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Avoidance of offshore wind farms by Sandwich Terns in the North Sea increases with turbine density



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PUBLICATION TOPICS

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Offshore wind energy is considered an essential part of humanity's transition away from fossil fuels, but it is important to understand the consequences that wind farms can have for wildlife. In this study, GPS data revealed how breeding Sandwich Terns avoid offshore wind farms in the North Sea.

The study, led by Waardenburg Ecology in the Netherlands, used data from GPS tracking of breeding Sandwich Terns carried out at Scolt Head, Norfolk, and De Putten in the Netherlands between 2016 and 2021. Scolt Head had four operational offshore wind farms nearby (within the distance that Sandwich Terns are known to fly when searching for food), and De Putten had three.

The authors examined the terns' so-called 'macro-avoidance rate', which is the rate at which birds avoid entering an offshore wind farm altogether. This avoidance amounts to habitat loss, since the birds will no longer use this area of the sea, and perhaps incur additional energetic costs by flying around wind farms or having to forage in less optimal alternative areas.

The results showed that Sandwich Terns reduced their use of the Dutch offshore wind farms areas by 41%, and British offshore wind farms by 54%. Birds were more likely to avoid wind farms the closer together the turbines were.

This study's findings could inform not only the positioning of future offshore wind farm developments, but also their design, as taller, more widely spaced turbines could be preferable to shorter, most densely packed ones in terms of minimising any detrimental effects on Sandwich Terns and related species.

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Notes

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