Policy Brief

Minimising environmental impact and maximising the support base: the Finnish example

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Introduction

The environmental impact assessment (EIA) is a central milestone in the planning of most wind energy projects. The objective is to integrate environmental considerations into the selection of a location, such as the distance from natural reserves and cultural sites, biodiversity sensitivity and land erosion issues.
Ideally, this is done while at the same time taking into account public concerns and maximising the political and social support base of a project.
Both the EIA and efforts to involve decision makers and citizens should be carried out at an early stage when there are still alternatives to the project. The aim of the process of generating alternatives is to find the option having the least adverse environmental impact and the strongest possible backing.

On 1 and 2 October 2024, the partners of the Interreg Europe project BIOWIND visited the Suolakangas wind farm in Kauhajoki, Finland. The study visit, organised by the Regional Council of South Ostrobothnia, was intended to understand the regional planning approach to wind farm design and site selection. During the permitting phase, the Suolakangas wind farm's initial location was altered following public consultation and biodiversity sensitivity surveys.

BIOWIND partners discussed the approach in South Ostrobothnia and compared this with EIA and planning procedures in their own regions. The policy recommendations are based on that discussion and on the input paper that guided the debate[1].

Policy recommendations

1. A formal, structured spatial planning process for wind farm development – preferably dynamic planning that takes into account new environmental data and evolving technologies - can already avoid much environmental harm and public resistance.

[1] Interreg Europe BIOWIND, 'Study Visit Finland Input Paper'

2. A robust and mandatory Environmental Impact Assessment (EIA) framework that considers local biodiversity, ecosystems and wildlife movement patterns as well as national regulations and EU directives—such as the Birds and Habitats Directives - is essential for sustainable wind farm development. The framework should not only evaluate the impacts of individual wind farm projects but also the cumulative effects of multiple projects within a region.

3. The use of GIS technology, environmental modeling, advanced habitat mapping and other technological tools can improve EIA performance.

4. Avoiding sensitive areas, creating buffer zones and maintaining appropriate distances from protected areas, residential zones and wildlife corridors protect the environment but can also significantly improve social acceptance of wind projects. This applies to wind farms but also to transmission lines[2].

5. There are innovative solutions that minimize environmental impacts, such as specialized turbine designs to reduce noise and shadow flicker or advanced technology to monitor wildlife.

6. Timing construction activities to avoid critical breeding or migration periods is another strategy that protects local ecosystems.

7. Infrastructure designs that reduce land disturbance, paired with revegetation using native plants post construction, ensure long-term soil stability.

8. Early and meaningful engagement with local communities and stakeholders can allow promotors to adapt projects based on feedback from residents. This demonstrates a commitment to addressing community concerns.

9. Partnering with local stakeholders can ensure the social sustainability of wind energy projects, fostering long-term acceptance and support within the community. Co-ordinated agreements with landowners - eg. sharing leasing income of plots used by wind farms among owners and neighbours using a fixed allocation key - can enhance smooth project development. In Finland, land lease payments are distributed between all of the land owners that have land in such a distance from a turbine that another turbine cannot be built in

[2] https://www.fingrid.fi/en/grid/land-use-and-environment/environmental-impacts-of-transmission-lines/mitigating-the-environmental-impacts-of-transmission-lines/

the area.[3] Landowners that are affected by transmission lines have a right to a site and a disadvantage compensation and compensation for damage.[4]

10. Specific measures can increase political support. Finland has set an example with a standard municipal property tax on wind projects[5]. The tax is paid for each wind turbine yearly to the municipality where the turbine is located. Municipalities can use the general tax rate or, for bigger wind farms, determine their own rate, with a maximum of 3,1%.

11. Post-construction monitoring can allow for adaptive management, leading to operational adjustments informed by real-time data and environmental insights. This would improve sustainability after construction. Also mitigation measures can be updated as needed.

12. Permitting processes are often lengthy due to the complexity of integrating environmental, social, and technical considerations. There is a need to streamline these processes while maintaining rigorous environmental standards. Finland's streamlined permitting processes, which integrate environmental assessments with public feedback, serve as a benchmark for efficiency without compromising compliance.

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[3] https://suomenuusiutuvat.fi/en/wind-power/effects-to-the-economy/
[4] https://www.fingrid.fi/en/grid/construction/project-stages/#compensation-procedure
[5] https://suomenuusiutuvat.fi/en/wind-power/effects-to-the-economy/