

Coral restoration and adaptation benefits challenged

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In a new paper for the *Natural Climate Change* journal, researchers have questioned the accepted narrative behind coral restoration, calling it a "dangerous

distraction". Bleached and dead nursery corals. Credit: *Nature Climate Change* (2024). DOI: 10.1038/s41558-024-02063-6

University of Melbourne and James Cook University researchers have called for an urgent rethink of the merits of coral reef restoration and adaptation, questioning whether the practice can meaningfully improve reef health.

In a [new paper](#) for the *Nature Climate Change* journal, Dr. Robert Streit, Professor Tiffany Morrison, and Professor David Bellwood were unapologetic in their view of coral restoration, labeling the narrative behind it a "dangerous distraction."

Coral restoration and adaptation can involve "outplanting," where coral is transported from nurseries and secured onto reef habitats, [selective breeding](#) or minimizing coral stressors, such as providing shade or removing [natural predators](#).

University of Melbourne's Dr. Robert Streit, a research fellow in Just Ocean Governance and lead author on the paper said, "active interventions make us feel good, and we do need to understand how to protect corals. But the problem starts when we confuse 'helping corals' with 'saving [coral reefs](#).'"

"Coral bleaching gets attention. It has visual impact, and concern over the impacts of climate change is incredibly valuable. But how we act now is critical. If scientists overpromise and under-deliver, we are at risk of wasting time, money and importantly, trust."

While acknowledging the role of coral gardening in a small-scale context, James Cook University's Professor Bellwood said large-scale

coral restoration was "costly, premature, and doomed to fail" unless the root cause of climate change was addressed by lowering carbon emissions.

"We need a fundamental rethink. Too much is at stake. At the moment, coral restoration is, at best, psychological relief and cosmetic conservation, and at worst, a dangerous distraction from climate action. Unhealthy reefs lose corals but simply adding corals will not necessarily make reefs healthy."

In the paper, the trio point to evidence from the northern Great Barrier Reef where recent major bleaching events were followed by large-scale, natural regrowth of corals. "Current and future heat waves will continue to kill these re-grown corals, rendering this natural success ephemeral," authors wrote.

The paper went on to say, "To-date, there is little evidence that the ecological dynamics that enabled this regrowth will cease to exist, or that active interventions—which have the stated goal of increasing cover of the same fast-growing corals—can have any population-wide impact."

Professor Bellwood said there was "little, if any, [scientific evidence](#) supporting interventions."

University of Melbourne Professor Morrison added, "The most radical action does not involve experimental 'solutions' that fix climate change symptoms. Instead, we need systematic, evidence-based and financially independent science that can inform decarbonized economy and how humanity can cope with changing reef systems."

Despite their critique, the authors stressed that preventing coral reef science "from developing into a pro and anti-intervention partisanship" was critical to finding a long-term, workable solution." Despite their

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"Coral reefs deserve more nuance," they wrote. "We are not calling to abandon interventions that help coral. Coral species are worth saving and any avoided loss of coral cover is a boon to future socio-ecological systems.

"What is needed is a broader evidence-based investigation building a knowledge base for more transformative solutions."

The journal invited three groups of experts to each write a comment paper on how to best address coral loss as oceans warm in order to canvass a range of opinions.

More information: Robert P. Streit et al, Coral reefs deserve evidence-based management not heroic interference, *Nature Climate Change* (2024). [DOI: 10.1038/s41558-024-02063-6](https://doi.org/10.1038/s41558-024-02063-6)

Provided by University of Melbourne

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