

Partnership
for nature
and people



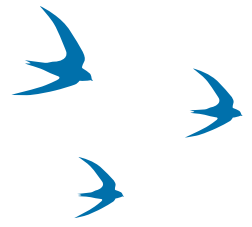
Assessment of the Marine Spatial Plan of The Netherlands

Alignment of The Dutch Marine Spatial Plan
with EU environmental objectives

July 2023



Summary of the assessment



The Dutch Marine Spatial Plan (MSP), Programma Noordzee 2022-2027, was published together with part 3 (programme of measures) of the Marine Strategy Framework Directive (MSFD) for the Dutch part of the North Sea. The agreements made in the North Sea Agreement (NSA) have been integrated into the MSP. The NSA is an agreement between the Dutch government, NGOs, the offshore wind industry and several other stakeholders with the aim of guiding the process of realizing three transitions simultaneously: the nature transition, the energy transition and the food transition. The NSA could serve as an example to other countries.

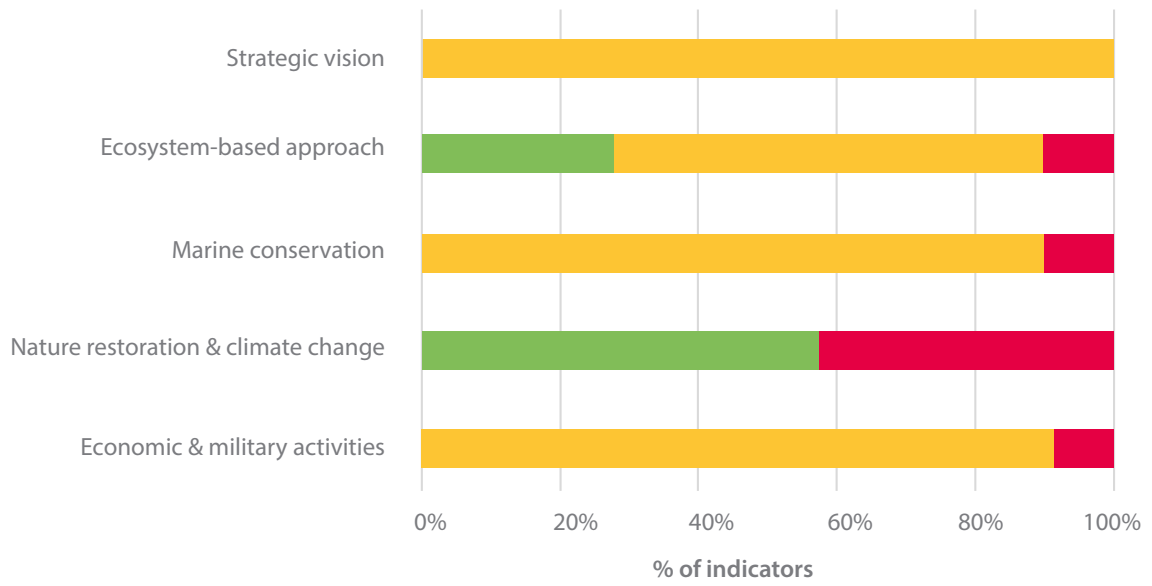
Most of the concrete new measures to restore and/or strengthen nature that are included in the MSP stem from the NSA. These include the identification and designation of extra protected areas for birds, the closure of 15% of the Dutch part of the North Sea to bottom trawling by 2030, the reservation of an area of 100 km² for the restoration of oyster reefs and the development and implementation of species protection plans.

The MSP has a strong focus on the expansion of offshore wind. An important requirement that was explicitly included in the MSP is that the ecological carrying capacity is not exceeded during this process.

For sensitive birds, a cumulative impact assessment of all planned wind farms across the whole North Sea was performed, focused on collision risk and avoidance behavior. Ecological research programmes inform science-based decisions on the site selection for wind farms. Furthermore, in principle no wind farms will be located in marine protected areas (MPAs). The uncertainties regarding the ecosystem impacts (e.g., through destratification) of offshore wind developments are of great concern, but for the moment play a limited role in the decision-making process.

