

Høringsnotat: ESPOO-høring for grænseoverskridende påvirkninger ifbm. miljøvurderingen af Plan for Program Energiø Nordsøen

Kontor/afdeling
Center for Energiøer

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ESPOO-høringen af Plan for Program Energiø Nordsøen

Parallelt med den offentlige høring af miljøvurderingen af Plan for Program Energiø Nordsøen (idéfasehøring), har Energistyrelsen i henhold til artikel 3 i ESPOO-Konventionen¹, sendt materialet i ESPOO-høring i Belgien, England, Frankrig, Holland og Tyskland. Materialet er sendt via Miljøstyrelsen den 22. august 2022 til de førnævnte ESPOO-landes Point-of-Contact. De modtagende høringssvar er efterfølgende modtaget via Miljøstyrelsen den 27. september. De tyske høringssvar indkom efter aftale den 5. oktober 2022, da de havde fået forlænget høringsfristen.

Landene er som notificerede parter blevet bedt om at give en tilbagemelding angående nedenstående punkter i henhold til ESPOO-konventionens artikel 3 og deltagelse i den danske miljøvurderingsproces for Plan for Program Energiø Nordsøen:

- Besvare om de ønsker at deltage i den danske miljøvurderingsproces
- Komme med bemærkninger til Plan for Program Energiø Nordsøen og kommentere på mulige grænseoverskridende miljøpåvirkninger, der bør vurderes og undersøges i forbindelse med miljøvurderingen af Plan for Energiø Nordsøen

Notifikationen omfattede et udkast til afgrænsningsudtalelse og et notat om rammerne for det kommende plangrundlag for Energiø Nordsøen², hvilke indeholder en beskrivelse af projektet og et kort med angivelse af projektets placering.

ESPOO-høringen forløb i perioden fra den 22. august 2022 til den 26. september 2022. Den nationale myndighed, der er udpeget som ESPOO-Point-of-Contact sørger for, at de berørte myndigheder og offentligheden i det enkelte land, får mulighed for at komme med bemærkninger og indsigelser mod det påtænkte projekt inden for tidsfristen. I alt modtog Energistyrelsen 8 høringssvar fra Belgien, Frankrig, Holland og Tyskland, der alle har givet udtryk for, at de er interesseret i at deltage i den danske proces for miljøvurdering af Plan for Program Energiø Nordsøen. England har ikke indsendt et høringssvar.

Det bemærkes, at flere høringssvar henviser til høringssvar afgivet i forbindelse med ESPOO-høringen august 2021. Disse er også inkluderet i nedenstående høringsnotat.

¹ <https://www.retsinformation.dk/eli/ltc/1999/71>

² <https://ens.dk/ansvarsomraader/vindenergi/udbud-paa-havvindmoelleomraadet/danmarks-energi-0er/miljoevurderinger-0>

Behandling af høringssvar – 1. offentlige høring

En samlet oversigt over alle høringssvar findes i Table 3 nedenunder.

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Table 1 The Danish Energy Agency's remarks for the consultation response from the ESPOO

