Recent Dutch OFW studies on displacement and turbine density

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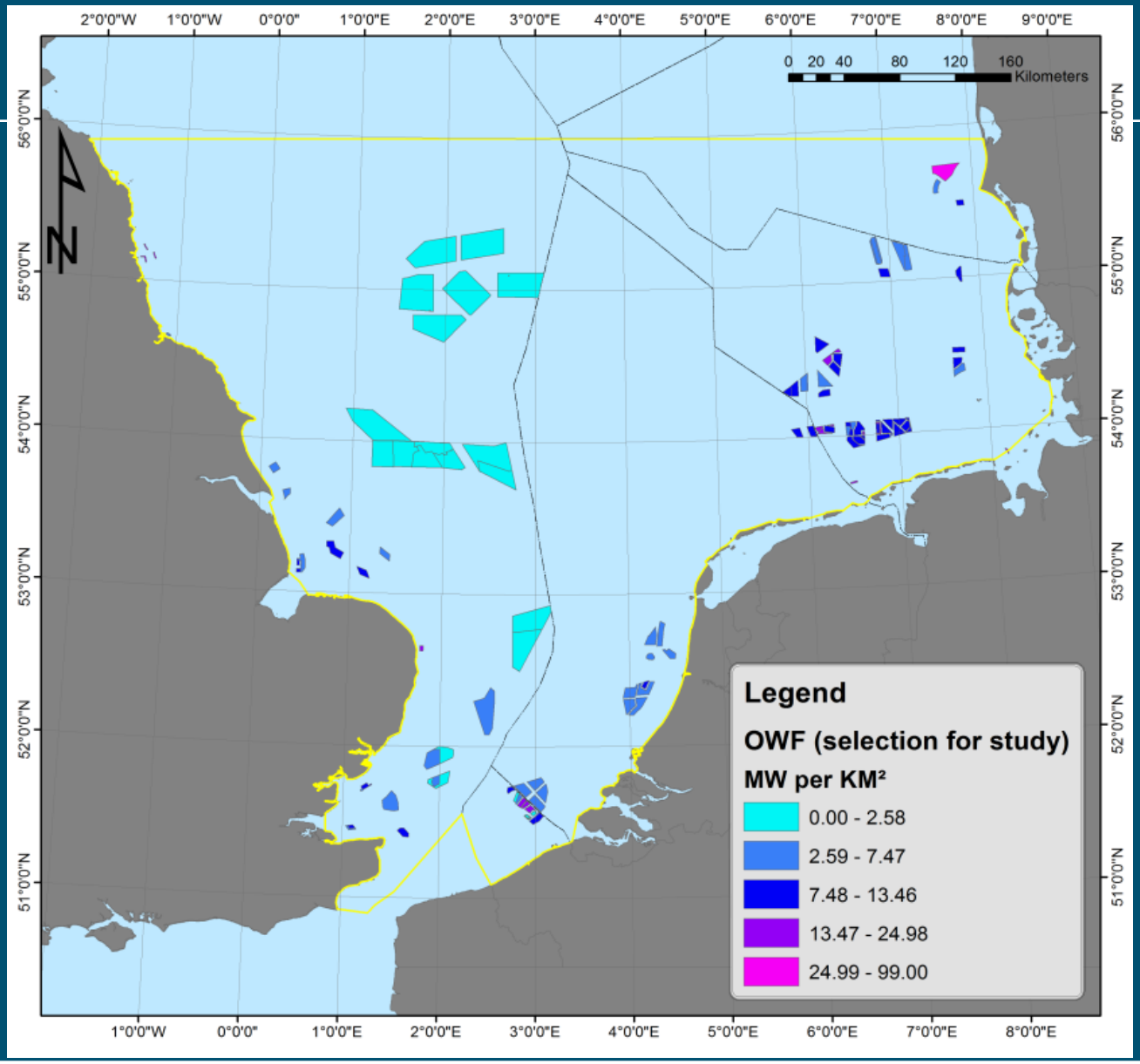
Perth May 2015