The MSP largely follows a sectoral approach. A true cross-border cumulative impact assessment of human activities including shipping, sand extraction, offshore wind, fisheries, oil and gas extraction is not presented. This implies that the insights needed to follow an ecosystem-based approach in decision making processes are lacking. It also implies that essential information is missing that is needed to assess if significant impacts on the ecosystem are taking place. There are several examples in the MSP of human activities that are permitted where the precautionary principle should have been applied. Given the above it must be concluded that it is unsure whether the Dutch MSP supports the achievement and maintenance of the Good Environmental Status (GES) as required by the MSFD.

Note: A partial revision of the MSP is planned for 2024 particularly to include new search areas for offshore wind farms (OWFs). The new ambition of the Dutch government is to have 70 GW of OWFs installed in 2050 ([Kamerbrief over windenergie op zee 2030-2050 | Kamerstuk | Rijksoverheid.nl](#)).



✓ Satisfied
⚡ Partially satisfied
✗ Not satisfied




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

About this assessment

This assessment of the alignment of the Dutch Marine Spatial Plan with EU environmental objectives was conducted following the methodology developed by BirdLife Europe and Central Asia as 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.

The assessment was conducted by Tim van Oijen (Vogelbescherming Nederland)

Scoring system

-  Criterion is satisfied
-  Criterion is partially satisfied
-  Criterion is not satisfied

Documents¹ included in the assessment

- Programma Noordzee 2022-2027, including the appendix Marine Strategy Framework Directive Part 3: [Programma Noordzee 2022-2027 - Noordzeeloket \(NL_MSP\)](#)
- North Sea Agreement (NSA): [North Sea Agreement - Noordzeeloket UK \(NL_NSA\)](#)



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Detailed Assessment

1. Strategic Vision

1.1 Strategic Vision & Long-term Objectives



Criterion	1.1a Does the Marine Spatial Plan (MSP) set out a future vision with long-term objectives?
Score	Assessment
	<p>The MSP describes the three major transitions that take place in the Dutch part of the North Sea: the nature transition, the energy transition and the food transition.</p> <p>The nature transition concerns nature restoration to reach Good Environmental Status (GES) as required by the Marine Strategy Framework Directive (MSFD). However, the MSP is ambiguous since it also questions the usability of GES and does not set a clear deadline for reaching the GES.</p> <p>The energy transition concerns the expansion of offshore wind to meet national goals set for sustainable energy production. Concrete and ambitious goals are formulated.</p> <p>The food transition concerns the transition to a food production system that severely reduces the impact on nature and climate. Short term goals are clearly defined, including a reduction in the extent of destructive fishing techniques such as bottom trawling, particularly in protected areas. However, there is no clear vision yet for the food transition in the longer term with defined objectives. The MSP does commit to developing this vision.</p> <p><i>Note: a partial revision of the MSP is planned for 2024 to include new search areas for OWFs to meet the increased ambitions (70 GW in 2050). One would expect the partial revision to include additional measures to secure nature restoration. However, there is no clear commitment yet to do this.</i></p>
Criterion	1.1b Is the time period of the plan (usually 5 or 10 years) ¹ positioned within a longer timeframe?
Score	Assessment
	<p>The MSP covers the period 2022-2027 which is positioned in a timeframe until 2050. The vision for 2050 includes a restored ecosystem of the North Sea. However, the MSP lacks clear intermediate and quantifiable goals within the period until 2050.</p> <p>The MSP is coupled to the 6y-cycle of the MSFD. Part 3 –the programme of measures– of the MSFD is published as an appendix to the MSP. The MSFD-cycle secures that management, incl. monitoring and the measures linked to each of the descriptors of the MSFD are implemented in a structured manner and with continuity over a longer timeframe.</p> <p>In the MSP, particular attention is given to the long-term planning of the rollout of offshore wind farms (OWFs) since planning of infrastructure and permit procedures requires many years.</p>

1. 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 ² set out in the EU Biodiversity Strategy for 2030?
Score	Assessment
	<p>Approximately 30% of the Dutch part of the North Sea is already designated as MPAs (under Natura 2000, MSFD). However, currently few of the MPAs have effective protection measures in place. The MSP does include measures to improve protection in part of the MPA network e.g., 15% of the Dutch part of the North Sea will be closed to the most destructive type of bottom trawling (North Sea Agreement).</p> <p>The MSP will not lead to 10% strict protection. In autumn 2022, through the pledge and review process for the protected area targets in the EU Biodiversity Strategy, the Dutch government stated its refusal to meet this target and its wish to discuss the definition of 'strict protection'. The initial deadline to submit pledges has now passed, with the Netherlands yet to publish their plans.</p>

