# Wind farm related mortality among avian migrants –a remote sensing study and model analysis

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## Abstract:

This talk presents the result of a PhD study on bird-wind farm collisions and describes the findings from pre- and post-construction visual, radar and thermal imaging studies of migrating birds at the Nysted offshore wind farm in the Baltic Sea, Denmark. This talk poses and answers the following questions: a) what hazard factors do offshore wind farming pose to wild birds, b) how should one choose the key focal species to study, c) how can remote sensing techniques be applied to the study of bird wind farm interactions, and d) specifically, how do waterbirds react when approaching an offshore wind farm? The main aim of the study was the development of a predictive bird-wind farm collision model that incorporates the avoidance rate of birds at multiple scales. Out of 235,136 migrating sea ducks only 47 individuals were predicted to collide with the wind turbine rotor-blades, equivalent to an overall mean collision risk of c. 0.02%. This study shows the added value of modelling in supplementing sound empirical studies in accessing the effects of major human development pressures on migratory bird populations.