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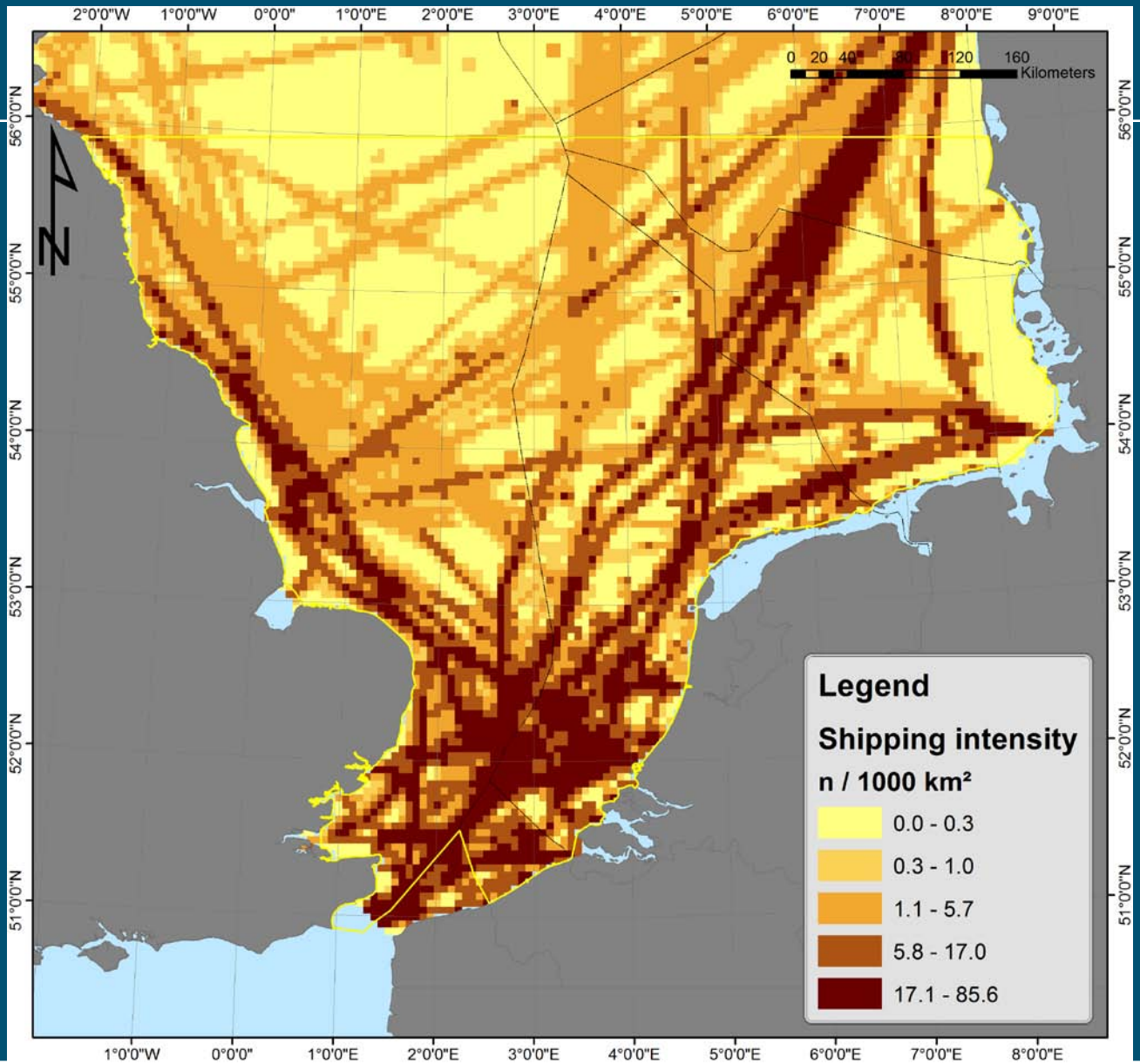
100 existing and projected OWFs (2013)