2. Ecosystem-based Approach



2.1 Precautionary Principle


Indicator	2.1a Does the MSP make explicit reference to the precautionary principle as the basis of decision-making?
Score	Assessment
	<p>Explicit reference is made to the precautionary principle (NL_MSP_p.25). According to the MSP this principle forms –together with an ecosystem-based approach– the basis of the Dutch management of the North Sea, in line with the MSFD.</p>
Indicator	2.1b Has the precautionary principle been applied to relevant MSP provisions?
Score	Assessment
	<p>The MSP details for instance that certain types of fisheries can only take place in an MPA when it is proven via an environmental impact analysis (EIA) that there is no significant impact on nature (eg. NL_MSP_p.139). It also details how OWFs can only be built when it first is demonstrated via an EIA that this does not significantly affect nature.</p> <p>A key weakness of the EIAs is that the cumulative impact assessment generally fails to include all pressures that act upon nature in the area under study. This may also concern external effects of an activity on an MPA. This may lead, and has led, to invalid conclusions on the significance of impacts of pressures and therefore a failed implementation of the precautionary principle.</p> <p>The precautionary principle has not been applied to all fishing activities in the Dutch North Sea. In particular, appropriate assessments for fishing activities have not been carried out for most MPAs, while habitats in these areas have not reached favourable status and continue to decline.</p> <p><i>Note: EU regulations are being developed (in particular REPowerEU) that may lead to less strict requirements for EIAs for OWFs in dedicated 'go-to' areas.</i></p>

2. Protection of 30% of the sea in the EU with at least one third of protected areas being strictly protected.


Indicator	2.1c Is there evidence that MSP zoning decisions have been substantially informed by the precautionary principle?
Score	Assessment
	<p>Many areas in the Dutch part of the North Sea were reserved for specific economic activities decades ago, including shipping lanes, sand extraction, oil and gas industry. The reservation of space was largely driven by economic motives.</p> <p>For new expansions of economic activities more attention is given to avoidance, mitigation and compensation of identified negative impacts on nature (NL_MSP_p.139). Particularly for any new developments in or near Natura 2000 areas the obligation to prove the absence of any significant negative impacts is followed, which essentially means that inside or near these areas (because of possible external effects on the protected areas) the precautionary principle is followed in decisions on whether a zone with a certain economic activity can be established. However, the assessments are incomplete and therefore insufficient to properly apply the precautionary principle (see 2.1b).</p>

2.2 Cumulative Impact Assessment

Indicator	2.2a Was a cumulative impact assessment ³ conducted as part of the preparation of the MSP?
Score	Assessment
	<p>It is well described in the MSP that there are cumulative impacts of different activities on the ecosystem. It is also stated that this cumulative impact should not hinder the restoration of the ecosystem (eg. NL_MSP_p.100, first bullet). However, no overall cumulative impact assessment was made. Instead, the MSP states that adaptive management is the key to preventing unacceptable cumulative impacts on the system.</p>
Indicator	2.2b Is the MSP designed accordingly, recognizing ecological limits and cumulative impacts?
Score	Assessment
	<p>The MSP acknowledges that activities can only take place to an extent that is compatible with the restoration of the North Sea ecosystem and achievement of Good Environmental Status (GES) (NL_NSA_p.12). It is described that there are ecological limits to the cumulative impacts of human activities. However, the MSP is not well-suited to safeguard that these limits are not exceeded (see 2.2a).</p>


Indicator	2.2c To what extent is there evidence that MSP zoning decisions have been substantially informed by an assessment of cumulative impacts?
Score	Assessment
	<p>Many areas in the Dutch part of the North Sea were reserved for specific economic activities decades ago, including shipping lanes, sand extraction, oil and gas industry. The reservation of space was largely driven by economic motives. No cross-sectoral cumulative impact assessment has taken place.</p> <p>For new expansions of economic activities more attention is given to the impacts on nature, through the process of an EIA during the planning phase followed by more detailed project-EIAs. However, as stated in 2.1b, a key weakness of the EIAs is that the cumulative impact assessment generally fails to include all pressures that act upon nature in the area under study. This may lead, and has led, to invalid conclusions on the significance of impacts of pressures.</p>

