

IceWind

Improved Forecast of Wind, Waves and Icing
A new Nordic R&D project - www.icewind.dk

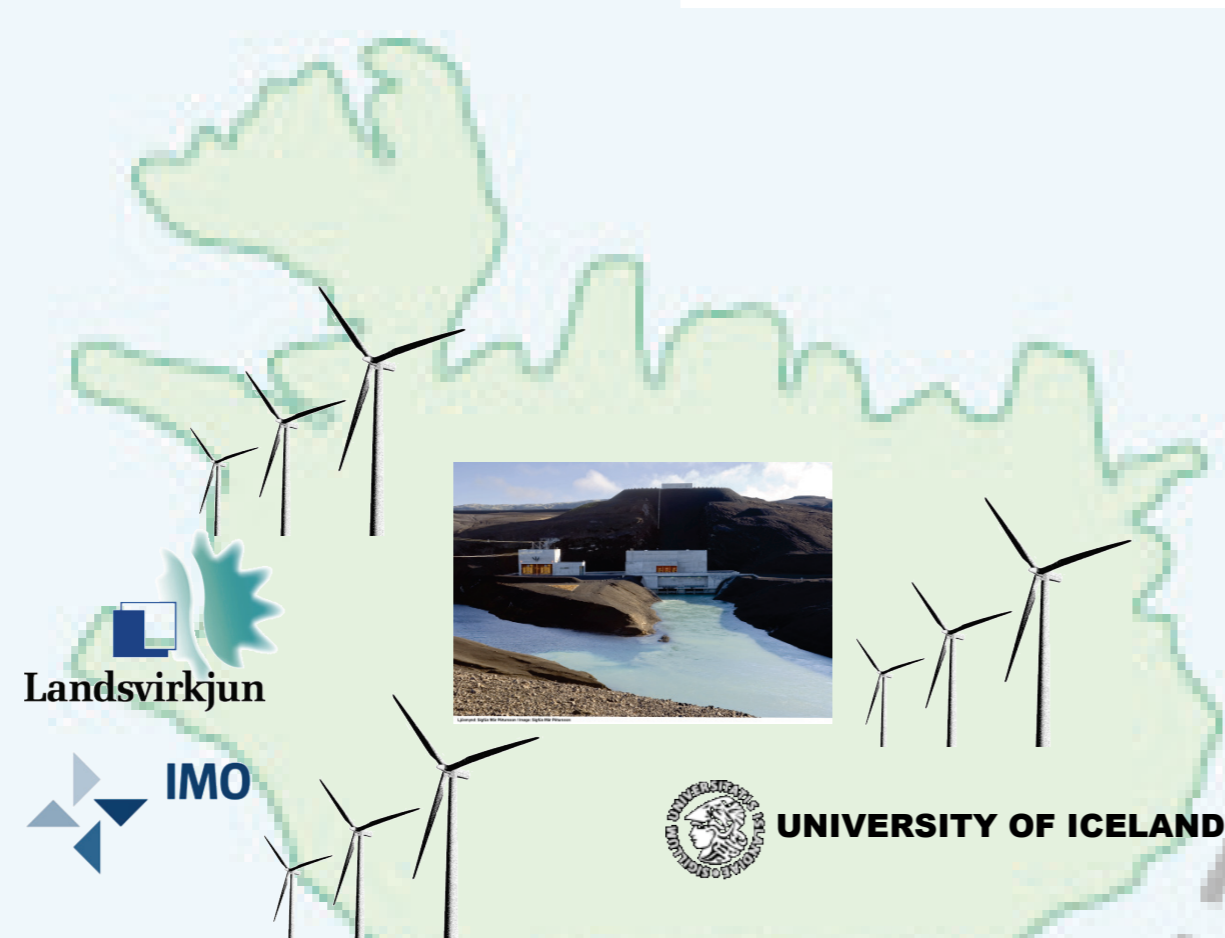
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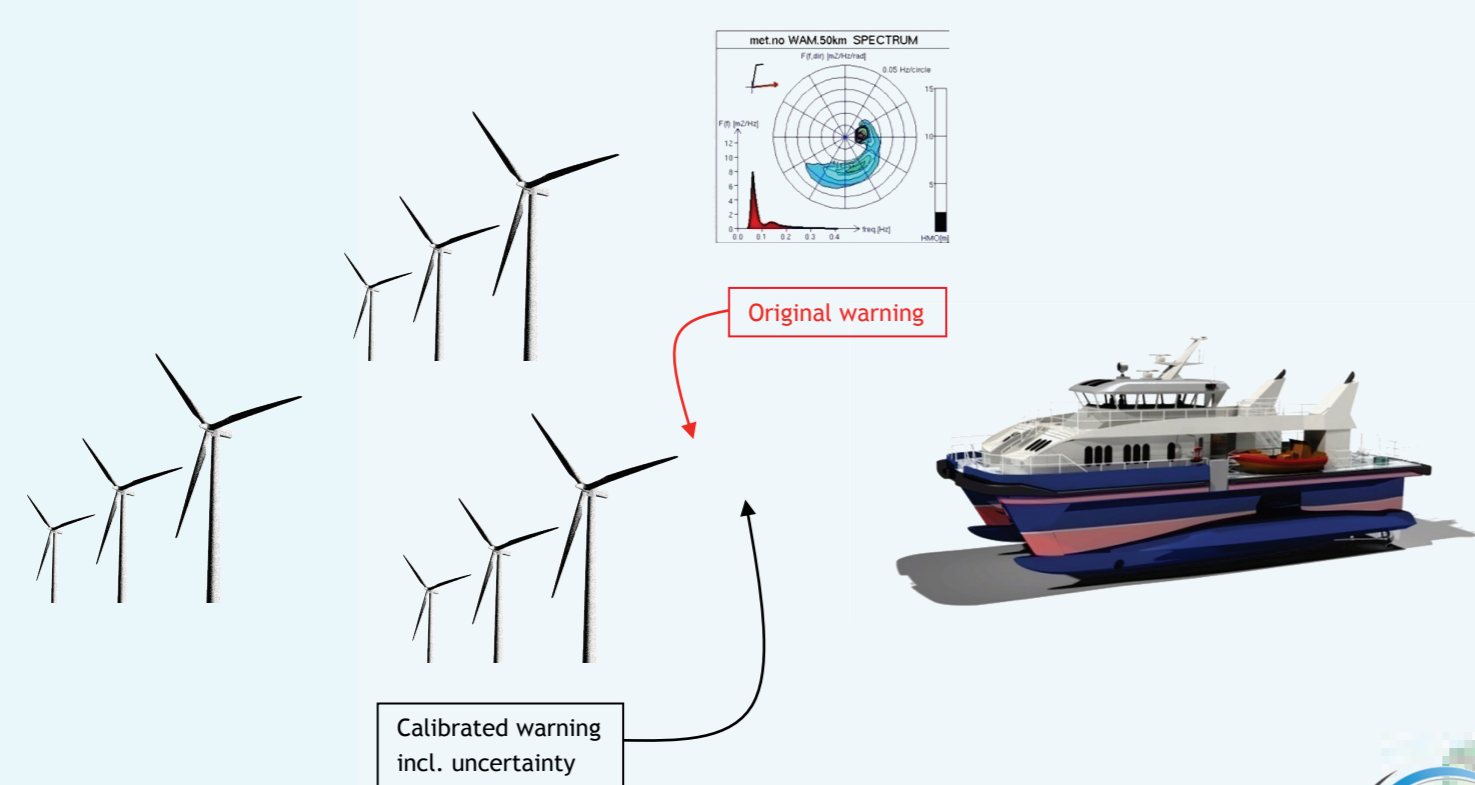
WP 2 Iceland