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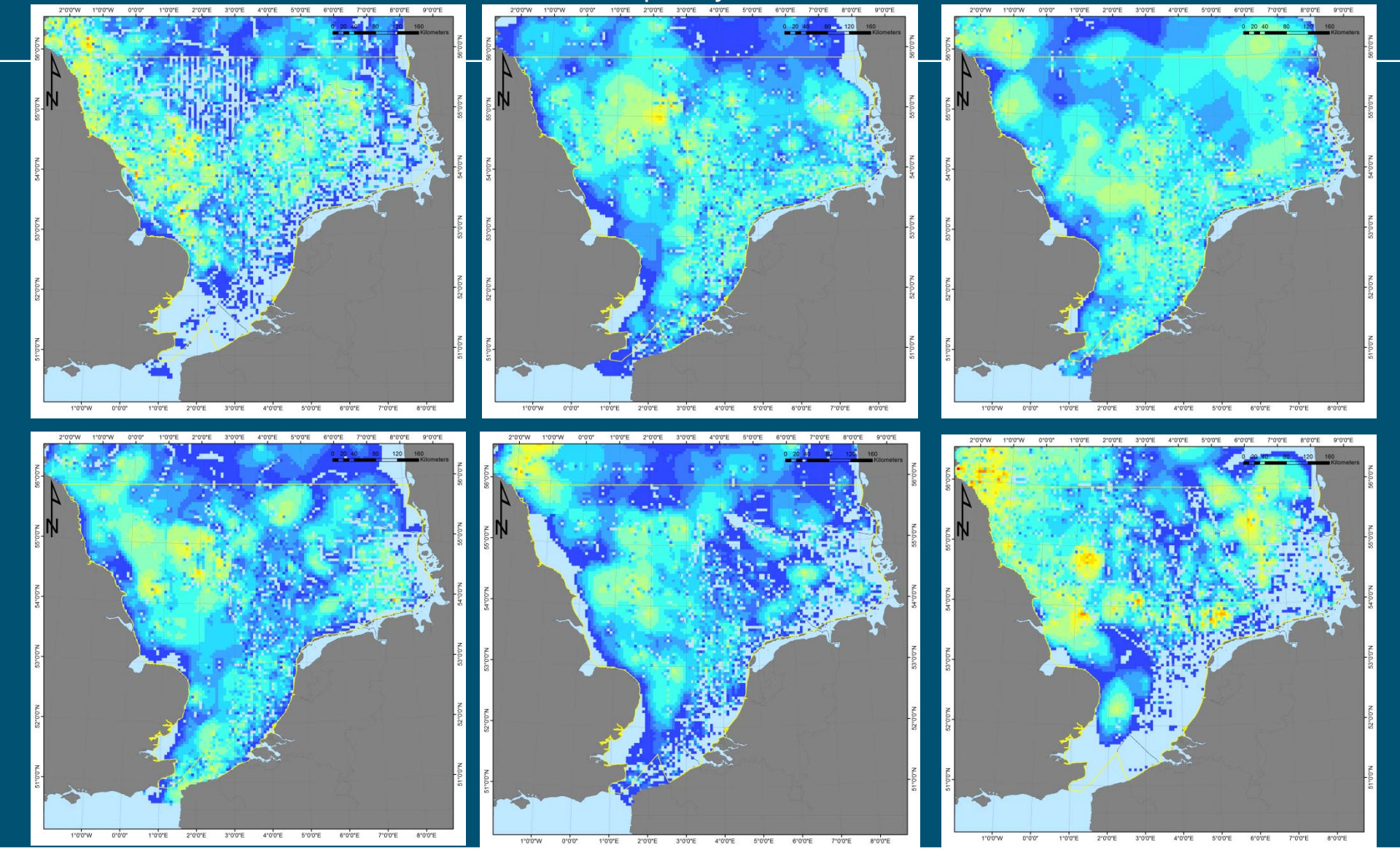
And OWFs are not alone... (present shipping)