2.3 Ecological Limits



Indicator	2.3a Does the MSP include an explicit calculation of ecological limits or carrying capacity?
Score	Assessment
	<p>The MSP makes ample reference to the precondition that pressures on the North Sea ecosystem should not exceed the ecological carrying capacity. It acknowledges that calculations to define the ecological limits are hampered by the complexity of the ecosystem and knowledge gaps. The MSP does invest in a monitoring and research programme to fill knowledge gaps (the MONS-programme, NL_MSP_p.146).</p>



The sanderling (*Calidris alba*)
 Photo: Maximilian-nils (Istock images)

Indicator	2.3b Is there evidence that MSP zoning decisions have been substantially informed by an assessment of ecological limits (e.g. safe biological limits for commercially exploited fish and shellfish)?
Score	Assessment
	<p>Many areas in the Dutch part of the North Sea were reserved for specific economic activities decades ago, including shipping lanes, sand extraction, oil and gas industry. The reservation of space was largely driven by economic motives. No cross-sectoral cumulative impact assessment has taken place.</p> <p>With regards to the expansion of offshore wind, the MSP does include explicit calculations of the impact of the wind farms on animal populations, particularly legally protected species including birds and marine mammals. This is done via the Framework for Assessing Ecological and Cumulative Effects (KEC) for the roll-out of offshore wind energy⁴. This is part of the Dutch Governmental Offshore Wind Ecological Programme (WOZEP)⁵. Calculations of the impact for different scenarios for the expansion of offshore wind on 20+ bird species were made. Both habitat loss and collisions with blades were taken into account. The calculations determine the probability that the expansion of offshore wind will exceed the Acceptable Level of Impact (ALI) for some species. For marine mammals, the noise generated by pile-driving is the key issue. The impact of the construction of wind farms on harbour porpoises and seals was assessed for the different scenarios for the expansion of offshore wind.</p> <p>Here, The Netherlands could play a guiding role for other countries surrounding the North Sea to apply a more science-based decision process for the planning of offshore wind without exceeding the ecological carrying capacity.</p>



2.4 Ecosystem Services

Indicator	2.4a Does the MSP explicitly identify ecosystem services?
Score	Assessment
	Yes, the MSP does identify these services, particularly the provision of food and the storage of CO ₂ in sediment in the coastal zone (<i>Blue Carbon</i>).
Indicator	2.4b Is there evidence that MSP zoning decisions have been substantially informed by an assessment of ecosystem services?
Score	Assessment
	<p>The MSP makes reference to the Strategy of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic 2030 (Agreement 2021-01: North-East Atlantic Environment Strategy OSPAR 21/13/1, Annex 22) (NL_MSP_p.25). One of the defined goals which will be operationalised by the MSP, is the protection of ecosystem services. However, no assessment is yet presented in the MSP of the ecosystem services so it seems this approach is still in its infancy and needs to be detailed during the period 2022-2027.</p>



4. [Kader Ecologie en Cumulatie - Noordzeeloket](#)

5. [Wind op zee ecologisch programma \(Wozep\) - Noordzeeloket](#)

2.5 Ecosystem Sensitivity Analysis



Indicator	2.5a Does the MSP include an ecosystem sensitivity analysis, assessing in particular sensitivity to human-induced changes or influences?
Score	Assessment
	Ecosystem sensitivity analyses are planned as part of the MONS ⁶ and WOZEP programmes. For example, MONS will possibly deliver a model to assess the effect of reducing fisheries pressure by area closures on ecology (NL_MSP_p.53, 114). The WOZEP programme models the ecosystem effects of wind farms. So, ecosystem analyses are planned as part of the MSP but are sectoral and not holistic. A full ecosystem sensitivity analysis is not part of the MSP.
Indicator	2.5b Is there evidence that MSP zoning decisions have been substantially informed by an assessment of ecosystem sensitivity?
Score	Assessment
	No, but as mentioned above, there are plans to do so, in particular in the process of choosing search areas for offshore wind.

