

Study shows four out of five British people are unaware of ocean acidification

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Credit: Tiago Fioreze / Wikipedia

A survey of 2,501 members of the public has revealed that just one in five people in Britain are aware of ocean acidification - a consequence of carbon emissions that poses serious risks to sea-life.

Furthermore, just 14% of the sample report that they have even basic knowledge about the subject.

The results of the public [survey](#), which have been published today, 9 May, in the journal *Nature Climate Change*, are the first detailed assessment of the public's understanding of [ocean acidification](#).

While public awareness of climate change is now almost universal, the study authors, from Cardiff University, conclude that the same cannot be said for this parallel environmental issue, sometimes dubbed 'the other CO2 problem'.

As more and more CO₂ is put into the atmosphere as a result of burning fossil fuels, approximately a third of it is absorbed by the oceans. When CO₂ dissolves in seawater it forms carbonic acid, making the oceans less alkaline and more acidic. Since the 1980s, the acidity of the oceans has increased by 30% and, if CO₂ continues to be emitted at today's rate, it is set to increase by 150% by 2100. This poses a substantial risk to marine organisms and ecosystems.

To reach their conclusions, the Cardiff University researchers surveyed a nationally representative sample of 2,501 members of the British public. Although just 20% of respondents had heard of ocean acidification, the term prompted a range of negative associations among respondents, with many making an immediate connection with harm to marine organisms and ecosystems; others made incorrect associations with marine pollution from oils spills and chemical waste.

The researchers also set out to assess whether scientific reports published by the Intergovernmental Panel on Climate Change (IPCC) during 2013 and 2014 might have affected levels of public awareness of ocean acidification. These widely-reported assessments focussed more than ever on the role of the oceans in relation to climate change, but were found not to have raised awareness of ocean acidification among the general public in the study.

Dr Stuart Capstick, the lead author of the study from the University' School of Psychology, said: "Although we didn't expect to find high levels of awareness or understanding of ocean acidification, we were surprised at just how overlooked this topic seems to be. By now, just about everyone has heard of climate change and a majority of people understand our part in it - even if we don't all agree on what should be done - but only a small proportion of our sample said they knew anything much about ocean acidification.

"Scientific studies over the past few years have demonstrated the importance of ocean acidification for marine ecosystems and the people that depend on them, but we have barely scratched the surface in terms of bringing this issue to the attention of the [public](#) and policy-makers."

The research also examined whether the provision of some basic, technical information about ocean acidification would lead to a change in attitudes among the study participants. The researchers did indeed observe a substantial jump in stated levels of concern in response to this information.

Dr Capstick cautioned however that their findings showed that the connection between ocean acidification and climate change could be a double-edged sword for those seeking to communicate about this issue: "We provided study participants with one of two information types - either linking ocean acidification to climate change, or describing it as a stand-alone issue. When we made a direct connection between the two topics, part of our sample was less responsive to the information, perhaps due to an overriding scepticism among some people regarding climate change itself."

Given the technical nature of ocean acidification, and its complex relationship with [climate change](#), the researchers suggest that a more fruitful approach to engaging people about this important environmental

topic could be to present it in terms of a risk to ocean health as well as stressing its importance for food security in parts of the world that are most-dependent on fisheries.

More information: Public Understanding in Great Britain of Ocean Acidification, [DOI: 10.1038/nclimate3005](https://doi.org/10.1038/nclimate3005)

Provided by Cardiff University

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