Country and topic	Consultation responses	DEA's remarks
Belgium		
Fisheries	The Belgian fisheries administration acknowledge and support the pursuit for green energy, with the understanding that this would be done in a non-discriminatory manner with efforts to limit the impact on existing activities. The proposed plan for the North Sea Energy Island and the offshore wind turbines in the Danish North Sea would significantly affect the Belgian fishery. Preliminary data show that these areas account for 3.88% of the annual turnover of the Belgian fleet and produce over 3.2 million euro each year. In addition no measures were presented to limit the impact on existing activities. We ask that the potential impacts discussed above will be taken into account and that measures to ensure the continuation of current activities within the proposed area will be added to the upcoming proposal.	<i>In the draft scoping of the strategic environmental assessment (SEA), which was a part of the consultation material, it is specified that the SEA report must include an assessment on the potential impact on the fisheries. The assessment level must follow the detail level of the plan. In addition, the DEA can inform that more detailed analyses currently are being done for the potential impact on fisheries, which can be used for the upcoming environmental impact assessments (EIAs). The technical report on fisheries will be available on the DEA website in January 2023 (Publication of results from the preliminary site investigations – Offshore wind North Sea Energistyrelsen (ens.dk)).</i>
France		
Seabirds	<i>The Interregional Directorate of the East Channel - North Sea (Direction interrégionale de la mer Manche Est - mer du Nord (DIRM MEMN)) has declared its interest to participate in the environmental impact assessment procedure set out under the Espoo Convention, particularly in view of the potential presence of common scoters (Melanitta nigra) and red-throated loons (Gavia stellata) in the "Channel - North Sea" area, falling within the vicinity of the proposed energy island.</i>	The strategic environmental assessment will include assessments of the potential impact on seabirds, also in a transboundary context. The DEA will ensure future participation of France through the ES-POO-Point-of-Contact.
Germany		
Marine traffic and	BSH (05-10-2022): In addition to the spatial development plan (ROP) for the German EEZ (ROP 2021), BSH request that the current site development plan or the site development plan currently being compiled (FEP-E 2022) be taken	<i>Marine traffic and safety of navigation, hereunder mapping and assessment of impact on shipping lanes, will be included in the SEA. If significant impacts are identified for maritime traffic and safety of</i>