2.6 Future Scenarios



Indicator	2.6a Have alternative future scenarios informed the preparation of the MSP?
Score	Assessment
	Yes, e.g., the Planbureau voor de Leefomgeving (PBL) published the report <i>The future of the North Sea</i> (2018), which defined four alternative scenarios. This report has informed the MSP (see e.g., NL_MSP_p.73) but probably only to a limited extent.
Indicator	2.6b Is there evidence that MSP zoning decisions have been substantially informed by an assessment of alternative scenarios?
Score	Assessment
	Particularly for the expansion of renewable energy the MSP makes mention of the exploration of various alternative scenarios. A vision for the transition to a sustainable food supply from the North Sea will be developed during the MSP-period 2022-2027, so here alternative scenarios are not yet defined.

6. *Monitoring en Onderzoek, Natuurversterking en Soortenbescherming* (Monitoring and Research, Nature enhancement and Species protection). This programme was established through the NSA. For more information (in Dutch only): [MONS Onderzoeks-en monitoringprogramma - Noordzeeloket](#).

2.7. Monitoring and Adaptation

Indicator	2.7a Does the MSP make arrangements for ongoing monitoring of marine ecosystems?
Score	Assessment
	Yes. The Netherlands has ongoing monitoring in the context of the MSFD. On top of that a significant monitoring effort is planned as part of the MONS and WOZEP programmes. The current monitoring is insufficient for detailed marine spatial planning. There is especially a lack of data on food web functioning. There also is a need for integrated monitoring at sea basin level through international collaboration.
Indicator	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
	An adaptive approach is followed for the implementation of the North Sea Agreement (NL_NSA_p.16 paragraph 3.10). Especially for offshore wind farms and associated infrastructure an adaptive approach is defined by the MSP (e.g., NL_MSP_p.100). However, it is unclear how this adaptive management approach will be applied in reality. Long-term plans tend to be set out in which adaptive management is possible to a certain extent. But after site-decisions have been taken and permits have been issued there is little room for adaptive management.


2.8 Good Environmental Status

Indicator	2.8a Does the MSP make explicit reference to the requirements of the Marine Strategy Framework Directive (MSFD)⁷ in relation to the achievement of Good Environmental Status (GES)?
Score	Assessment
	Yes (e.g., NL_MSP_p.8). However, the MSP is ambiguous since it also questions the usability of GES (NL_MSP_p.25) and does not set a clear deadline for reaching GES.
Indicator	2.8b Does the MSP indicate how the MSFD implementation process has informed the MSP?
Score	Assessment
	Yes. Part 3 of the MSFD for the Dutch part of the North Sea is published as an appendix to the MSP. The MSP makes ample reference to this document and explains how measures described in the MSP are based on goals set by the MSFD. It must be noted however that it not always clear how the set measures included in the MSP, and thus part 3 of the MSFD, are expected to deliver the MSFD goal of reaching GES for each of the descriptors.



3. Marine Conservation

3.1 Location of Conservation Areas and Economic Activities

Indicator	3.1a Is the location of protected areas founded on a clear and transparent scientific rationale?
Score	Assessment
	<p>Yes (the scientific background documents are available on the website www.natura2000.nl). However, it is clear that socio-economic drivers are also heavily taken into account, sometimes conflicting with scientific rationale. For example, an MSFD area next to the Frisian Front lies outside the Natura 2000 zone, mainly due to fisheries interests in the area.</p> <p>Not all areas that are important for birds as resting or foraging areas have been designated as Bird Directive protected area. The North Sea Agreement contains an agreement to study which areas that are already protected through the Habitat Directive or the MSFD also qualify as Bird Directive protected areas. If they qualify, they will be assigned (NL_NSA_ paragraph 4.34). This agreement is included in the MSP.</p>
Indicator	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
	<p>It is disturbing how many activities are still allowed to take place in conservation areas. Particularly, in most protected areas destructive fishing techniques can still take place with high intensity. Scientific rationale would lead to further protection and banning of certain activities in line with the precautionary principle. However, an appropriate assessment has not yet been done for almost all MPA's, leaving them open to destructive fishing activities. This is not in line with nature legislation and there is a lack of transparency about why these assessments have not been done. The Art 11 process stemming from the EU Common Fisheries Policy (CFP) created bottlenecks for science-based decision making for MPAs and contains untransparent processes.</p> <p>On a positive note, wind farms are -in principle- not allowed to be built in protected areas, as agreed in the North Sea agreement (NL_NSA_paragraph 4.12).</p>
Indicator	3.1c Does the MSP include buffer zones to ensure sufficient distance between protected areas and wind energy zones?
Score	Assessment
	No.