Aug-Sep
Feb-Mar

Oct-Nov
Apr-May

Dec-Jan
Jun-Jul



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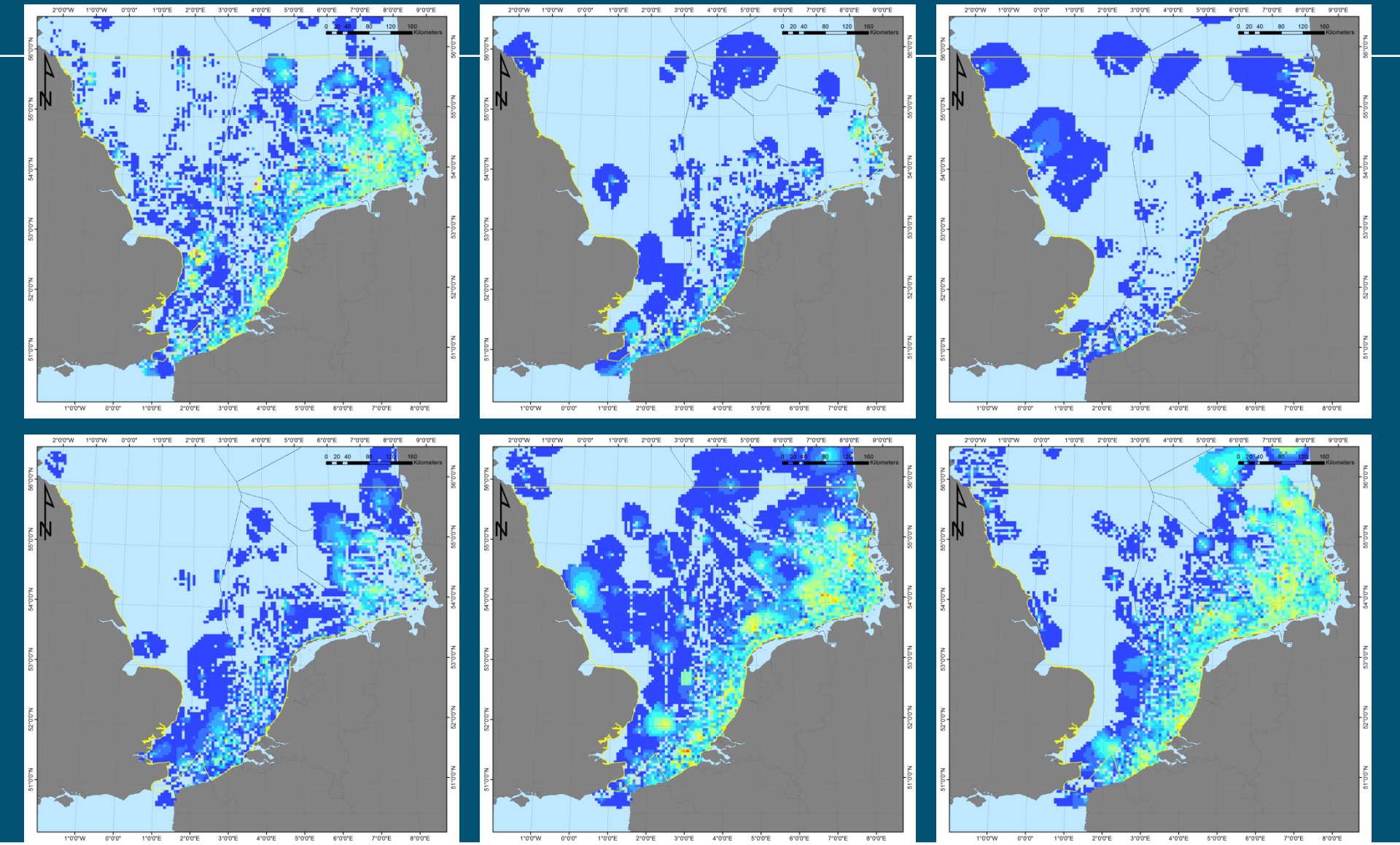
Common Guillemot

