

Insurance policy could save Earth's coral reefs

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Credit: University of Queensland

A new strategy to save the world's coral reefs proposes an "insurance policy" which focuses on the reefs most likely to survive global warming.

University of Queensland Global Change Institute (GCI) Director Professor Ove Hoegh-Guldberg and colleagues have addressed two basic questions facing those championing coral reef preservation.

"We needed to objectively identify coral reefs that are relatively less vulnerable to climate change and are better positioned to help the regeneration of other reefs in the future," Professor Hoegh-Guldberg said.

"We've also outlined where we must carry out actions that mitigate near-term threats, especially in the context of uncertainty."

Scientists predict that coral reefs are still to decline by as much as 70-90 per cent even if [global warming](#) is limited to 1.5°C by 2050.

"Our strategy focuses on well-connected coral reefs that have the best chance of surviving projected climate change as defined in the Paris

Agreement," Professor Hoegh-Guldberg said.

"By applying modern portfolio theory – a mathematical technique used in finance to identify areas for maximum return versus risk – scientists have been able to account for some of the uncertainty regarding future climate conditions."

Professor Hoegh-Guldberg said portfolio theory helped scientists identify 50 sites that were likely to provide good returns on investment for long-term coral reef preservation.

"The global community should strengthen existing conservation and invest in sites around the world, including 500 km square selections of coral reef in French Polynesia, Brazil, the Caribbean, East Africa, the Coral Triangle and the Great Barrier Reef," he said.

GCI's Dr. Emma Kennedy said the recent IPCC special report into Global Warming was emphatic in its advice about the future of [coral reefs](#) around the world.

"The planet is [warming](#). It has already warmed by one degree since pre-industrial times, and we are continuing to track towards two degrees," Dr. Kennedy said.

"What we propose is a global strategy for reef conservation – like an insurance policy for reefs – that involves finding the 10-30 per cent of [reef](#) areas that might still be habitable in the long term."

The research is published in *Trends in Ecology and Evolution*.

More information: Ove Hoegh-Guldberg et al. Securing a Long-term Future for Coral Reefs, *Trends in Ecology & Evolution* (2018). DOI: [10.1016/j.tree.2018.09.006](https://doi.org/10.1016/j.tree.2018.09.006)

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