Indicator	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
	<p>See 3.1.b. There is no clear scientific rationale for intense multi-use in conservation areas, rather it is driven by economic interests. There are EIAs performed for activities that requires a license. However, for many activities including fishing, military activities and shipping this is not the case.</p> <p>The MSP does aim for multi-use of wind farms using a holistic approach with an analysis of the sites' suitability for different forms of use, including nature protection.</p>



3.2 Ecological Corridors

Indicator	3.2a Does the MSP provide for protected ecological corridors ⁸ ensuring connectivity between conservation areas?
Score	Assessment
	<p>True protected ecological corridors are not defined in the offshore part of the Dutch part of the North Sea. However, in process of selection of wind energy areas attention is given to making sure that particularly seabirds are able to reach their important resting and foraging areas e.g., the Brown Ridge (Bruine Bank) or the Frisian Front (Friese Front). Still, the creation of barriers for birds is not completely avoided. This would require much more intensive international cooperation.</p>
Indicator	3.2b Does the MSP take explicit account of the life-cycles ⁹ of mobile marine species (birds, bats, fish and marine mammals)?
Score	Assessment
	<p>The MSP acknowledges that EU regulations require member states to take into account impacts on migrating species in their spatial planning (NL_MSP_p.17). Still, the MSP provides few examples of measures that are taken to protect movements of species e.g., from and to their breeding grounds. There is a species protection plan for harbour porpoises (NL_NSA_paragraph 6.8) but the implementation is poor, as illustrated by the infringement procedure concerning the bycatch of harbour porpoises¹⁰. For other sensitive species, species protection plans will be drawn and executed (NL_NSA_paragraph 6.9).</p>


8. EU Biodiversity 2030.

9. E.g. reference to breeding grounds

10. See https://ec.europa.eu/commission/presscorner/detail/EN/inf_22_601

Indicator	3.2c Are migratory routes for birds protected by the provisions of the MSP¹¹?
Score	Assessment
	<p>Little attention is given to measures for migrating birds in the MSP. However, site decisions for several existing and all new wind farm sites include a curtailment measure to reduce the risk of collision of birds with turbine blades.</p> <p>Furthermore, the site selection process for wind energy areas aims to avoid parts with dense bird migration. This is not explicitly mentioned in the MSP but is part of the procedure for site selection (NL_MSP_p. 109).</p>
Indicator	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
	<p>For offshore wind, the MSP aims to avoid fragmentation of ecological corridors, see 3.2a. However, related servicing infrastructure are only taken into account to a limited extent. Seismic exploration is of concern, in particular for the harbour porpoise and research is taking place into measures to minimize noise. Current provisions do not provide sufficient protection against the potentially severe impact on this species.</p>

3.3 Protected Species


Indicator	3.3a Does the MSP include explicit measures to ensure the protection of species in accordance with EU legislation and international commitments?
Score	Assessment
	<p>Yes (NL_MSP_p.40, p.152). Species protection plans have been developed for the harbour porpoise and sharks and rays. The plans are only partly executed, which resulted in an EC infringement procedure in the case of the harbour porpoise (see 3.2b).</p> <p>CFP measures are taken to protect fish and bird species, particularly by the designation of protected areas and the implementation of fisheries management measures (such as quota management and the landing obligation). These aim to contribute to achieving GES (NL_MSP_p.45).</p> <p>Species protection plans for sensitive bird species will be developed (NL_MSP_p.41 = NL_NSA_paragraph 6.9) and executed (NL_MSP_p.152).</p> <p>The above measures are also included in the appendix with the existing and additional measures that are taken in the context of the MSFD. Overall it must be concluded that lots of effort is put into the improvement of monitoring and research, and the production of plans, but there is little detail on the execution of concrete measures.</p>