Aug-Sep
Feb-Mar

Oct-Nov
Apr-May

Dec-Jan
Jun-Jul



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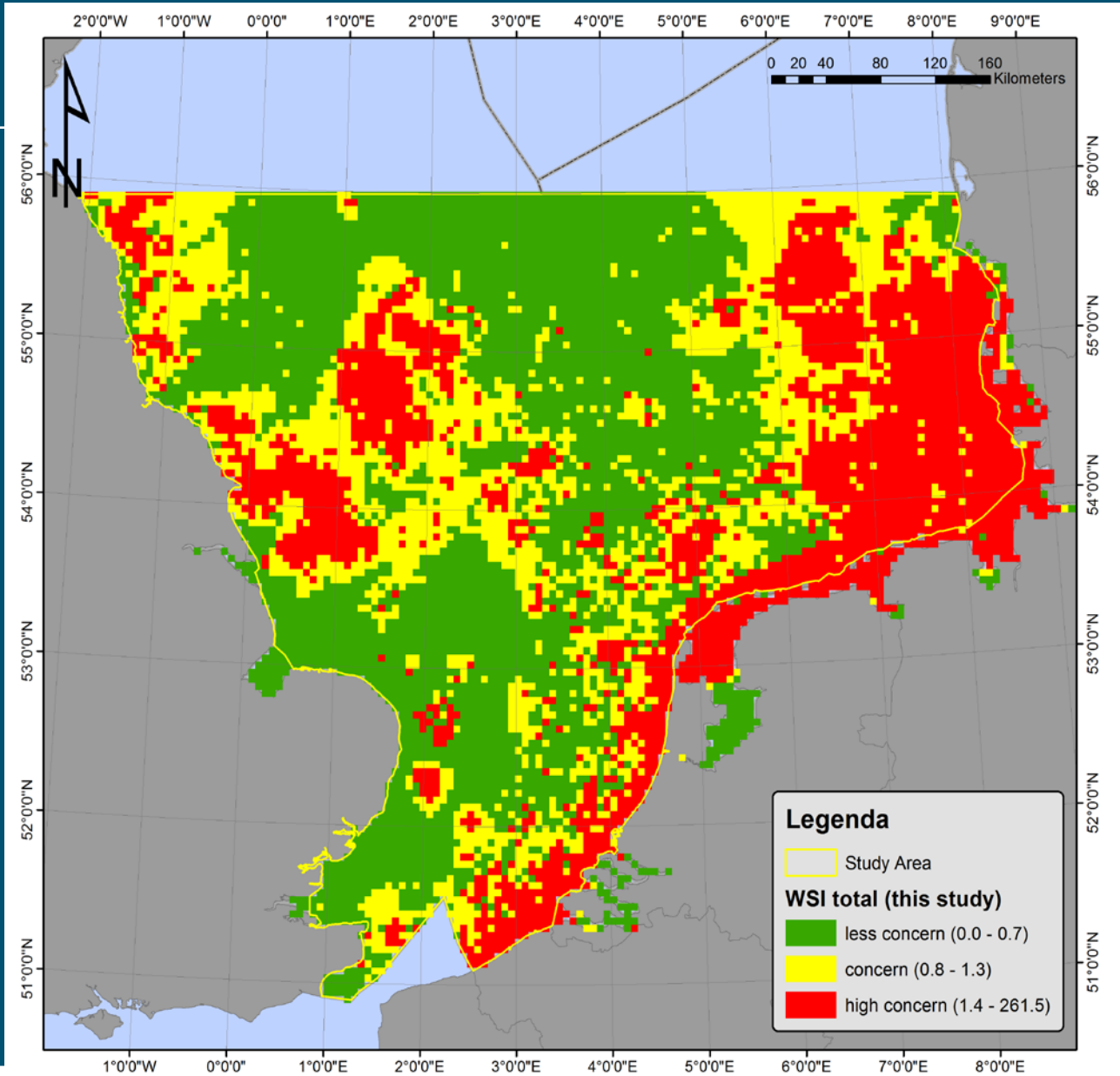
Lesser Black-backed Gull



