assessment ⁷ conducted as part of the preparation of the MSP?
Score	Assessment
~	Yes, cumulative impact assessments have been conducted for both the North Sea and Baltic SEA EEZs. Cumulative impacts are assessed for seafloor, birds and mammals in the MSP in relation to the following activities: wind energy generation, wind turbine construction and cable laying (DE_ENV_NS, 263-270). This review of likely cumulative impacts is, however, based solely on expert judgement and does not include a quantitative analysis. The assessment does not include a baseline review of the impacts of current and projected activities. The assessment is conducted on a sectoral basis only and does not include synergetic impacts (i.e., impacts due to the combined impact of two or more sectoral activities on a particular species or habitat). The assessment is flawed due to its exclusion of the projected impacts of shipping, fishing, extractive and military activities.

Criterion	2.2b Is the MSP designed accordingly, recognizing ecological limits and cumulative impacts?
Score	Assessment
X	There is no mention of ecological limits in the MSP. In order to avoid or reduce the cumulative impacts arising from the construction of wind farms, the MSP calls for coordination of the timing of construction work. It is, however, noted that this should not lead to disproportionate additional expenditure: In order to avoid or mitigate cumulative impacts, an overall coordination of the timing of the construction work should be aimed for. This also includes the reduction to a minimum of shipping traffic for construction and operation and the associated acoustic and visual disturbances through coordinated construction and time planning. However, disproportionate additional expenditure for the expansion of renewable energy should not arise from the requirement for overall time coordination (DE_MSP, 13). Possible ongoing cumulative impacts on the seabed, protected area benthos and protected biotopes from installed foundational structures and cables are also noted. Significant adverse effects are not anticipated given the relative space requirement of grid infrastructure and wind farms. It is noted that cumulative impacts on marine mammals, especially harbour porpoises, may occur mainly because of noise exposure during the installation of deep foundations (DE_MSP, 35).
Criterion	2.2c Is there evidence that MSP zoning decisions and/or spatial policies have been substantially informed by an assessment of cumulative impacts?
Score	Assessment
\bigotimes	There is no direct evidence of this.

2.3 Ecological Limits

Criterion	2.3a Does the MSP include an explicit calculation of ecological limits or carrying capacity?
Score	Assessment
×	No, there are no calculations of ecological limits or carrying capacity. Reference is made to the calculation of carrying capacity as potentially forming part of a future development of the ecosystem approach, dependent on the availability of data and improved knowledge. <i>A quantification of the carrying capacity of the ecosystem cannot be considered</i> <i>conclusively because of a lack of data and knowledge. This represents a task for the</i> <i>future development of the ecosystem approach</i> (DE_ENV_NS, 40).

Criterion	2.3b Is there evidence that MSP zoning decisions and/or spatial policies have been substantially informed by an assessment of ecological limits (e.g., safe biological limits for commercially exploited fish and shellfish)?
Score	Assessment
\bigotimes	No, there is no evidence of this.

2.4 Ecosystem Services

Criterion	2.4a Does the MSP explicitly identify ecosystem services?
Score	Assessment
\mathbf{X}	Explicit reference is made to ecosystem services in the vision statement of the MSP. In this context, ecosystem services are understood broadly in terms of human use of the sea. Further application of the concept is not evident. <i>The sea is a special space that combines many different functions. Healthy seas</i> <i>provide space for biodiversity, make an important contribution to climate protection,</i> <i>and offer a wide range of ecosystem services</i> (DE_MSP, 5).
Criterion	2.4b Is there evidence that MSP zoning decisions and/or spatial policies have been substantially informed by an assessment of ecosystem services?
Score	Assessment
\bigotimes	No, there is no direct evidence of this.

2.5 Ecosystem Sensitivity Analysis

Criterion	2.5a Does the MSP include an ecosystem sensitivity analysis, assessing in par- ticular sensitivity to human-induced changes or influences?
Score	Assessment
\bigotimes	No, an ecosystem sensitivity analysis has not been included within the MSP or Environmental Reports. A detailed sensitivity analysis pertaining to the Baltic and the North Sea ecosystems has been conducted in the course of a large-scale research project commissioned by the Federal Agency for Nature Protection (BfN). There is no evidence that the results of this analysis have informed the MSP or SEA, although the FABENA research did inform the formal submission of the BfN/Federal Ministry for the Environment to the MSP (BfN 2020a).

