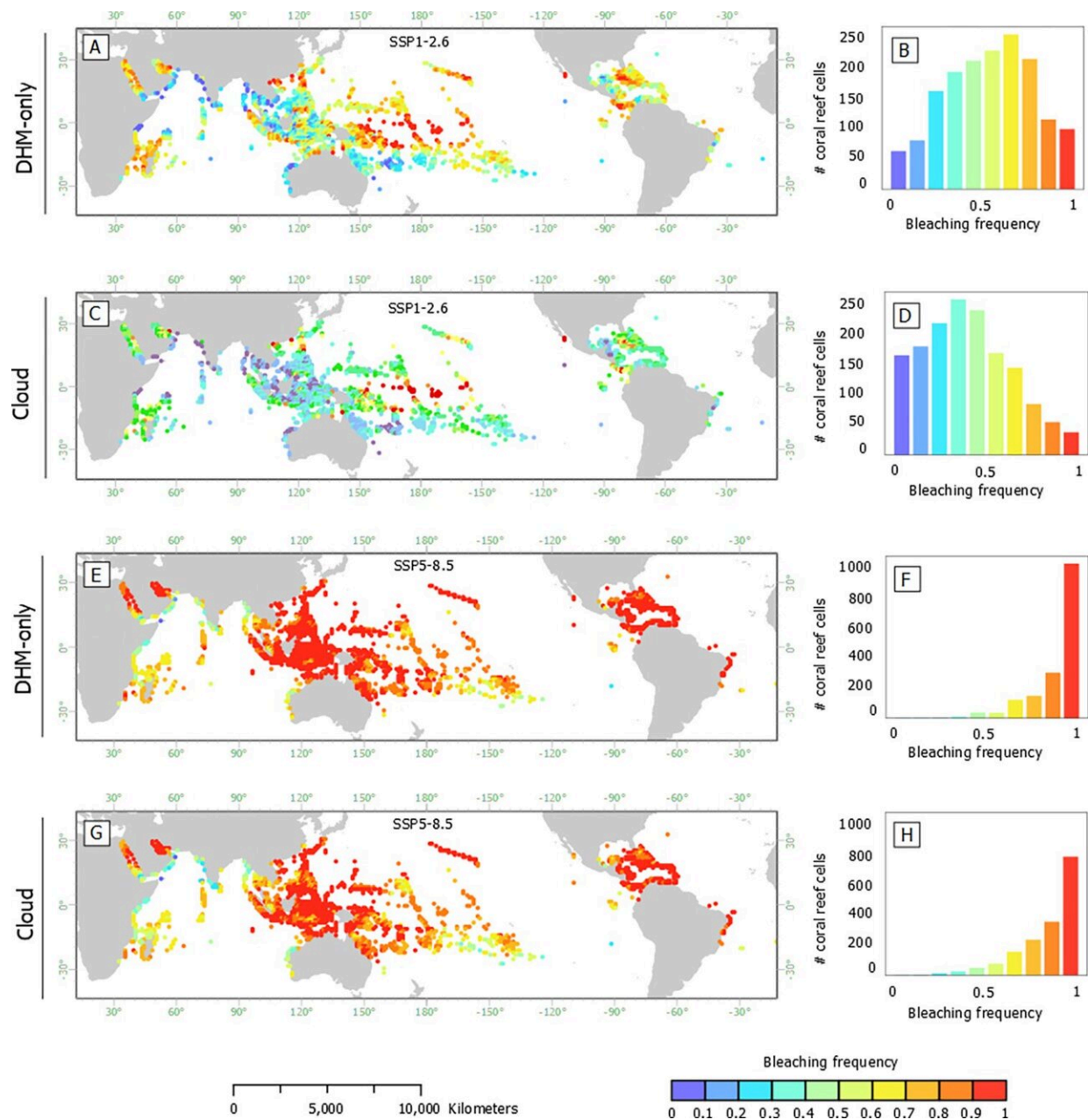


Clouds could delay the impact of climate change on reefs, but not for long

February 8 2023



Credit: *PLOS Climate* (2023). DOI: 10.1371/journal.pclm.0000090

Clouds seem to offer some protection from excess heat to coral reefs—but most will still face frequent bleaching conditions by 2080, according to new research.

Life's a bleach

Corals turn white when the surrounding water gets too warm. This is called bleaching, and it leaves coral vulnerable to disease and mortality. Warming can occur due to climate change, as well as solar radiation. Some of this radiation can be absorbed by clouds.

By incorporating cloudiness into bleaching models for the first time, UBC researchers project [clouds](#) could "buy" reefs about a decade before 75 percent undergo frequent bleaching conditions. That would occur in about 2045 in a moderate emissions scenario, which is the world's current track, says first author Pedro González-Espinosa (he/him).

Models that don't incorporate cloud protection project 75 percent of reefs would undergo frequent bleaching conditions by 2035.

Change needed now

The researchers also added coral's ability to adapt to [high temperatures](#) to their cloud models. In a moderate emissions scenario, the "delay" before most reefs would face frequent [bleaching](#) conditions was then projected to be about 35 years, to 2080.

"Even assuming low emissions, [coral reefs](#) are going to be affected. Let's start changing our behavior now," says González-Espinosa.

The work is published in the journal *PLOS Climate*.

More information: Pedro C. González-Espinosa et al, Cloudiness delays projected impact of climate change on coral reefs, *PLOS Climate* (2023). [DOI: 10.1371/journal.pclm.0000090](https://doi.org/10.1371/journal.pclm.0000090)

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