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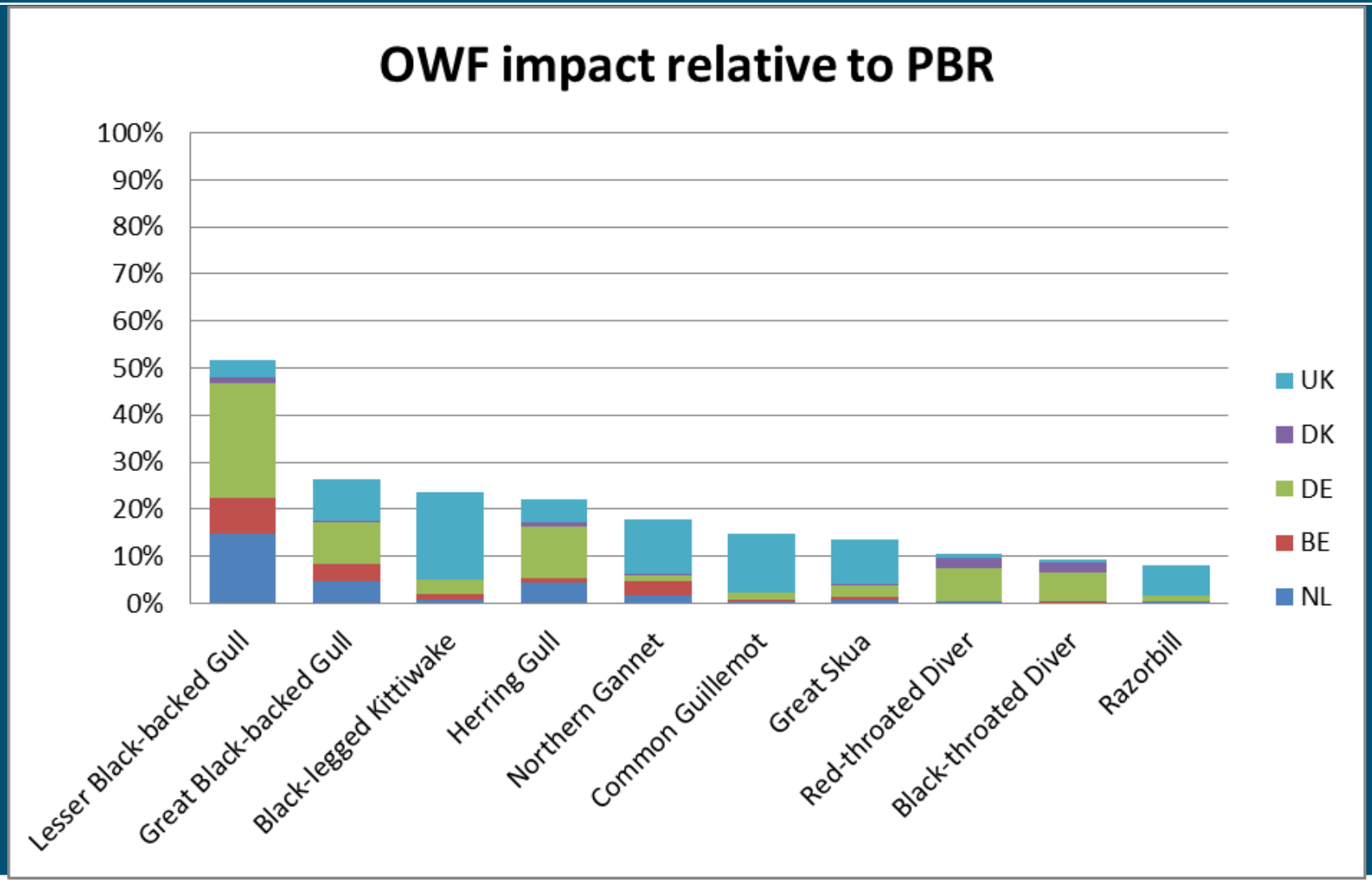
Garthe & Hüppop updated

Collision & Displacement mortality

Collisions: Band model

Displacement: Density * D-Factor * M-Factor:

D-Factor (Bradbury et al PLoS)
M-Factor: Bradbury/Furness: 0.1



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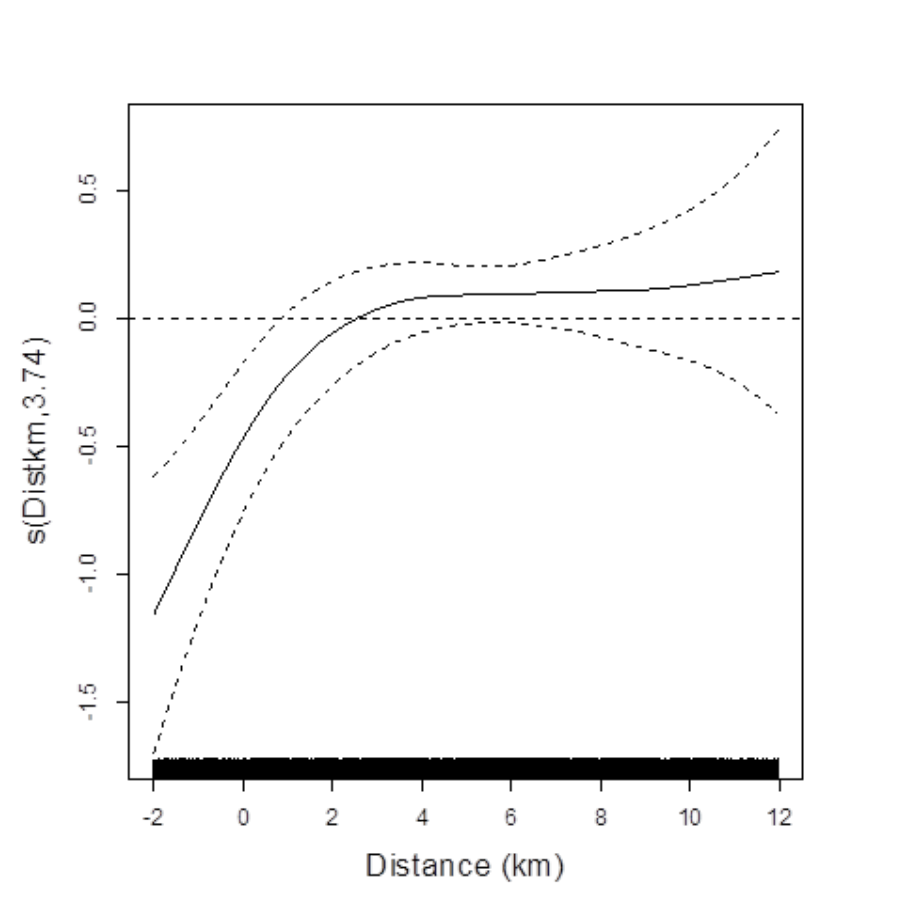
Displacement and collision mortality