Criterion	2.5b Is there evidence that MSP zoning decisions and/or spatial policies have been substantially informed by an assessment of ecosystem sensitivity?
Score	Assessment
\bigotimes	No, there is no evidence of this.

2.6 Future Scenarios

Criterion	2.6a Have alternative future scenarios informed the preparation of the MSP?
Score	Assessment
	Yes, alternative future scenarios are set out in the Environmental Reports (DE_ENV_ NS, 318-337). The three scenarios place emphasis on A) traditional uses (shipping, extractive activities and fisheries), B) on climate protection via wind energy development and C) protection of marine ecosystems. In some respects, however, the three scenarios do not differ substantially from one another. For example, in each case, the projected volume of shipping traffic is unchanged, and the introduction of speed limits or similar restrictions is not considered. Scenario C) (marine ecosystem protection) includes provision for a priority area for migratory birds in the Baltic Sea, between Fehmarn and Lolland but not for migratory routes in the North Sea. As a consequence of these limitations, the Environmental Reports conclude that from an environmental planning perspective, no clear preference for one scenario over another may be identified (DE_ENV_NS, 323). Other chapters of the environmental report, including the assessment of cumulative impacts do not refer to these three scenarios but compare the preferred planning scenario to likely development in the absence of an MSP.
	On the one hand, the environmental report will describe and assess the current state of the environment, and describe the likely development if the plan is not implemented. Second, the likely significant environmental impacts resulting from the implementation of the plan are predicted and assessed (DE_ENV_NS, 36).
	The No-MSP scenario is based, however, on the assumption that the volume of economic activity such as shipping, fishing and wind energy development is not dependent on whether there is an MSP in place or not. This suggests that it is not intended that the MSP should place constraints on the volume of activities. This is counterintuitive and does not align with an ecosystem-based approach where cumulative impacts on and carrying capacity of the ecosystem are considerations of central importance. Against this background, the choice of scenarios within the Environmental Reports may be considered problematic. A detailed quantitative comparison of alternative scenarios, characterised by substantially different levels of activity, would have greater scope to substantially inform decision-making.

Criterion	2.6b Is there evidence that MSP zoning decisions and/or spatial policies have been substantially informed by an assessment of alternative scenarios?
Score	Assessment
	Yes, an assessment of alternative scenarios has informed zoning decisions. This assessment must be considered as partial rather than comprehensive (see above).

2.7. Monitoring and Adaptation

Criterion	2.7a Does the MSP make arrangements for ongoing monitoring of marine eco- systems?
Score	Assessment
?	Yes, there are arrangements for ongoing monitoring. Reference is made to project- related monitoring. It is unclear what precisely is understood under project-related monitoring (e.g., research projects or applications for wind energy development). This may amount to a reliance on the results of research projects which have not been commissioned, and are not conducted, for this particular purpose. An ecosystem-based adaptive approach to MSP requires dedicated comprehensive monitoring of marine ecosystems to ensure that human activities at sea do not lead to adverse impact or place additional risk on the achievement or maintenance of Good Environmental Status. In order to ensure alignment with the requirements of relevant EU Directives, monitoring of the MSP should be fully aligned with the implementation of the MSFD. <i>In order to ensure that the EEZ is used in the most environmentally compatible manner</i> <i>possible, data and findings on the impacts of economic uses on the marine environment</i> <i>obtained in the course of project-related monitoring are to be made available to the</i> <i>BSH The results obtained at project level are used for monitoring the implementation</i> <i>of the maritime spatial plan.</i> (DE_MSP, 11).
Criterion	2.7b Does the MSP make provision for adaptive modification of the MSP in response to identified changes in the marine environment, or new information pertaining to pressures on the marine environment?
Score	Assessment
	 There is no explicit provision for adaptive modification in response to such changes. The monitoring process is intended to feed into the revision of the MSP scheduled for 2026. The spatial plan is considered to provide sufficient room for flexibility for adaptation to changing circumstances. The medium-term guiding effect of the spatial plan makes it possible to adapt the designations to the situation if this becomes necessary in the sense of the guiding principle of spatial planning – namely sustainable and future-oriented spatial development from an economic, social, and ecological point of view. In this regard, all sectoral concerns are evaluated on an ongoing basis; the BSH is in contact with the relevant federal ministries (DE_MSP, 5). The BSH [Federal Maritime and Hydrographic Agency] does not intend to modify the provisions of the MSP in response to the findings of new information concerning the ecological impacts of shipping routes, reported in studies published in June 2021.

