

# Are deep blue seas fading? Oceans turn to new hue across parts of Earth, study finds

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A large swath of Earth's oceans changed color over the past 20

years—and human activity is suspected to have caused it, a new study reports.

That deep blue color depicted so richly in postcards is disappearing, particularly in the tropics.

"On the whole, low-latitude oceans have become greener in the past 20 years," according to the report published in *Nature*.

The discovery has confirmed what study co-author Stephanie Dutkiewicz has long feared.

"I've been running simulations that have been telling me for years that these changes in ocean color are going to happen," she said in a news release from the Massachusetts Institute of Technology. "To actually see it happening for real is not surprising, but frightening. And these changes are consistent with man-induced changes to our climate."

The color shift was discovered as researchers pored over two decades' worth of satellite data. They eventually concluded 56% of ocean's surface was greener than it was before the turn of the century.

The shift in color will impact "marine food webs," the team concluded. However, the report did not specify a broader impact on humans.

Climate change may be driving the shift, scientists suspect. However, the trend does not appear to be associated with rising [sea surface temperatures](#), the study concluded.

"We don't know what is causing the trend. It could be dissolved [organic material](#), changes in the type and quantity of phytoplankton...all these aspects can affect [ocean color](#)," study co-author Emmanuel Boss told EOS Science News.

"We're hoping more colleagues will try and find what has been causing these changes."

**More information:** B. B. Cael et al, Global climate-change trends detected in indicators of ocean ecology, *Nature* (2023). [DOI: 10.1038/s41586-023-06321-z](https://doi.org/10.1038/s41586-023-06321-z)

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