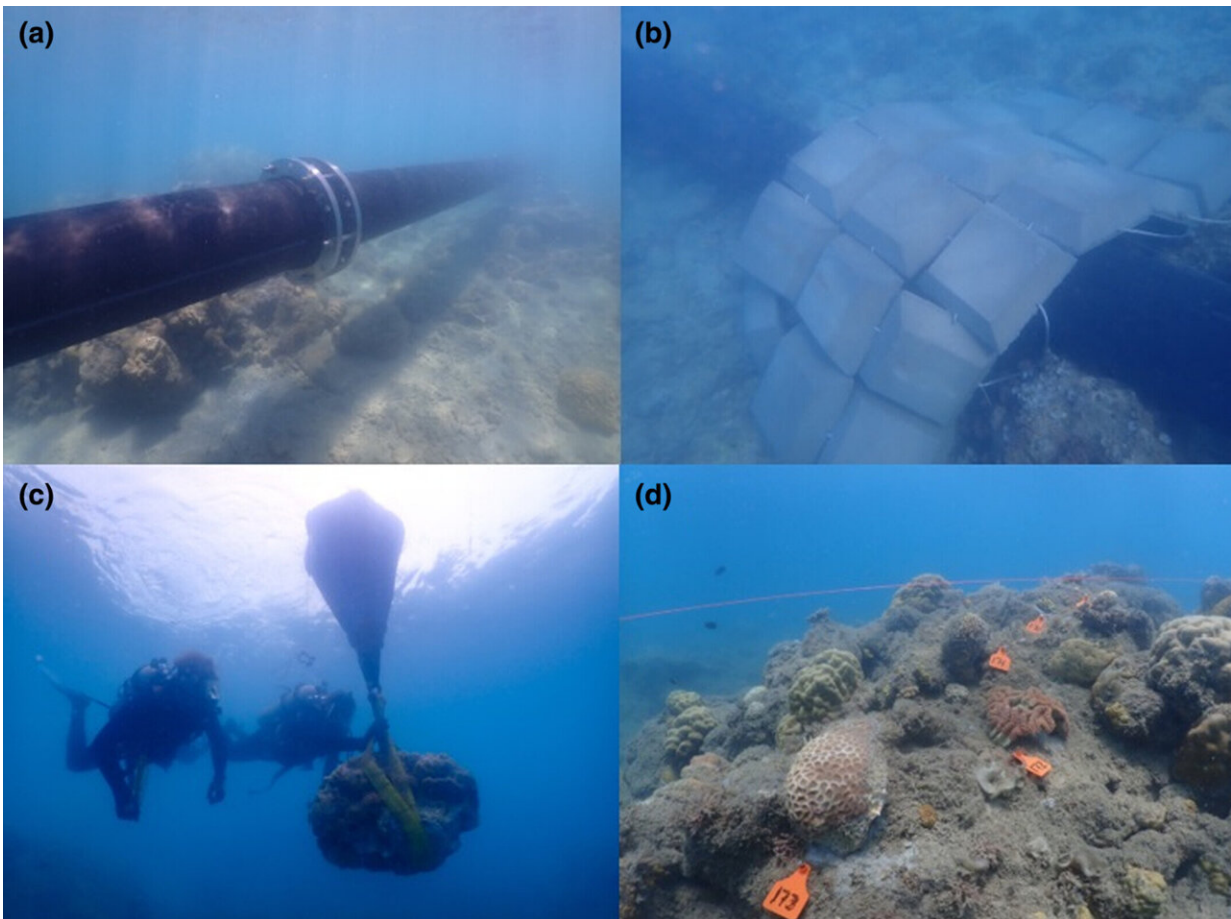


Reef management techniques have the potential to save coral

April 5 2024



(a) The installed pipeline at Hayman Island in the Great Barrier Reef, (b) pipeline with concrete mats, (c) commercial divers relocating a large coral to the donor site, and (d) tagged corals at the donor site. Photographs by Gemma Molinaro. Credit: *Ecological Management & Restoration* (2024). DOI: 10.1111/emr.12590

Scientists say the relocation of coral away from the path of a new wastewater pipe has been a success and shows how coral can be moved to reduce the impact of developments and natural disasters.

Adam Smith, Adjunct Associate Professor at James Cook University and CEO of environmental advisory company Reef Ecologic, led the [study](#), which has been published in *Ecological Management & Restoration*.

"Coral reef management techniques such as [relocation](#) and transplantation are increasingly used as coastal developments and the global decline of coral reefs has increased over the last 30 years," said Dr. Smith.