11. AEWA Art. 2.1, Annex 3.2.4, CMS Art. 1.


4. Nature Restoration and Climate Change


4.1 Nature Restoration


Indicator	4.1a Does the MSP make specific provisions for the restoration of ecosystems¹²?
Score	Assessment
	<p>Most of the habitats that are in need of restoration have been identified and MPAs are designated for their protection.</p> <p>Specific attention is paid to oyster reef restoration which is also important for the species that depend on these reef structures (NL_MSP_p.41-box 3.1, p.152). While an area has been allocated for this, there is no plan in place to achieve oyster restoration, and no planned measures or investments.</p> <p>In the MSFD part 3, the first steps are taken to define indicators relevant for the achievement of a food web that meets GES (descriptor D4).</p>
Indicator	4.1b Does the MSP explicitly take account of the likely impacts of climate change on the marine ecosystem?
Score	Assessment
	<p>For as far as they are known, yes (e.g., NL_MSP_p.47). Given the uncertainty regarding the exact nature and extent of the impacts of climate change additional monitoring has also been set-up.</p>
Indicator	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
	<p>Ironically, the impacts of climate change that are underscored are those that have economic impacts. For example, new fish species that may move into the North Sea from the south may be commercially exploitable, and the impact on coastal defenses with the concurrent need of extensive sand extraction.</p> <p>It does not include specific measures to mitigate the impacts of climate change on the marine ecosystem. There is also no mapping of areas vulnerable to climate change including climate refuge areas and restoration.</p> <p>It does copy the OSPAR statements on climate change and stresses that climate change puts extra pressure on the North Sea ecosystem. It states that this needs to be taken into account in policy (NL_NSA_p.25) and gives examples of changes of the ecosystem in response to climate change (NL_MSP_p.32). It also states that the system change complicates taking appropriate measures (NL_MSP_p.32).</p>

Indicator	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
	Yes. There is a procedure for compensation measures (NL_MSP_p.142) for activities that affect N2000 areas. The EU obligation to demonstrate the effectiveness of the measure is included in the procedure. From the nature compensation measures for the construction of Maasvlakte 2 –an extension of the Port of Rotterdam– we know this is key. The measures were not proven to be effective so adaptations will need to be made ¹³ .

4.2 Climate Change Mitigation

Indicator	4.2a Does the MSP make reference to the role of marine ecosystems as carbon sinks¹⁴?
Score	Assessment
	Yes. See NL_MSP_p.96, where the MSP refers to Mission B4E11D of the national Knowledge and Innovation Covenant ¹⁵ which concerns the opportunities for carbon sequestration in the coastal zone.

Criterion	4.2b Does the MSP quantify the contribution of marine carbon sinks to climate mitigation?
Score	Assessment
	No, this contribution has not been specified and no areas of importance are allocated.

Criterion	4.2c Does the MSP include explicit measures to safeguard the contribution of marine carbon sinks?
Score	Assessment
	No.




¹³. [Nature compensation for Maasvlakte 2 still not realized - NIOZ](#)


¹⁴. [EU Biodiversity 2030](#).

¹⁵. [Knowledge and Innovation Covenant | NWO](#)



5. Economic and Military Activities

5.1 Shipping


Indicator	5.1a Does the MSP include specific measures to ensure marine ecosystems are not negatively impacted by shipping activity?
Score	Assessment
	The MSP contains measures on reducing emissions and other pollution caused by shipping activity (NL_MSP_p.36, 37). There also is an incentive to improve the guidelines for noise pollution. This does not mean however that all negative impacts are prevented. There is very dense shipping traffic in main shipping lanes in the Dutch part of the North Sea. This inevitably has an impact on the ecosystem via disturbance.
Indicator	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
	It does not present this assessment, however, there are plenty of examples that the MSP is aimed at minimising the risk of shipping accidents, also with the aim of preventing an impact on the ecosystem (NL_MSP_p.147). There is a focus on minimising the risk of a collision with wind farms (NL_MSP_p.74, 76, 125). The government launched a research and monitoring programme in 2020 to assess these risks (NL_MSP_p.74, 147).
Indicator	5.1c Does the MSP include explicit measures to mitigate the risks posed by shipping accidents to marine ecosystems?
Score	Assessment
	The MSP aims to avoid shipping accidents (see 5.1b) and therefore an impact on marine ecosystems. Several measures are described including buffer zones around infrastructure (NL_MSP_p.74). Protocols are in place to respond to shipping accidents and minimize ecological impacts (NL_MSP_p.77).

