Suomen ympäristökeskus
Finlands miljöcentral
Finnish Environment Institute

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Ministry of Climate
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Finland's response to the notification in accordance with Article 3 of the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention) for the offshore windfarm ELDWIND (Estonia)

The Finnish Environment Institute acknowledges that Finland has received the notification dated 6 August 2024 and the consultation documents from Estonia. The notification is based on Article 3 of the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention) regarding the offshore windfarm ELWIND (Estonia).

The ELWIND is a joint Estonian-Latvian state-run cross-border hybrid offshore windfarm project in the Baltic Sea. The administrative procedures (including EIA procedures) will be carried out separately according to the regulations of each country. In Estonia, the ELWIND windfarm is planned to be developed in west of Saaremaa Island in the area defined in the Estonian national maritime spatial plan as suitable for the development of wind energy. The area of the ELWIND (Estonia) is approximately 200,44 square kilometers. The planned total installed capacity of the wind farm is 400–1000 megawatts (MW) with 20–100 wind turbines depending on capacity of each turbine (10–25 MW). The maximum height of the turbines is 330 meters with a rotor diameter of up to 300 meters.

Consultation in Finland

In accordance with Section 30 (911/2022), Subsection 1 of the Finnish Act on Environmental Impact Assessment (252/2017), the Finnish Environment Institute is the competent authority and responsible for tasks under the Espoo Convention when a project in a party of the treaty or a Member State of the European Union may have significant transboundary impacts in Finland. The Ministry of Climate of Estonia requested an indication whether Finland intends to participate in the EIA procedure of the offshore windfarm ELWIND (Estonia), comments concerning the scope for the assessment of the environmental impacts of the project affecting Finland, and comments from the public and authorities in Finland.

The public and the authorities were given the opportunity to comment on the consultation documents from 12 August to 16 September 2024, which were available on the website of Finland's environmental administration and on the website of lausuntopalvelu.fi. Statements were also asked from relevant stakeholders.

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Remarks received during the consultation

The Finnish Environment Institute has prepared an English summary of the 12 statements received in Finland. The original statements in Finnish or Swedish, which are enclosed to this letter, include important and detailed remarks which need to be examined and taken into consideration in their entirety in the EIA.

Natural Resources Institute Finland (Luke)

It is possibly justified for Finland to participate in the environmental impact assessment of the project regarding potential impacts on birds.

In spring and autumn, several bird species nesting in northern Fennoscandia and the Russian Arctic region migrate through the project area. Most of these "Arctic species" also migrate across the territory of Finland, and some individuals, such as Long-tailed duck (*Clangula hyemalis*), Scoters (*Melanitta spp.*), Loons (*Gavia spp.*) and Velvet Scoter (*Melanitta fusca*), also nest in Finland. The effects of the project in Finland could, in principle, affect both migration and nesting populations. A single project is unlikely to have impact on bird populations at the population level, but the cumulative effects of windfarm projects located on important main bird migration routes in the Baltic Sea that could weaken bird population, which could be seen in some bird species in Finland.

The potential significance of cumulative effects should also be clearly identified in the environmental impact assessments of individual projects, although it is very difficult to even try to predict cumulative effects with the available data. Therefore, possible cumulative impacts should be anticipated and assessed in broad transboundary cooperation, and if necessary, covering the entire habitats of species. At the same time, the significant information gaps should be identified, and efforts should be made to systematically collect the additional information needed to anticipate cumulative impacts.

Finnish Meteorological Institute

In terms of marine research, the Finnish Meteorological Institute considers the EIA programme comprehensive in terms of the hydrographic effects on the sea but considers that Finland should participate in the EIA process to minimise the project's impact on marine measurements. The Finnish Meteorological Institute considers that impacts on marine measurements ('scientific heritage') should be considered in the EIA. The Finnish Meteorological Institute and several other institutes operate free-floating Argo floats in the main basin of the Baltic Sea from where they can drift into the farm area and possibly be damaged if they collide with farm structures. The Finnish Meteorological Institute proposes that the EIA process should also investigate how the project developer together with other actors can avoid such situations, and if and/or whether the project developer has the possibility to compensate for any missing measurements during the construction of the windfarm.

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Regarding the weather radar network, the Finnish Meteorological Institute has no comment to make, as the area is more than 20 km away from the nearest weather radar of the institute.