safety of navigation	into account so as to ensure planning coherence, especially with regard to the shipping lanes, in the Danish and German EEZ. Furthermore, the currently ongoing expert report on shipping by ABL in particular and the already completed expert reports on shipping (Shipping analysis of the North Sea, BMI 2021) as well as related discussions held in various working groups, such as the North Sea shipping group, should be taken into account. This should ensure a continuation of the shipping corridors in respect of the volume of shipping traffic with the required width. WSV (30-09-2022): In addition the Federal Waterways and Shipping Administration of Germany (WSV) response to the plan is as follows. The announced project will involve shipping hazards directly in busy international shipping lanes. This will make significant areas out of bounds for international shipping, especially in relation to the Baltic Sea, and entail risks of collision/stranding of ships with/on the facilities of the project. When developing the scope of the assessment (scoping) for the plan / Strategic Environmental Assessment of the plan, it is therefore necessary to outline and evaluate in adequate detail the anticipated implications of the announced project for the safety of shipping using internationally recognised scientific risk assessment methodology. One particular area of focus of the risk assessment should be recording and validating the specific risk scenarios that could arise for shipping as a result of the construction and operation of the projects. Furthermore, appropriate conclusions must be drawn from the risk assessment, whereby in particular the protective measures required to be able to reduce the	<i>navigation, the plan can be adjusted to reduce risk. In connections with planning of the certain projects, hereunder route planning and location of OWF, cables and pipelines and the flexible island, detailed analyses of marine traffic and safety of navigation will be done. In addition it is specified that the maximum size of the artificial island can be 1 km².</i> <i>In connections with the second consultation phase of the draft plan and the SEA, the DEA will ensure the involvement of WSV in the future hearing processes through the ESPOO-Point-of-Contact. Furthermore detailed analyses of impacts on maritime traffic and safety of navigation will be publically available at the DEA webpage during January 2023 (Publication of results from the preliminary site investigations – Offshore wind North Sea EnergiStyrelsen (ens.dk)).</i>
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	implications of these risk scenarios on traffic safety to a manageable level are set out and assessed with regard to their effectiveness. In terms of setting out any protective measures, I deem it necessary to distinguish between preventive and damage control measures and to examine and assess these in respect of their effectiveness at minimizing the risk. This includes: • Reviewing the optimisation of the position and size of the Energy Island and the surrounding wind farms to retain a maximum degree of traffic safety and in particular to be able to organise the internationally coordinated restructuring of the shipping lane between the English Channel and the Skagerrak strait with the necessary flexibility/required degrees of freedom as well as with an adequate level of safety for shipping, including in the Danish sector, • Equipping the Energy Island and the wind farms with navigational aids in accordance with the international standards of IALA, • Reviewing the establishment of VTS systems and measures for maritime emergency preparedness around the projects, etc. WFV would be grateful to be informed of the definition of the scope of assessment in this respect and ask to be involved in the subsequent process. WFV (28-09-2021): Denmark plans to build an approx. 6 km² artificial island in the North Sea approx. 80 km off the west coast of Jutland in international waters. The island is to be built in an area in which the rights of use of shipping are privileged and secured by the International Convention on the Law of the Sea of the United Nations of 1982 (UNCLOS) (including freedom of navigation according to Art. 58 and 87 UNCLOS). The construction of an energy island will introduce an additional obstacle to shipping in the previously free sea space. This creates new dangers for the	
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	safety and ease of shipping, which must be minimized by taking appropriate measures. From the point of view of the issues to be represented by the Directorate-General for Waterways and Shipping, the construction of an artificial island in the Danish EEZ must take place in a suitable position so that the international system of the IMO may still be determined or habitually navigated Shipping routes, in particular on the English Channel - Skagerrak relation, are taken into account, so that the project does not impair the safety and ease of shipping in the German EEZ. On the question of future traffic routes on the above-mentioned route, extensive coordination is currently taking place between the affected North Sea countries (including Denmark) with the aim of developing a coordinated proposal for the IMO for the future design of the above-mentioned shipping routes in the North Sea.	
Cables and pipelines	BfN (08-10-21): The DEA states that the energy island will produce electricity significantly above the national demand and thus will export electricity to the neighbouring countries in the future. For this purpose, a number of submarine cables are to be laid in corridors to connect with the cooperation countries. The BfN points out that when laying the cables and connecting them to Germany, the specifications of the "Flächenentwicklungsplan (FEP)" must be adhered to and the gates (Netzverknüpfungspunkte) defined there for interconnectors must be used.	<i>As stated in the draft Plan for Programme Energy Island North Sea, which was a part of the consultation material interconnectors (cables and/or pipelines) to Germany must be constructed to meet the gates in Germany, which is defined in "Flächenentwicklungsplan (FEP)".</i>
Nature protection and biological diversity	BfN (08-10-21): Technical specifications for reducing sediment heating and electromagnetic fields must be applied and there must be no crossing of protected areas in the German EEZ. The BfN does not expect any significant adverse impacts on the marine environment in these areas due to the long distances of more than 80 km between the Danish energy island 'Energjø Nordsøen' and the German SCIs 'Sylter Außenriff – Östliche Deutsche Bucht' (DE 1209301, DE 1011-401). However,	<i>The DEA appreciates the consultation response. The DEA wants to emphasize that the Plan for Programme Energy Island North Sea does not include planning in German EEZ. The plan, if adopted, will provide the opportunity to tender specific offshore windfarms up to 12 GW offshore wind (phase 1) and up to 40 GW offshore wind (phase 2) within the two defined areas for OWF in the Danish EEZ and will provide the opportunity to tender a wide range of innovative activities. The plan does not define the design of the flexible island</i>

