

Study highlights vulnerability of England's only resident bottlenose dolphins

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England's only resident population of bottlenose dolphins is under serious threat from a combination of human activity, environmental pollution and difficulties in rearing young that survive into adulthood,

according to new research.

For almost a decade, scientists and [conservation groups](#) based along the English Channel [coast](#) have been working together with [citizen scientists](#) to monitor the movements and distribution of this [population](#).

This has enabled them to establish the most detailed picture yet of this population, their movements and social interactions, and the challenges they face on a daily basis.

Writing in the journal [Animal Conservation](#), the researchers report that as a result of their ongoing research they estimate the pod currently consists of just 48 individual dolphins.

That is less than half the size of most coastal bottlenose dolphin populations, and around 10 times smaller than a pod known to inhabit the Channel coast of France.

Their fight for survival is made even more challenging by the fact they inhabit some of the busiest shipping lanes in the world and also [coastal waters](#) known to suffer from repeated and prolonged spells of pollution and fishing pressure.

These findings have led the researchers to call for urgent measures to protect the population and its habitats, or risk the possibility that this group of animals may not survive.

The ongoing research is being led by Cornwall Wildlife Trust and scientists at the University of Plymouth, who have been having working with a range of partners along the Channel coast over a number of years to collate and analyze sightings data, through the South Coast Bottlenose Dolphin Consortium.

This particular study is the result of work by former MRes Marine Biology student Shauna Corr, and former MSc Marine Conservation students Rebecca Dudley and Saskia Duncan, supervised by Associate Professor of Marine Conservation Dr. Simon Ingram.

"Bottlenose dolphins are highly intelligent and social animals with complex cultures. They are known to have some of the closest interactions with humans of any species on the planet, but because they live in the sea, and not on land, they go unseen by most people and we fail to appreciate quite how amazing yet vulnerable they are. This population lives along one of the most developed and busy coastlines in the world which poses a clear threat to their [conservation](#). To see the south coast population decline to extinction would be a local tragedy for the dolphins and for us," says Ingram.

This population of [bottlenose dolphins](#) was first documented by scientists in the mid-1990s and became the subject of detailed scientific analysis again in 2017 due to concerns raised by Cornwall Wildlife Trust about their plight and vulnerability to human impacts.

Individual bottlenose dolphins can be identified from their unique fin markings enabling scientists to build up a catalogue of known dolphins which, through repeated sightings, enabled the MSc students to track the movements of individual dolphins over several years.

To achieve this, a citizen science network of boat owners, ecotour operators and members of the public was established along the length of the south coast from Cornwall to Sussex to pool sightings from the entire coast.

As a result of the South Coast Bottlenose Dolphin Consortium was formed and to date has yielded almost 7,500 sighting reports generated between 2000 and 2019.

These repeat sightings revealed that dolphins from this pod travel the coast between North Cornwall and East Sussex, with some individuals known to have traveled up to 760 km between sightings.

The population appears to be isolated with individuals known to socialize within their own pod close to the shore but not with others from other populations normally found in the open sea.

The study's authors hope this information will be used by statutory marine conservation organizations to provide better protection for this highly vulnerable population and to take [appropriate measures](#) in order for the pod to survive.

"Conservation measures to protect these animals have previously been hindered by a lack of knowledge of population size, distribution, and ranging behavior. Thanks to a citizen science network stretching right along the English Channel and beyond, we can now fill these knowledge gaps. By highlighting the most damaging human activities, and regions of conservation significance, our results will be useful for developing management policies for threat mitigation and population conservation, to protect this vulnerable group," says Corr.

More information: S. Corr et al, Using citizen science data to assess the vulnerability of bottlenose dolphins to human impacts along England's South Coast, *Animal Conservation* (2023). [DOI: 10.1111/acv.12921](#)

Provided by University of Plymouth

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