Wind atlas, identification of wind farm sites, technical and market integration studies



WP 1 Icing

Atlas of icing for Iceland and Sweden, forecast of icing, estimate of losses due to icing

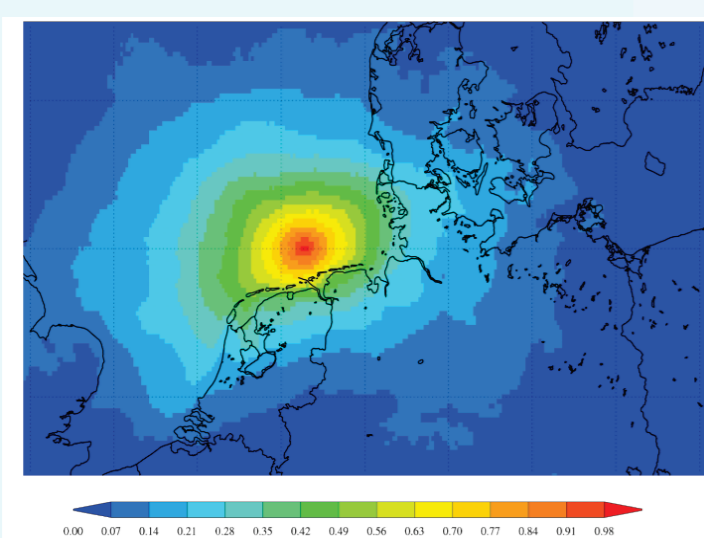


WP 3 Forecast and O&M

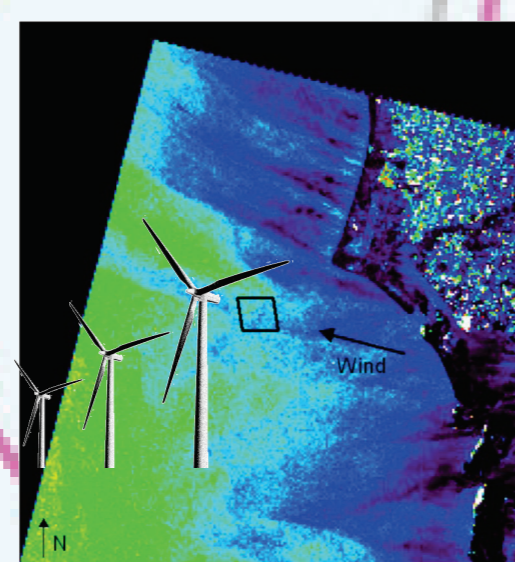
Offshore meso-scale effects of large wind farms incl. wakes, short term forecasting, maintenance strategies and availability

WP 4 Power and energy aspects

Spatial and temporal variability of wind resource, forecast errors and their impact on the Nordic power grid and balance market



Wind power forecast error correlation next day for FINO1. Source: Von Bremen et al 2010.



Wind field at Horns Rev based on ERS-2 SAR image from 25 February 2009. For scaling, the total wind farm width is ~5 km. Source: M. Bruun Christiansen, PhD report 2007

The Icewind project consists of four work packages (WP)

Project focus areas

- Icing on wind turbines (atlas, forecasting and losses)
- Integration of wind energy on land (Iceland)
- Offshore wind energy (forecasting and access)

A key issue is to share knowledge among the five Nordic countries and to work in areas where differences in know-how exist and where barriers or challenges prevent or slow down a large penetration of wind energy in the Nordic grid.