

# Environmental impact reports may hugely underestimate consequences for wildlife

April 6 2023

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Black-tailed godwits in the Tagus Estuary. Credit: Verónica Méndez Aragón (VMA) and Ericka Fierro (EF)

Environmental Impact Assessments may hugely underestimate the effect that new developments have on wildlife, according to new research from

the University of East Anglia. This is because they don't take into account how birds and other animals move around between different sites.

A study published today in *Animal Conservation* shows how a new [airport](#) development planned in Portugal could affect more than 10 times the number of black-tailed godwits estimated in a previous Environmental Impact Assessment. The research team has been studying these godwits across Europe for over 30 years, but they say that any species that moves around is likely to be underrepresented by such reports.

In the UK, the environmental impact of a planned tidal barrage across the Wash estuary could similarly be much worse than predicted for [wild birds](#) and England's largest common seal colony.

Prof Jenny Gill from UEA's School of Biological Sciences said, "Environmental Impact Assessments are carried out when developments are planned for sites where wildlife is protected. But the methods used to produce these reports seldom consider how species move around between different sites. This can drastically underestimate the number of animals impacted, and this is particularly relevant for species that are very mobile, like birds."

Josh Nightingale, a Ph.D. researcher in UEA's School of Biological Sciences and from the University of Aveiro in Portugal, said, "We studied the Tagus Estuary in Portugal, an enormous coastal wetland where a new airport is currently planned and has already been issued an environmental license.

"This area is Portugal's most important wetland for waterbirds, and contains areas legally protected for conservation. But it faces the threat of having a new international airport operating at its heart, with low-

altitude flightpaths overlapping the protected area. Black-tailed godwits are one of several [wading birds](#) that we see in large numbers on the Tagus.

"The new airport's Environmental Impact Assessment estimated that under 6% of the godwit population will be affected by the plans. However, by tracking movements of individual godwits to and from the affected area, we found that the more than 68% of godwits in the Tagus estuary would in fact be exposed to disturbance from airplanes."

The research team has been studying individual black-tailed godwits for three decades, by fitting them with uniquely identifiable combinations of colored leg rings. With the help of a network of birdwatchers across Europe, they have recorded the whereabouts of individual godwits throughout the birds' lives.

"Many of these godwits spend the winter on the Tagus Estuary," said Dr. José Alves, a researcher at the University of Aveiro and visiting academic at UEA's School of Biological Sciences.

"So we used local sightings of color-ringed birds to calculate how many of them use sites that are projected to be affected by airplanes. We were then able to predict the airport's impact on future godwit movements across the whole estuary.

"This method of calculating the footprint of environmental impact could be applied to assess many other proposed developments in the UK, particularly those affecting [waterbirds](#) and coastal habitats where tracking data is available.

"Eight environmental NGOs together with Client Earth have already taken the Portuguese government to court to contest the approval of this airport development. We hope our findings will help strengthen the case

by showing the magnitude of the impacts, which substantially surpass those quantified in the developer's Environmental Impact Assessment," he added.

**More information:** Conservation beyond Boundaries: using animal movement networks in Protected Area assessment, *Animal Conservation* (2023). [DOI: 10.1111/acv.12868](https://doi.org/10.1111/acv.12868)

Provided by University of East Anglia

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