2.8 Good Environmental Status

Criterion	2.8a Does the MSP make explicit reference to the requirements of the Marine Strategy Framework Directive (MSFD) [®] in relation to the achievement of Good Environmental Status (GES)?
Score	Assessment
•	Yes, the MSP makes multiple references to the MSFD and the achievement of Good Environmental Status. The vision statement does explicitly mention Good Environmental Status and the need to achieve this. However, how exactly this will be achieved and maintained remains unclear, including measures within the MSP that might risk a deterioration in environmental status. In particular, the MSP does not include an explicit commitment to ensuring the proposed expansion of offshore wind energy does not risk the achievement and maintenance of GES (see BfN 2021, 2).
Criterion	2.8b Does the MSP indicate how the MSFD implementation process has in- formed the MSP?
Score	Assessment
\mathbf{x}	The MSP incorporates individual measures that are explicitly aligned with MSFD objectives. It should be noted, however, that the measures listed below may serve to mitigate further deterioration of environmental status but are likely to be insufficient to achieve and maintain GES. There is no evidence that the proposed volume of activity (fishing, shipping, wind energy, extraction) has been informed by a consideration of the carrying capacity of the marine ecosystem with respect to compatibility with the achievement and maintenance of GES. Examples of references to the MSFD objectives include:
	The designation of the priority area reserved for divers also supports the MSFD environmental objective 3 "Seas not adversely affected by the impacts of human activities on marine species and habitats" (DE_MSP, 19).
	The designation of the nature conservation priority areas also supports MSFD environmental objective 3 "Seas not adversely affected by the impacts of human activities on marine species and habitats" (DE_MSP, 19).

^{8.} Marine Strategy Framework Directive

3. Marine Conservation

3.1 Location of Conservation Areas and Economic Activities

Criterion	3.1a Is the location of protected areas founded on a clear and transparent scien- tific rationale?
Score	Assessment
	A clear scientific rationale is evident in the designation of areas for divers (protection for specific species of intact open space over a large area), despite the fact that adequate buffer zones are missing. Commitments under relevant international agreements and directives are referenced as the primary basis for decision-making on the designation of protected areas. For the harbour porpoise area, the scientific rationale is missing – only one area with relatively high population density was selected in the North Sea, ignoring other areas in the central North Sea (Dogger Bank) and entirely across the Baltic, despite the presence of the critically endangered population in the Baltic proper.
	In contrast to the other types of use, marine nature conservation is not a use in the narrower sense, but rather a fundamental spatial function covering the entire area; this makes clear the special importance of marine nature and the marine ecosystem and which must be considered when other uses lay claim to it. The environmental objectives of relevant international agreements and directives as well as national regulations are taken as a basis (DE_MSP, 18).
	The designations help to ensure that the marine environment in the EEZ is permanently preserved and developed as an ecologically intact open space over a large area. The designation of areas that have an important ecological function for specific species – the main concentration area of loons and the main distribution area of harbour porpoises – as reserved areas provide special protection for the species group of loons and harbour porpoise, which are sensitive to disturbance (DE_ENV_NS, 246).