Centre for Economic Development, Transport, and the Environment of Southwest Finland

The Centre for Economic Development, Transport and the Environment of Southwest Finland considers that it is necessary for Finland to participate in the environmental impact assessment procedure of the ELWIND offshore windfarm project.

Several separate offshore windfarm projects are planned for the Baltic Sea region. The ELY Centre considers that, especially considering the cumulative effects of the projects, it cannot be ruled out that the project in question, in conjunction with others, would not cause significant transboundary environmental impacts on, for example, migratory birds, fish and marine mammals. Regarding the impact of the project on nature, it has been identified that several seabird species use the Baltic Sea areas as wintering, nesting, and food supply areas. Large numbers of seabirds fly through the Baltic Sea during migration periods, which means that bird migration routes may pass near of the planned project area. The impacts of the project may potentially affect migratory birds and bat species that migrate through the area in Finland. Regarding the birds, species nesting in Finland can also use the sea areas near the project area as resting places during migration periods. However, the potential impacts will primarily arise through the cumulative effects of all planned offshore windfarm projects in the entire Baltic Sea region, rather than individual projects.

The cumulative impacts of windfarm projects located on important main bird migration routes in the Baltic Sea Region could have a negative impact on bird populations at the population level. However, birds migrating through the project area will, as a rule, migrate through the southern and eastern Gulf of Finland, which means that the populations within the responsibility area of the ELY Centre may not be significantly affected.

In general, the consultation document corresponding to the assessment programme is very brief and the planned impact assessment is presented at a general level. Based on the assessment programme, it is difficult to form an understanding of whether the impacts of the project will be assessed with sufficient accuracy. Furthermore, the assessment programme does not clearly present the options for implementing the project, and their formation and delimitation are particularly important. The planned studies have also been described on such a general level that it is difficult to assess their adequacy.

Nature surveys must be conducted properly, following the latest guidelines, and utilising the best possible methods. Regarding bird impacts, any available satellite monitoring data could be a good complement to the impact assessment. In addition, special attention should be paid to migration routes and wintering areas in relation to wind turbines, and the significance of the impacts in these respects should be assessed. On the other hand, it is also important to identify rest and feeding areas during migration and to identify the species most sensitive to wind power. In addition, measures to mitigate possible adverse effects should be examined and the possibility of compensating the resulting impacts should be assessed and examined. In addition to the regional impacts caused by wind power, the assessment must consider cumulative impacts on a larger scale as well as possible, and identify challenges and uncertainties directly related to the assessment.

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In the assessment of cumulative impacts, it is not mentioned the projects with which the potential cumulative effects will be assessed. They should be presented more clearly in the assessment report.

Centre for Economic Development, Transport and the Environment of Southwest of Finland - Fisheries Authority

In the point view of the Fisheries Authority, Finland should participate in the EIA procedure of the ELWIND project. Finland has fishing rights and established fishing activities near the project area, in Estonia's exclusive economic zone and in international waters. In addition, fish stocks in the Baltic Sea are shared, and fishing is regulated at EU level. The environmental impacts of the project may also extend all the way to Finnish territorial waters.

The project area is located in Estonian territorial waters, where Finnish fishing vessels do not have fishing rights. However, the border of the project area is very close to the international waters of the Estonian exclusive economic zone, where Finnish vessels have permanent trawl areas. The fisheries authority considers the fishing area near the project area to be occasionally important for Finland's fisheries and security of supply. In the project area, there are significant shared fish stocks for Finland’s fisheries, particularly Baltic herring (*Clupea harengus membras*), Sprat (*Sprattus sprattus*), and Salmon (*Salmo salar*). The project can affect fishing opportunities in the nearby area by influencing movements, growth, and reproduction of fish. The project may also change the ecology of economic species and thus affect Finland's fishing opportunities. The movements of Baltic herring and sprat as well as the feeding and spawning migration of salmon are particularly emphasised here. It is possible that a large part of the Baltic salmon population migrates through the project area. An operating windfarm area with cables may affect the migration of salmon and other fish, for example, through electromagnetic fields. Pollution and hazardous substances entering the sea during construction may end up in the catches of Finnish vessels.

The main currents of the Baltic Sea flow directly from the project area towards the Finnish coast, so it is likely that sediment clouds and possible emissions during the construction will directly affect the Finnish coast and the Gulf of Finland, affecting coastal fishing in Finland and offshore fishing in the Gulf of Finland and the Archipelago Sea. Potential operational emissions (lubricants, protective paints) and especially major emissions caused by accidents and sabotage (e.g. ship fuels or cargoes, transformer coolants) also threaten Finnish nature and coastal fishing through currents.

