



SWEDISH
ENVIRONMENTAL
PROTECTION
AGENCY

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Sweden's response to the notification in accordance with the Protocol on Strategic Environmental Assessment to the Espoo Convention regarding off-shore wind farm Sunnanvind, Åland, Finland

Sweden has been notified by Finland regarding the offshore wind farm Sunnanvind north of Åland. The notification is in accordance with Article 10 of the Protocol on Strategic Environmental Assessment (the SEA protocol) to the Convention on Environmental Impact Assessments in a Transboundary Context (Espoo Convention).

Sweden acknowledge that the notification has been received and inform that Sweden would like to take part in the further environmental assessment. Views and comments are summarised below and all statements with comments are attached and have to be read in its entirety.

Consultation in Sweden

The document for consultation has been circulated for consideration to Swedish central government agencies, the relevant county administrative boards and municipalities, organizations and the public during the period from 19 May until 26 August 2025. The documents have also been published on the SEPA website.

The Swedish EPA is the authority responsible for fulfilling the obligations following from, inter alia, Article 10 in the protocol (SEA) to the Espoo convention. However, SEPA does not evaluate the consultations received with a view to presenting an overall Swedish position. For a comprehensive view of the comments received during the consultations, we refer to the enclosed statements.

Comments received

Statements have been received from central government agencies, county administrative boards, municipalities and organizations. SEPA has briefly summarised the statements below.

Central government agencies

The Swedish Transport Administration has no comments at this stage. The Swedish Agricultural University refrains from leaving comments. The Swedish

Energy Agency have no comments at this stage but would like to be informed regarding the further process.

The Swedish Maritime Administration raise the risks for cumulative impacts on maritime transports, the need, and increased costs, for ice breaking ships, the need for nautical risk assessment, that since a large number of parks are planned in the Bothnian Sea, the cumulative effects on maritime traffic should be investigated before areas for wind power are decided upon.

The Swedish Meteorological and Hydrological Institute (SMHI) consider that there are transboundary environmental impacts such as impact on the abiotic conditions, the turbidity, increased nutrients, release of potential contaminants from sea bottom and increased marine transports. In addition to those aspects the effect on waves, wind and marine streams from wind power plants have to be considered. SMHI states that those consequences have to be included in the SEA, see full statement for more information. Finally, SMHI states that there is a need that some part has an overview of cumulative impacts from the planning of OWF in the Baltic Sea and the Bothnian Bay and Bothnian Sea, see further detailed in the full statement.

The Geological survey of Sweden (SGU) states that the SEA includes a general overview of the degree of pollution in the area but lacks site-specific information on the potential spread of sediment and turbidity based on the planned activity. The SGU considers this to be necessary information in order to enable an assessment of cross-border effects. The detailed design for the establishment of wind turbines in the area should therefore include such site-specific sediment dispersion modelling. See full statement for detailed information regarding what the modelling should be based on and further investigations that are required.

Swedish Geotechnical Institute (SGI) has no comments regarding the location of the park. SGI comments on geotechnical risks, see statement for details. They also raise the need for an assessment of the environmental impact of wind farms during the operational phase, for example in the form of leakage of metals into surface water and sediments (based on environmental quality standards), needs to be carried out.

The Swedish Transport Agency states that since the actual area borders to important maritime transport areas there is a risk for cumulative impact. Maritime transports have to be taken into account in the future work.

The Swedish Environmental Protection Agency, as national authority responsible for birds and bats, states that the plan may risk causing cross-border impacts on birds and bats, particularly during the operational phase. SEPA notes that the planned wind farm is located in a coastal area of great importance for migratory and resting birds. The migration corridor across the southern Bothnian Sea is one of the most important in Scandinavia. Migration of birds and bats have to be assessed preferably during spring and autumn, see full statement for more details. In addition SEPA states that cumulative impacts and a risk analysis of cumulative impacts should be included in the SEA and more guidance are given in the statement.

County board of administrations

County Administrative Board in Gävleborg leaves some general comments but refrains from leaving comments on the specific plan. There is a need for better knowledge about the overall cumulative impact, particularly on fish and birds

the large-scale expansion of wind power could have in the Bothnian Sea. Species that move across large areas, such as fish and birds, are particularly important to highlight in the assessment of cross-border impact. The county board states that there is a transboundary impact on Sweden and the impact and consequences have to be taken into account.