Indicator	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
	This can be the case for instance for shipping traffic related to maintenance works and/or construction of infrastructure, but is not referred to in the MSP.


5.2 Commercial Fishing

Indicator	5.2a Does the MSP include restrictions on commercial fishing methods (e.g., bottom-trawling) to minimise damage to marine ecosystems?
Score	Assessment
	<p>Yes. In the North Sea Agreement it was agreed to close several areas to bottom-trawling. By 2030 15% of the Dutch part of the North Sea will be closed to bottom-trawls. This implies that in 2030 about half of the total surface of all protected areas is closed for this type of fisheries.</p> <p>Still, in the larger part of the North Sea a high fishing intensity with methods that are potentially harmful to the ecosystem and causing loss of integrity of the seabed is allowed.</p> <p>A transition towards more sustainable fisheries is planned in the MSP, including research on innovative techniques with less impact on the ecosystem and a switch to alternative forms of food supply from the North Sea including aquaculture.</p>
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
	<p>Additional measures are taken. For example, in two protected areas seasonal closure of gillnet fisheries will become effective.</p> <p>However, overall the set of measures that have been taken is not sufficient to minimise damage to protected and vulnerable ecosystems and habitats and to achieve healthy populations of all commercial fish species.</p>


5.3 Extractive Activities

Indicator	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
	<p>Agreements have been made that the total volume of gas extraction must reduce in MPAs (no increase). In the North Sea Agreement it was further agreed that oil/gas platforms and other infrastructure should use the best available techniques to minimise damage to ecosystems.</p> <p>With regards to sediment extraction, it is only mentioned that this activity should match with the ambitions for nature restoration, the energy transition and the food transition (NL_MSP_p.28). No clear and concrete restrictions are mentioned.</p>

5.4 Military activity

Indicator	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
	<p>No mention is made of these restrictions in the MSP. However, management plans for the Natura 2000 areas do include an assessment of the impact of military activities and include measures to reduce impact. An example is the minimization of military activity at the Natura 2000 area Friese Front during the moulting period of the guillemot. Measures also exist to minimise effects of Unexploded Explosive Ordnance (UXO) explosions in Natura 2000 sites but are also not covered in the MSP.</p>

5.5 Noise and Light Pollution

Indicator	5.5a Does the MSP include an assessment of the impacts of noise pollution on the marine ecosystem?
Score	Assessment
	<p>There is investment in research and relatively good insight into the extent of noise pollution in the Dutch part of the North Sea (NL_MSP_p.33), but according to the MSP the impacts on the ecosystem are not yet well understood (NL_MSP_p.38). The effects of piledriving noise have been studied in more detail. The harbour porpoise is used as an indicator species for impulse noise. Measures are in place to mitigate effects of piledriving through a noise threshold during the construction phase.</p>
Indicator	5.5b Does the MSP include specific and concrete measures to ensure that noise pollution is minimised?
Score	Assessment
	<p>Specific and concrete measures are in place for reducing the impact of noise caused by: drilling monopiles for wind turbines, seismic research, the removal of explosives, and active sonar (NL_MSP_p.33). This however is not sufficient to minimise the impact of impulse noise on marine life. One of the goals of the MSP is to have more strict regulations (NL_MSP_p.38). At present, International Maritime Organization (IMO) guidelines for the reduction of shipping noise are included, but remain voluntary and therefore ineffective.</p> <p>The southern part of the North Sea has a high level of continuous underwater noise from other sources like ship engines. The MSP acknowledges that it remains a challenge to reduce this noise.</p>
Indicator	5.5c Does the MSP include specific measures to minimise the impact of light pollution (e.g., from shipping and harbour activities)?
Score	Assessment
	<p>The MSP describes that light coming from ships or gas/oil platforms and other infrastructure can have a negative impact on birds and bats. Guidelines were made for offshore platforms, but these can be used on a voluntary basis (NL_MSP_p.37).</p>

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