Work in progress on Displacement



For the PAWP data there is a distance effect up to about 3 km distance from the wind park. At the centre of the wind park there is a 74% decrease in abundance as compared to the 3+ km values.

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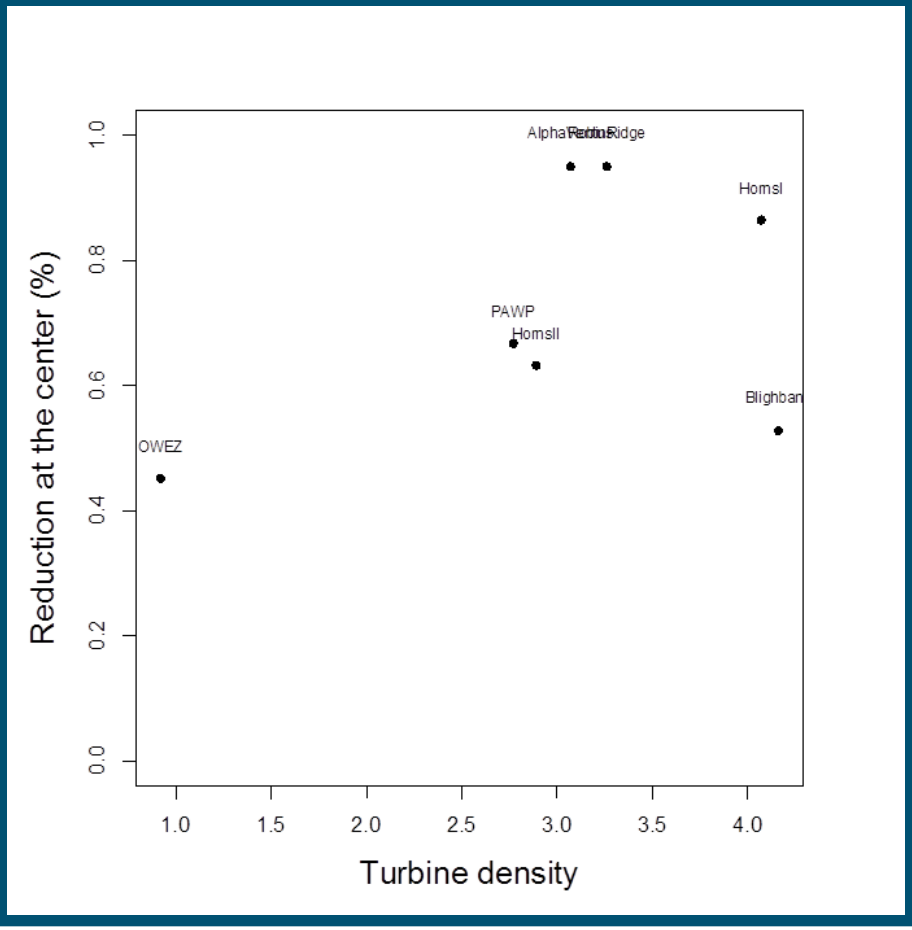
Common Guillemot: PAWP

Results from: OWEZ, PAWP, Alfa ventus, Blighbank, Horns Rev I & II, Robin Rigg



Reduction at the center versus turbine density. Results based on non-significant smoothers are included. Displacement increases with turbine density.

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Common Guillemot: Displacement at various OWFs