Criterion	3.1b Do conservation areas explicitly exclude the following from taking place within or adjacent to their boundaries: commercial fishing; wind energy development; shipping; sand and gravel extraction; military use?
Score	Assessment
	No, the MSP states that especially shipping and sand and gravel extraction can always happen according to a spatial planning perspective. It is argued that shipping is accorded a legal priority over other uses, under the UNCLOS legal framework. This interpretation is contested by several stakeholders including the Federal Agency for Nature Conservation (BfN). In their submission to the draft MSP, the BfN (2020b, 2021, 4) states that UNCLOS does not provide a generally applicable prioritisation of shipping over environmental protection. It is argued that Germany should ensure the protection status of designated protection areas is upheld and secure areas of minimal noise pollution.
\mathbf{x}	When overlapping priority areas for nature conservation or divers with priority areas for shipping, shipping enjoys priority within the framework of the international legal requirements of UNCLOS (DE_MSP, 18).
	In some areas, priority areas for shipping overlap with priority areas for nature conservation and the priority area for divers. According to the provisions of UNCLOS applicable in accordance with Section 1, paragraph 4 ROG, a restriction on shipping in the EEZ is possible only under the conditions laid down in UNCLOS. Section 57, paragraph 3, No. 1 BNatSchG stipulates that restrictions on shipping are not permitted in nature conservation areas (DE_MSP, 19).
	In those areas in which the nature conservation priority area overlaps with reservation areas for sand and gravel extraction, raw material extraction in the existing licence areas will continue to be permissible from a spatial planning perspective, since mining conditions prevail here which cannot be found in comparable circumstances on land (DE_MSP, 19).
	For one of the conservation areas (Dogger Bank) there is research on the possibility to install a wind park:
	The target of climate neutrality in Germany, which has been brought forward to 2045, will require a significantly increased expansion of renewable energies. Therefore, further sites for offshore wind energy use are also needed in the EEZ. Dogger Bank is well suited for wind energy use and is expected to deliver an additional potential of 4 to 6 GW if this is possible in a nature-compatible manner. The federal government will therefore commission studies on the use of wind power on the Dogger Bank in line with nature conservation goals (DE_MSP, 18).
Criterion	3.1c Does the MSP include buffer zones to ensure sufficient distance between protected areas and wind energy zones?
Score	Assessment
~	Buffer zones are not generally provided for. The establishment of buffer zones is considered in the MSP to be 'alien' to spatial planning (DE_MSP, 38). This may be explained by the adherence to a very narrow view of spatial planning and insufficient regard for the ecosystem-based approach.

Criterion	3.1d Does the MSP provide a clear and transparent scientific rationale for the colocation (multi-use) of conservation areas and economic activities?
Score	Assessment
\bigotimes	No, the rationale for co-location is based on what is legally permissible, not what is scientifically advisable.

3.2 Ecological Corridors

Criterion	3.2a Does the MSP provide for protected ecological corridors [®] ensuring connectivity between conservation areas?
Score	Assessment
	Protected ecological corridors between conservation areas are not explicitly provided for. There is provision for connectivity in relation to migratory bird routes but not between conservation areas, however this is only for the Baltic Sea despite overwhelming evidence for offshore bird migration across the North Sea. It is stated that there are not sufficiently robust findings for further spatial designations. This statement does not follow the precautionary principle which would call for precautionary measures in situations where data or scientific understanding is incomplete.
	The permeability of the marine space for large-scale migratory species is necessary in order to reach and use areas that are functionally important for them; this applies in particular to the western part of the German EEZ in the Baltic Sea up to longitude 13.5° East. The connection between functionally relevant areas should therefore be maintained. Area designations in the marine environment ensure such passability (DE_MSP, 20).
	Ecological connectivity is taken into consideration and protected in particular through Designated 2.4 (8) on migration areas; there are no sufficiently robust findings for further spatial designations (DE_MSP, 42).
Criterion	3.2b Does the MSP take explicit account of the life-cycles ¹⁰ of mobile marine species (birds, bats, fish and marine mammals)?
Score	Assessment
×	There is no mention of the life-cycles of mobile marine species in the MSP. There is a limited reference to the life-cycle of harbour porpoises in the Environmental Report for the North Sea: The designation of the porpoise priority area will also protect important habitats during the rearing season. As a result, the nature conservation provisions have a positive impact on the conservation status of the harbour porpoise population (DE_ENV_NS, 246).

Criterion	3.2c Are migratory routes for birds protected by the provisions of the MSP ¹¹ ?
Score	Assessment
	The MSP includes limited provision for mitigation measures to ensure the protection of migratory routes for birds, however, only for selected areas in the Baltic Sea. It is stated that wind turbines may be switched off during mass migration events should other measures not be sufficient to "exclude a proven significantly increased risk of collision of birds with wind turbines". The requirement for a significantly increased risk of collision to be proven may make this provision difficult to implement effectively. It is not in line with the precautionary principle, which would require that precautionary measures are undertaken where a risk of adverse impact is likely, but not necessarily proven. Bird migration routes are furthermore not limited to Fehmarn-Lolland and Rügen-Skåne but include large areas of the North Sea EEZ and the Wadden Sea (located within the territorial waters, adjacent to the North Sea EEZ). The need for protection of migratory routes in the Baltic Sea and the North Sea is set out in detail in the submission of the BfN to the MSP (BfN 2000, 21ff). The designation of the bird migration corridors "Fehmarn-Lolland" and "Rügen-Skåne" takes into consideration the special importance of bird migration across Fehmarnbelt, the "bird flight line", and across Rügen to Sweden. The principle ensures targeted protection of bird migration as an essential component of the marine environment by appropriately resolving the conflict with the use of wind energy. It thus follows the precautionary approach and the ecosystem approach (DE_MSP, 20). As soon as mass migration takes place in the vicinity of offshore wind turbines according to these measurement systems and specifications, measures to protect bird migration, in particular those that exclude the collision of birds with wind turbines if there is an increased risk of collision, shall be initiated without delay (DE_MSP, 20).
Criterion	3.2d Does the MSP make provisions to minimise the disruption or fragmentation of ecological corridors due to the following activities: shipping; sand and gravel extraction; seismic exploration; offshore wind (and related servicing infrastructure)?
Score	Assessment
\bigotimes	With the exception of the question of offshore wind and bird migration routes addressed above, no explicit provision is made to ensure minimal disruption or fragmentation of ecological activities due to economic/resource extraction activities.