County Administrative Board in Stockholm states that Åland have to consider the Swedish Maritime Spatial Plan in the planning process and ensure that the planning is in line with the Swedish MSP. The county board comments that cables and infrastructure are not included in the SEA. If those activities will impact Stockholm County, the board will have the possibility to take part in the consultation. See full statement for more details.

County Administrative Board in Uppsala states that the sea between Finland and Sweden is a natural resource that depends on both countries ensuring good management and protecting marine life and birds that migrate across national borders. Therefore, the County Administrative Board considers it particularly important to highlight the impact and possible protective measures to safeguard bird life and fish, as well as the management of electricity production and mitigation measures that reduce climate impact. In addition, the alternative with production of hydrogen gas needs to be described in detail in an environmental assessment. The full statement has details and further information regarding those topics listed above. In addition, the board has attached two appendices regarding hydrogen leakage.

Municipalities

Tierps municipality states that cumulative impacts from all wind farms in both Swedish and Finnish waters have to be assessed and considered. For example, the project area appears to be located in an important migration route for the geese (*Anser Fabilis*). Other studies have found that geese have a high avoidance rate. It is therefore important to carefully investigate the consequences if the geese change their route in order to avoid the wind farm, or if all wind farms in Swedish and Finnish waters together become a major barrier for the geese. In addition to the impact on bats and migratory and breeding birds, the impact of wind power on the sensitive ecosystem of the Baltic Sea needs to be carefully investigated, particularly its impact on species that are already under severe pressure, such as cod and herring. In addition eels and safety issues have to be considered. Further information and details regarding what must be investigated and assessed are given in the full statement.

Östhammars municipality states that there are potential cross-border effects that may affect our Swedish waters, Swedish and international shipping, and blue growth. For the municipality of Östhammar, the possible establishment of one or more offshore wind farms will have consequences for bird life, fish stocks, shipping, and the landscape. Cumulative impact have to be assessed and consequences of all projects must be considered.

Non-governmental organizations

BirdLife Sweden states that the bird migration across the Åland Sea and the southern Bothnian Sea is well known. Taken into account, the localization of Sunnavind is problematic. The OWF entails risks for collisions and risks for night migrating birds. BirdLife presents a list including what have to be presented and considered in the SEA, such as cumulative impact, the total loss of habitat etc. The assessment of the impacts needs to be based on relevant species.

BirdLife recommends further investigations of existing birds and mitigations measures such as closing down the turbines during bird migration. BirdLife requires temporary shutdown during when there is high risk for impact on birds. See full statement for details and further information and requirements.

The Swedish Pelagic Federation PO and the Sveriges Fiskares

Producentorganisationer (SFPO) has cooperated and leave one statement. They state that the plan has a negative impact on flora and fauna and the fishstock and the fishing industry. Wind farms in the proposed area may affect fish stocks through underwater noise, vibrations, altered currents, sediment dispersion in connection with the turbines, or electromagnetic fields around cables. Current knowledge about these factors and their impact on the environment and the fish species in the area is insufficient. The organizations consider that more knowledge is required, and cumulative effects have to be carefully considered in the environmental impact assessment. See full statement for a list of what should be included in the SEA.

Conclusion and summary

Based on the comments received Sweden intends to participate in the further planning procedure since the plan likely has transboundary impact on Sweden's environment and Swedish interests. Issues raised are for example the risk for cumulative impacts from off shore wind farms in both Swedish and Finnish waters, negative impact on bird and bat migrations etc, risk for contaminations and impact on sea transports. In the full statements there are more information and details of what should be included in the SEA, further investigated and assessed.

The decision has been made electronically and there is no need for signatures.

For the Swedish Environmental Protection Agency

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Head of Unit

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Point of Contact for the Espoo protocol

Attachment with comments from:

The Geological survey of Sweden (SGU)

The Swedish Geotechnical Institute (SGI)

The Swedish Meteorological and Hydrological Institute (SMHI)

The Swedish Transport Agency

The Swedish Maritime Administration

The Swedish Environmental Protection Agency (SEPA)

The county Administrative Board in Gävleborg

The county Administrative Board in Uppsala

The county Administrative Board in Stockholm

Tierp municipality

Östhammar municipality

BirdLife Sverige
The Swedish Pelagic Federation PO and the Sveriges Fiskares
Producentorganisations (SFPO)

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Ministry of Climate and Enterprise Eleonora Rönström and Bastian Ljunggren