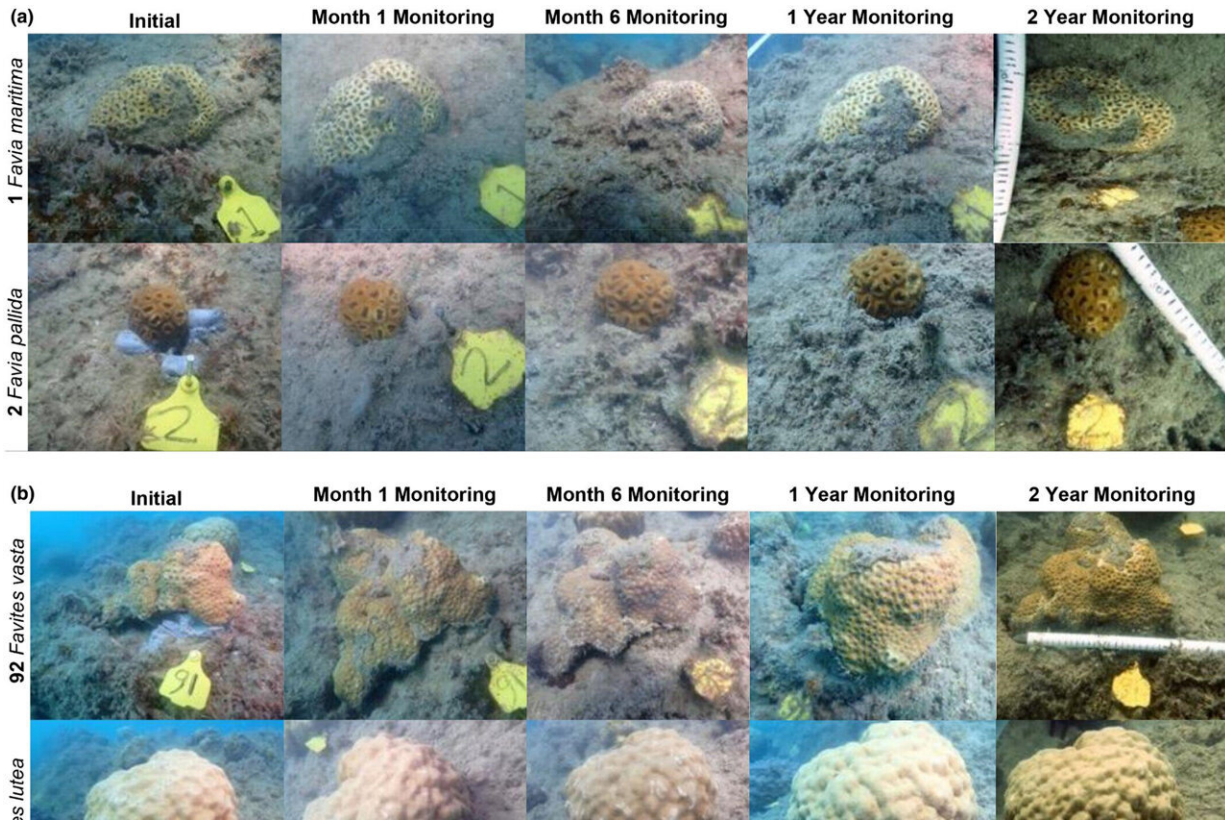
He said a 170-meter [pipeline](#) was constructed in 2020 to discharge wastewater from the [desalination plant](#) at Hayman Island resort, located off the Queensland coast.

"There was a healthy coral community in the route of the pipeline so we worked to detach the corals using a hammer and chisel or crowbar, then placed them into crates and moved them 20 to 100 meters away.

"A total of 204 corals were relocated and placed on bare rocks, held in place by a concrete mixture," said Dr. Smith.

"Scientists monitored the coral immediately after they were moved and at one, six, 12 and 24 months.

"Overall survival of translocated coral was 94.6% after 12 months and 77.5% after two years, with smaller corals doing better."



Photographs of selected corals at the Hayman Island pipeline relocation site with numbered tags that were classified as: (a) small, (b) medium, and (c) large that were monitored at times zero, one, six, 12 and 24 months. Credit: *Ecological Management & Restoration* (2024). DOI: 10.1111/emr.12590

Dr. Smith said minimizing damage from marine construction activities involving dredging, marinas, moorings, or pipelines in and around [coral reefs](#) was a priority for [sustainable development](#).

"Using the techniques implemented at Hayman Island gave [higher survival rates](#) for the relocated coral than the global average of 64%.

"Apart from saving corals from certain destruction due to development, it means repositioning coral colonies can also effectively aid in reef

recovery in the aftermath of acute disturbances such as cyclones," said Dr. Smith.

More information: Adam K. Smith et al, Effectiveness of coral (Bilbunna) relocation as a mitigation strategy for pipeline construction at Hayman Island, Great Barrier Reef, *Ecological Management & Restoration* (2024). [DOI: 10.1111/emr.12590](https://doi.org/10.1111/emr.12590)

Provided by James Cook University

Citation: Reef management techniques have the potential to save coral (2024, April 5) retrieved 2 May 2024 from <https://phys.org/news/2024-04-reef-techniques-potential-coral.html>

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