as the exact location and methodology for the construction and operation of the artificial island has not yet been determined, BfN asks that possible impacts on Natura 2000 sites be assessed. The construction of an artificial island for the generation of sustainable energy in the North Sea is a project of unknown scale, which so far involves many unknown factors and potential risks for the environment. In order to be able to investigate and mitigate the (direct, indirect and cumulative) impacts on the German environment in a timely manner, BfN requests to be involved in the further SEA and EIA procedures as well as future projects within the development zone for renewable energy and energy islands, Havplan 2020. The effects of the planned artificial island and its wind farms on migratory birds and bats are to be considered as transboundary environmental impacts. According to current knowledge, possible effects include in particular bird and bat collisions with offshore wind turbines as well as barrier effects and habitat loss. Many migratory birds leave and arrive in Scandinavia via the Danish coastline along the North Sea. It is therefore to be expected that birds may collide with wind turbines during the operation phase or avoid the areas altogether whilst migrating or passing through. Consequently, the BfN recommends that the applicant covers relevant migratory birds and seabirds in greater detail in the EIA and conducts field surveys involving aeroplane flights and radar within the project area. Furthermore, the BfN recommends the use and installation of long-term radar on the turbines by the developers to collect further data on migration events and enable the management of shutdowns during mass bird migration events. For the planning of wind farms in the German EEZ, the BfN already demands the use of such radar systems. As already stated, bird migration is a cross-border	<i>concept. The plan is hence an overall framework plan, and the SEA will address a wide range of potential impacts and the level of details of the assessments will follow the level of details of the plan. Assessments will be done according to the Danish legal framework.</i> <i>The strategic environmental assessment (SEA) will include a chapter regarding potential transboundary impacts, which can arise from the specific projects following the plan. This will also include potential impacts on German nature protected areas/Natura 2000, on migratory birds and bats, seabirds, marine mammals, if it is assessed that there is a risk. The SEA will, if there is a potential significant impact, include suggestions for mitigation measures.</i> <i>In connections with the specific projects, the environmental impact assessment (EIA) will address the project impacts in details. The EIA must also include mitigation measures to reduce impacts from the construction and operation of the flexible island, OWF, cables and pipelines etc.</i>
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phenomenon and shutdowns as they are required by the Danish Environmental Protection Agency are therefore complementary to the measures required by the BfN for the German EEZ. The applicant also refers to the risk of bat collisions with offshore windfarms but does not state how the potential risk will be assessed or minimised. Bat migration over the North Sea and, in particular, the Baltic Sea has been confirmed in numerous studies (e.g., AHLÉN et al. 2007, 2009) and the protection status of these species necessitates targeted surveys to allow estimation of their collision risk on the proposed offshore wind farm. The BfN therefore recommends the use of monitoring systems (e.g., batcorders) on buoys on the artificial island to inform the EIA and subsequent bat monitoring on constructed wind farms to estimate actual bat collision risk. Mitigation measures like temporary shutdown of turbines would have to be considered. Large portions of the North and Baltic Sea function as resting and feeding areas for different species of divers, ducks and auks. Some seabird species, e. g. red-throated and black-throated diver (<i>Gavia stellata</i>, <i>G. arctica</i>), but also some ducks and auk species react to offshore wind turbines by spatial evasive behaviour, which leads to a permanent habitat loss (e.g., Garthe et al. 2015, 2017; Mendel et al. 2019). In the document “Entwurf einer Stellungnahme zur Abgrenzung des Umweltberichts für den Plan für Energjø Nordsøen (Energieinsel Nordsee)” the applicant states that potential barrier effects of birds avoiding food searches in the planned area are expected due to the artificial island and its wind turbines, but again, does not state how this topic will be assessed and covered. The BfN points out that the planned artificial island and its wind farms are expected to directly affect seabird distributions through displacement effects,	