In recent years, the catches of Finnish vessels near the planned wind power area have been approximately the same amount as those of Estonian vessels. A significant portion of the catches from the vessels fishing under the Finnish flag are unloaded in Estonia. However, the programme only shows catches of Estonian vessels, which could lead the reader to underestimate the fisheries impact on both Finland and Estonia.

The previous one-time sonar survey presented in the programme is insufficient to determine the movements of Baltic herring in the area, because the Baltic herring is constantly moving. Sonar studies should be repeated frequently, especially during spawning, if the results are to be used for impact assessment. This should be considered in the project's studies.

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The AIS data presented in the programme are inadequately presented and the scale used is coarse to distinguish the core fishing areas. With the VMS data collected by the fisheries monitoring of EU states, the clear movements and fishing areas of vessels can be easily distinguished, enabling more accurate impact assessments and facilitating the planning of countermeasures. However, the fishing activities of Finnish vessels are unlikely to be disturbed by the structures located in Estonian territorial waters.

The fisheries authority is particularly concerned about the impact of construction activities (primarily noise and sediments) on the reproduction of Baltic herring in the area, as the Baltic herring stocks are shared. Therefore, herring spawning in the impact area of the project should be investigated and the effects of the project assessed accurately. It should be noted here that the impacts will not be limited to the project area, but the greatest impact will be on the nearby, shallow reefs.

Finnish fishing is directly affected by how noise and sediment clouds during the construction affect fish movements outside the project area, in Estonia's exclusive economic zone. These areas must also be investigated in noise and sediment modelling. The movement of sediments to the Finnish coast must be modelled if necessary.

The sediment dumping of the project can alter the hydrology of the sediment dumping site and release sediment for years. Sediment dumping areas should be defined and selection criteria should be presented, especially if the dumping areas are outside Estonian territorial waters.

According to the programme, the bedrock beneath the sedimentary bottom of the area is limestone. There may be petroleum-containing deposits in Baltic limestones. Geological surveys should determine whether such deposits occur and whether oil can be released into the water during the construction activities. Even the small quantities of oil, if getting into a trawl, can make the catch unsellable.

An operational windfarm with cables may affect the migration of salmon and other fish, for example, through electromagnetic fields. There is no information on the salmon migration in the area, but a large part of Finland's spawning population feeds in the main basin of the Baltic Sea and seems to migrate along the Finnish coast near the shoreline at the latest. It is possible that a large part of the salmon population of the Baltic Sea migrates through the project area. In the past, Finnish vessels have had lively salmon fishing activities in the surrounding areas. Attention should be paid to the possible effect of the magnetic field, as well as mitigation measures.

The programme does not mention the risk of alien species. With the implementation of numerous wind power projects in the Baltic Sea area, the global-scale import of construction and dredging equipment, as well as foundations, seems likely. Such equipment may be more favourable for the settlement and establishment of various organisms than regulary commercial vessels. The stepping-stone effect of the artificial structures of the farm can also contribute to the spread of alien species. Alien species have generally a negative impact on fisheries.

This project is one of several projects that may be carried out simultaneously in the Baltic Sea region. The impacts of significant projects alone can multiply and permanently change the marine environment. In the programme, cumulativeness has been considered, but largely limited to a cable project located in the same area. Cumulative impacts should be assessed on a case-by-case basis over a sufficiently large area, if necessary, at the Baltic Sea level.

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Finnish – Swedish Transboundary River Commission

Although the project area is located outside the geographical scope of application of the Agreement between Finland and Sweden Concerning Transboundary Rivers (91/2010), the project may have impacts on the Torne River through the impact on migratory fish. Salmon in the Torne River migrate even to the southern Baltic Sea, possibly through the project area or over submarine cables that lead the produced electricity to land.

Sweden and Finland have concluded an agreement between Finland and Sweden concerning transboundary rivers that one of the basic pillars of international law is the UN Convention on the Law of the Sea. It has been agreed in the Agreement between Finland and Sweden Concerning Transboundary Rivers that special attention must be paid to the conservation and sustainable use of fish stocks (Article 2.2.d). In addition, it has been agreed that the juvenile production of salmon in the Torne River must be kept at the level of maximum sustainable yield.

The Finnish-Swedish Border River Commission states that Finland's participation in the consultation on the offshore wind power project ELWIND is important. The Commission emphasizes that transboundary effects cannot be excluded, especially considering the migratory fish populations.