^{11.} AEWA Art. 2.1, Annex 3.2.4, CMS Art. 1

3.3 Protected Species

Criterion	3.3a Does the MSP include explicit measures to ensure the protection of species in accordance with EU legislation and international commitments?
Score	Assessment
•	There are restrictions to ensure the protection of divers (loons). A specific priority area for the protection of divers has been designated within the plan. Economic/ extractive activities are, however, not excluded from this protected area. Incompatible uses are determined at the project level. Seasonal restrictions are in place, to reduce disturbance during the spring breeding period. The scientifically sound distance of only 5.5 km was cut entirely between the divers protected area and the nearby wind energy zone. Scientific studies have identified the need for buffer zones of 10 km or more to ensure disturbance to this species is minimised. It is stated within the MSP that, "allowance must be made for the fact that wind turbines will lead to avoidance effects and permanent habitat loss". This is not in line with an ecosystem-based approach and does not support the achievement of GES. <i>Military use should adversely affect the conservation purpose of the priority and reservation areas for divers as little as possible. For the period from 1 March to 15 May of a given year, it applies that in the priority and reservation areas, divers should not be adversely affected by sand and gravel extraction authority should come to the forces authorities and the competent nature conservation authority should come to be adversely affected by sand and gravel extraction and that the Federal Armed Forces authorities and the competent nature conservation areas for divers to the forces authorities and the competent nature conservation areas for divers should come to be adversely affected by sand and gravel extraction and that the Federal Armed forces authorities and the competent nature conservation areas for divers should come to be adversely affected by sand and gravel extraction and that the forces authorities and the competent nature conservation areas for divers should come to be adversely affected by sand and gravel extraction and that the forces authorities and the competent nature conservation areas for divers and and</i>
	an agreement regarding military use (DE_MSP, 18). The main concentration area of the diver (Gavia stellata, Gavia arctica) is of outstanding conservation importance for the protection of the diver species group, which is sensitive to disturbance. The main concentration area of divers underlying the priority area takes into consideration the period of particular importance for the species: spring. In particular, allowance must be made for the fact that wind turbines will lead to avoidance effects and permanent habitat loss (DE_MSP, 39). The MSP includes specific measures for the protection of harbour porpoises. This protection is based on German rather than European or international legislation. A temporary reservation area for harbour porpoises in the North Sea EEZ has been designated (aligned with the main distribution area of the species in the summer months).

4. Nature Restoration and Climate Change

4.1 Nature Restoration

Criterion	4.1a Does the MSP make specific provisions for the restoration of ecosystems ¹² ?
Score	Assessment
\bigotimes	No, there are no explicit provisions for ecosystem restoration.
Criterion	4.1b Does the MSP explicitly take account of the likely impacts of climate change on the marine ecosystem?
Score	Assessment
~	The Environmental Reports refer to projected impacts of climate change on the marine ecosystem, including sea surface temperature increases, sea-level rise and higher extreme wind speeds (DE_ENV_NS, 47). Specific impacts on individual ecosystem components are not mentioned.
Criterion	4.1c Does the MSP include specific measures to mitigate the impacts of climate change on the marine ecosystem and allow for adaptation (e.g., migration of species)?
Score	Assessment
\bigotimes	No, the MSP does not include such measures. Extensive reference is made to the contribution of offshore renewable energy to climate mitigation.
Criterion	4.1d Does the MSP identify suitable areas for compensation, or does it have relevant provisions to support the implementation of compensation measures in the marine environment (e.g., for infrastructure projects on land or at sea)?
Score	Assessment
\bigotimes	The MSP does not contain such provisions.