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	which would extent into German waters. Additionally, barrier effects are not limited to potential loss of feeding habitats but include increased energy demands due to changes in flight routes during migration. In the case of large-scale habitat losses due to the project, also in connection with operational German wind farms, a displacement of wintering, staging and migrating seabirds seems possible. Furthermore, negative population changes in the Danish EEZ may also have an impact on the population in the German EEZ and vice versa. Hence, the BfN recommends a detailed monitoring not only for migrating but also possible wintering and staging seabirds in the planned area with a detailed analysis in the EIA. According to scientific findings, a temporary hearing threshold shift (TTS) among harbour porpoises is triggered by impulsive sound events with a broadband single event sound pressure level (LE) above 164 dB re 1µPa² s in combination with a peak level (L_{peak-peak}) of 199 dB re 1µPa (LUCKE et al. (2009)). In addition, a higher sound pressure caused by single sound events can lead to permanent hearing threshold shifts (PTS) by physical tissue damage, and in extreme cases even to death. The single event sound pressure level (LE) is identical to the sound exposure level (SEL). The peak level (L_{peak-peak}) is identical to the peak sound pressure level (SPL_{peak-peak}). The BfN comments that for the German approval procedures thresholds for the sound exposure level (SEL) of 160 dB re 1µPa² s and the peak sound pressure level (SPL_{peak-peak}) of 190 dB re 1µPa (measured at a distance of 750 m from the sound source) are mandatory to avoid death or injury of marine mammals. These limits are generally recognised, laid down in the German Noise Protection Concept (BMU 2013) and compliance with them is standard. The applicant has not yet determined which foundation is to be used for the artificial island, as it has not yet been decided which exact installation concept is to be used for the artificial island. The same applies to the construction of the wind	
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	turbines to be erected on and around the artificial island. In order to protect marine mammals during installation in the North Sea, safety and noise reduction measures must be tested in advance and put into practice during installation. Independently of the actually deployed foundation type, it must be ensured that no sound levels causing death or injury are emitted in the German EEZ of the North Sea on all accounts. According to the 'Rahmen für den künftigen Planungsvorschlag für die Energieinsel Nordsee zur Verwendung bei der Umweltverträglichkeitsprüfung' (p. 10), construction activities of wind turbines are scheduled to take place around 2030. In order to minimise the impact on harbour porpoises, the BfN recommends avoiding or minimising pile driving during sensitive periods (01.05. – 31.08., BMU 2013). In Germany, a combination of noise protection measures (e.g. big bubble curtain, IHC noise mitigation system or hydro sound damper) is standard for pile driving work in order to comply with the threshold values. The use of acoustic deterrent devices is limited to 30 minutes before the pile driving process in order to minimize disturbances caused by their use. In addition, the pile driving process should be initiated with a soft-start and is limited to 180 minutes for monopiles and 140 minutes for each jacket-pile. If breaks between the installation steps are longer than 40min, the acoustic deterrent devices have to be turned on again before continuing with the installations. Compliance with these requirements is ensured by the standard use of noise mitigation measures in the construction of all driven piles in German waters. The above mentioned thresholds are generally accepted and compliance is standard. According to the Federal Nature Conservation Act, disturbance is only prohibited if it is significant. This is the case when the conservation status of the local	
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	population is impaired. According to the German Sound Protection Concept, a significant disturbance of harbour porpoises in the German North Sea is prevented by limiting the area impacted by disturbing piling noise (chapter 7.3).	
Nederland		
Trans-boundary and cumulative impacts	The kind of activities being integrated on / linked to the island should be considered in the SEA, as they determine the kind of ecological effects. It is also of importance to consider cross border and cumulative environmental impacts of the construction, operation and (if applicable) demolition phase of the energy island. Also shipping safety and unimpeded accessibility of ports should be addressed.	<i>The DEA appreciates the consultation response. The plan is an overall framework plan, and the SEA will address a wide range of potential impacts and the level of details of the assessments will follow the level of details of the plan.</i> <i>The strategic environmental assessment (SEA) will include a chapter regarding potential transboundary impacts and also cumulative impacts, which can arise from the specific projects following the plan.</i>
Hydrography and water quality	The SEA should seriously consider indirect changes to the ecosystem resulting from physical changes that influence the ecosystem (such as impacts on currents, stratification, nutrients and sediments).	<i>DEA: The DEA appreciates the consultation response. The plan is an overall framework plan, and the SEA will address a wide range of potential impacts and the level of details of the assessments will follow the level of details of the plan. The SEA will include overall assessments on impacts on hydrography and on water quality. The SEA will take an ecosystem approach in the assessments.</i>
Flora and fauna	The SEA should seriously consider the direct changes to the ecosystem itself (species composition, invasive species).	<i>The DEA appreciates the consultation response. The SEA will include overall assessments on impacts on flora and fauna and will also take an ecosystem approach in the assessments. In addition the SEA will include assessments on non-indigenous species according to the requirements in the marine strategy frameworks directive.</i>