As the time of writing, there is still limited information on the potential impact of offshore wind power on migratory fish populations. Considering the large amount of planned offshore windfarms in the Baltic Sea and the Gulf of Bothnia, the Commission emphasises the importance of acting according to the precautionary principle. It is important to thoroughly investigate the potential combined and cumulative impacts on migratory fish stocks from all planned windfarm projects in the entire Baltic Sea region.

The Finnish Heritage Agency

According to the experience of the Finnish Heritage Agency, underwater cultural heritage sites related to a construction project farther from the coast are primarily shipwrecks or parts of wrecks that may have historical connections to different countries. However, underwater cultural heritage sites are physical remains located in a certain limited area, and according to the Finnish Heritage Agency, mapping, protection and research activities carried out in connection with the preparation and implementation of water construction projects do not have concrete transboundary environmental impacts.

Impacts on underwater cultural heritage need to be investigated in connection with the preparation of water construction projects. This is ensured by the cultural environment authorities of each country. The summary of the ELWIND project's environmental impact assessment programme dated 11.7.2024 rightly states that within the framework of the EIA, impacts will be assessed, and studies will be conducted, including those related to in relation to the cultural heritage conservation sites, such as shipwrecks.

From the perspective of taking underwater cultural heritage into account, there is no need for Finland to participate in the environmental impact assessment procedure of the planned ELWIND offshore windfarm project in Estonia.

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The Government of Åland

The Government of Åland, sees no need to participate in the environmental impact assessment process for the ELWIND offshore windfarm in Estonia. Due to distance over 538 kilometers between Mariehamn and Saaremaa, they consider it unlikely that the project has direct impacts on Åland's coastal waters.

The Finnish Border Guard

The Finnish Border Guard has no comment on the matter does not consider it necessary to participate in the environmental impact assessment procedure as the planned windfarm is far from the Finnish territory.

The Finnish Border Guard, Ministry of Transport and Communications, Finnish Transport and Communications Agency, Finnish Safety and Chemicals Agency and Finnish Transport Infrastructure Agency did not have any comment on the matter.

Participation in the transboundary EIA procedure

Based on the received statements and reflecting its own views, the Finnish Environment Institute states in accordance with Article 3, Paragraph 3 of the Espoo Convention that Finland intends to participate in the transboundary EIA procedure of ELWIND (Estonia).

Conclusions

The Finnish Environment Institute considers that it is important to examine and assess all the impacts mentioned in the comments. Based on the response received the consultation document for the EIA programme was found to lack sufficient detail and clarity, making it challenging to determine the accuracy and comprehensiveness of the planned environmental impact assessment.

The project's potential impacts on nature, particularly on bird species that use the Baltic Sea for wintering, nesting, and as a food supply area, are found to be potentially significant. The migration routes of these birds, as well as bat species, may intersect with the project area, necessitating thorough and precise nature surveys. Special attention must be given to migration routes, wintering areas, and the identification of species most sensitive to wind power. Mitigation measures and compensation for adverse effects should also be explored.

The project may also have significant impacts on fish populations. Therefore, for instance, possible impacts of the project on fish population during and after the construction of the windfarm should be assessed more comprehensively from Finland's perspective.

Additionally, considering that several offshore wind power projects are planned to the Baltic Sea, the Finnish Environment Institute states that the assessment must consider cumulative impacts on a larger scale than proposed in the EIA programme. The cumulative impacts on the

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marine ecosystem, such as fish populations, and migratory birds should be particularly assessed. Assessing cumulative impacts is essential because the combined effects of different projects can be significant. It is necessary to identify the uncertainties regarding the assessment of cumulative impacts as well.

To conclude, the Finnish Environment Institute wishes that the EIA documentation will provide a transboundary environmental impact assessment from Finland's perspective with a specific regard for the provided statements to the extent possible.

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This document has been electronically signed. The electronic signatures can be verified from the register office of the Finnish Environment Institute.

Appendices Received statements in Finland

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Ministry of the Environment
Natural Resources Institute Finland (Luke)
Finnish Meteorological Institute
Centre for Economic Development, Transport, and the Environment of Southwest Finland
Centre for Economic Development, Transport and the Environment of Southwest Finland - Fisheries Authority
Finnish – Swedish Transboundary River Commission
The Finnish Heritage Agency
The Government of Åland
The Finnish Border Guard
Ministry of Transport and Communications
Finnish Transport and Communications Agency Traficom

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