4.2 Climate Change Mitigation

Criterion	4.2a Does the MSP make reference to the role of marine ecosystems as carbon sinks ¹³ ?
Score	Assessment
×	No, there is no mention of carbon sinks in the MSP. There is a general reference to carbon sinks in the Environmental reports: In the case of marine ecosystems, particular emphasis should be placed on their function as natural carbon sinks and other contributions to climate protection and adaptation. This consideration should be taken into account in future updates of the spatial plan, and the development of the necessary tools should be continued (DE_ENV_NS, 42).
Criterion	4.2b Does the MSP quantify the contribution of marine carbon sinks to climate mitigation?
Score	Assessment
\mathbf{x}	No, the contribution of carbon sinks to climate mitigation is not quantified.
Criterion	4.2c Does the MSP include explicit measures to safeguard the contribution of marine carbon sinks?
Score	Assessment
\bigotimes	There are no explicit measures in the MSP to safeguard the contribution of carbon sinks.



5. Economic and Military Activities

5.1 Shipping

Criterion	5.1a Does the MSP include specific measures to ensure marine ecosystems are not negatively impacted by shipping activity?
Score	Assessment
	No. Reference is made to best environmental practice, but specific measures are not included. The Environmental Reports state that projected negative impacts of shipping on the marine ecosystem would occur whether or not an MSP was in place. Shipping volume is projected to increase, but this development is considered to be independent of the MSP and impacts from shipping are considered to be pre-existing (D_ENV_NS, 171). This line of argumentation is not supported by the BfN, who refer in their submissions to the possibility for mitigating measures to be undertaken in relation to shipping routes working with the International Maritime Organisation (BfN 2020b, 2021). Pollution from shipping is to be reduced by taking into consideration best environmental practice in accordance with international conventions on marine protection and the state of the art in science and technology. (DE_MSP, 36).
Criterion	5.1b Does the MSP include an assessment of the potential risks posed by shipping accidents (e.g., spillages of hazardous substances) to marine ecosystems?
Score	Assessment
- /-	Risks posed by shipping accidents are considered in the Environmental Reports (in particular, risks to seabirds and coastal habitats) (DE_ENV_NS, 220). Two relevant reports assessing the risk of such accidents if additional wind parks were constructed within one of the central North Sea shipping lanes (SN10) were published at the end of July 2021, just after the MSP consultations had concluded but prior to the finalisation of the MSP ¹⁴ . These reports do not support the designation of all of the shipping lanes in the MSP, notably where they overlap with the Sylt Outer Reef Marine Protected Area. These designations would need to be substantially amended in order to install an "Area-to-be-Avoided" under the IMO.
Criterion	5.1c Does the MSP include explicit measures to mitigate the risks posed by shipping accidents to marine ecosystems?
Score	Assessment
\bigotimes	No, measure to mitigate the risks posed by shipping accidents are not included in the MSP.

^{14.} EBundesamt für Seeschifffahrt und Hydrographie (2021) (as above).

Deutsches Bundesministerium des Innern, für Bau und Heimat (2021) (as above).

Criterion	5.1d Does the MSP include seasonal restrictions on shipping, such as speed restrictions or re-routing (e.g., during the breeding season of protected and vulnerable species)?
Score	Assessment
	No, the MSP does not put restrictions on shipping activity: In some areas, priority areas for shipping overlap with priority areas for nature conservation and the priority area for divers. According to the provisions of UNCLOS applicable in accordance with Section 1, paragraph 4 ROG, a restriction on shipping in the EEZ is possible only under the conditions laid down in UNCLOS. Section 57, paragraph 3, No. 1 BNatSchG stipulates that restrictions on shipping are not permitted in nature conservation areas (DE_MSP, 19).

5.2 Commercial Fishing

Criterion	5.2a Does the MSP include restrictions on commercial fishing methods (e.g., bottom-trawling) to minimise damage to marine ecosystems?
Score	Assessment
$\mathbf{\otimes}$	No such restrictions are found in the MSP.
Criterion	5.2b Does the MSP include additional restrictions on commercial fishing activity (e.g., vessel size, seasonal constraints) to minimise damage to protected and vulnerable ecosystems and habitats and to achieve healthy populations of commercial fish species?
Score	Assessment
\mathbf{X}	No such restrictions are found in the MSP.