Table 2 Energistyrelsens øvrige bemærkninger til høringssvarene, som ikke har kunnet adresseres i afgrænsningsudtalelsen

Country and topic	Consultation response	DEA's remarks
Belgium		
Critical infrastructure	Beyond the economic (fuel price) and environmental (conserving fauna and flora) aspects, our remarks have for goal to optimize the synergy between private and public agreements. Defense should be more involved in the process of energy Islands as such critical infrastructure has de facto a link for Coast Guard (homeland Operations). Therefore, in order to avoid wasting time for future cooperation, we would recommend to take into account the necessity to cooperate because "energy islands" is an incredible source of military, economical, environment and security advantages and may reach to interdepartmental agreement to reach common goals and, for example: - Increase our MSA, and therefore contribute to safety and security (Coast Guard, Police, Douane,...). - Use the energy islands as a pontoon to moor Danish ships or other ships (homeland operations) (Coast Guard, Economics,...) - Base for drones, cameras, helos. (Coast Guard, Police, Environment,...) Consequently, you can find some concrete proposals: 1. Place an antenna to extend the range of action of the UAS (drones) over the North Sea. 2. Place various sensors (EO/IR, radar, sonar, ESM, etc.) for maritime surveillance, a drone port with residential drones (UAV, USV, UUV), a platform for occasional mooring of ships (CPV, MCMPF). Both the helicopter landing pad and the quay facilities are already included in the project, for which the complete disposal of all collected real-time information from	<i>The DEA appreciates the comments and input regarding critical infrastructure. The DEA will inform relevant parties within the programme, so comments can be included in future planning</i>

	the relevant data sources such as e.g. camera images, radar and sonar images, hydrophone data, etc. 3. Exploit the data for maritime situational awareness (MSA) about the North Sea and surrounding critical infrastructures, but also to monitor, for example, non-NATO (hybrid) ships and to capture the EM signatures. 4. Tracking non-NATO (hybrid) units passing through the EEZ and capturing signals database for both Navy ships, vehicles and aircraft.	
Nederland		
Others	When preparing the construction of such an offshore structure, it is furthermore essential to address the relevant aspects related to safety of vital infrastructure. Aspects such as the way in which the island would be constructed and property rights (private vs public) should be carefully considered in this sense. The Island will combine wind energy with other innovative energy functions in time and space. The Netherlands would be very interested to know more about how the varying activities on / connected to the island will be planned and also combined, and how this relates to future plans on the energy system in the North Sea. A last aspect we would like to mention, is the aspect of sustainability in the sense of materials to be used and structures to be realized, e.g. concerning the availability of materials and the potential to reuse constructions or materials. A life cycle analysis might help to address this subject. Since we assume the life time of an island is longer than the life time of the constructions on the island, we are interested in the flexibility of design of the island. To which extent can the functions on the island change over time, and how is the governance/ decision-making process concerning various functions organized?	<i>The DEA appreciates the very thorough and relevant consultation response. In connections with the development of the certain projects covered by the plan and also the tender material, development of insurance of critical infrastructure, property rights on the artificial island, sustainability etc. will be handled thoroughly.</i> <i>The DEA will ensure the involvement of the Netherlands in future hearing processes through the ESPOO-Point-of-Contact.</i>

Table 3 An overview of the countries that have submitted a response to the ESPOO consultation of the Energy Island North Sea

Country	Consignor	Date	No comments
Belgium	The Belgian Fisheries Administration	24-09-2022	
Belgium	The Belgian Navy	23-09-2022	
France	The Interregional Directorate of the East Channel - North	26-09-2022	
Nederland	The Ministry of Infrastructure and Water Management	26-09-2022	
Norway	Miljødirektoratet	27-09-2022	X
Germany	Bundesamt für Naturschutz (BfN)	23-09-2022	
Germany	Bundesamt für Seeschifffahrt und Hydrographie (BSH)	05-10-2022	
Germany	Generaldirektion Wasserstraßen und Schifffahrt	30-09-2022	