5.3 Extractive Activities

Criterion	5.3a Does the MSP include restrictions on extractive activities (e.g., oil, gas, deep-sea mining, sediment extraction) to minimise damage to protected and vulnerable ecosystems and habitats?
Score	Assessment
	There are no concrete restrictions. The extraction of sediments and hydrocarbons are permitted in principle in areas of nature protection. The MSP does not pose any restrictions on such activities other than those that are legally required. This is not in alignment with an ecosystems-based approach to spatial planning. It serves to place greater responsibility on the project level of decision-making. This is problematic for reasons of transparency and public participation and does not support the achievement and maintenance of GES. It substantially restricts the scope for a realistic, thorough assessment of the cumulative impacts of extractive activities over the period of the MSP as there is no indication of the volume of such projected activity, nor an indication of their likely outcomes in interaction with other ecosystem pressures (synergetic impacts). The location in the nature conservation priority areas "Sylter Außenriff – Östliche Deutsche Bucht" and "Pommersche Bucht – Rönnebank" does not fundamentally exclude raw material extraction from a spatial planning point of view; the exact design will be determined in the mining law procedure (DE_MSP, 15). A location in the Doggerbank nature conservation priority area does not rule out the mining of raw materials from a spatial planning perspective, the exact form of the mining operation will be determined in the mining law procedure. (DE_MSP, 16). In those areas in which the nature conservation priority area overlaps with reservation areas for sand and gravel extraction, raw material extraction in the existing license areas will continue to be permissible from a spatial planning perspective, since mining conditions prevail here which cannot be found in comparable circumstances on land. (DE_MSP, 19).

5.4 Military activity

Criterion	5.4a Does the MSP include restrictions on military activities (e.g., seasonal, time of day, noise restrictions) to minimise damage to protected and vulnerable ecosystems and habitats?
Score	Assessment
	There are no specific restrictions. A proposed agreement between military and nature conservation is mentioned, but there are no concrete measures within the MSP. In the priority areas for divers, it is proposed that agreement should be reached between the military and conservation authorities. The opportunity presented by the MSP to facilitate the reaching of such an agreement was evidently not availed of. <i>Military use should adversely affect the conservation purpose of the priority and reservation areas for divers as little as possible. For the period from 1 March to 15 May of a given year, it applies that in the priority and reservation areas, divers should not be adversely affected by sand and gravel extraction and that the Federal Armed Forces authorities and the competent nature conservation authority should come to an agreement regarding military use. (DE_MSP, 18). The priority area for divers overlaps to a large extent with reservation areas for defence. In order to safeguard military interests and the functional capability of the Federal Armed Forces, the Federal Armed Forces authorities and the respective nature conservation authority shall agree on the use of the area from 1 March to 15 May in which the occurrence of divers, which are sensitive to disturbance, is particularly high. During this period, there should also be no adverse effects from sand and gravel extraction. The final decision on the permissibility of raw material extraction is taken at the project level. (DE_MSP, 19).</i>

5.5 Noise and Light Pollution

Criterion	5.5a Does the MSP include an assessment of the impacts of noise pollution on the marine ecosystem?
Score	Assessment
~	There is no overall assessment. Studies have been conducted specifically in relation to the impacts of noise pollution on harbour porpoise and measures are in place which aim to reduce noise impacts on harbour poises during wind park construction. However, there are no measures in place regarding noise reduction during operation, deinstallation and repowering.
	Cumulative impacts on marine mammals, especially harbour porpoises, may occur mainly because of noise exposure during the installation of deep foundations. In order to avoid and mitigate cumulative impacts on the harbour porpoise population in the German EEZ, the orders of the downstream approval procedure shall specify a restriction of the sound exposure of habitats to maximum permitted proportions of the EEZ and nature conservation areas. As a result, it is concluded that implementation of the plan will result in avoidance and mitigation of cumulative impacts (DE_MSP, 35).

Criterion	5.5b Does the MSP include specific and concrete measures to ensure that noise pollution is minimised?
Score	Assessment
⊗	No, specific measures to minimise noise pollution are not found within the MSP, despite the projected strong increase in shipping traffic and boat speed related to offshore construction, servicing, deinstallation and potential repowering of wind parks.
Criterion	5.5c Does the MSP include specific measures to minimise the impact of light pollution (e.g., from shipping and harbour activities)?
Score	Assessment
\bigotimes	No, there are no specific measures to minimise the impact of light pollution.







Cover image: Photo: Shaun Wilkinson







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