

CAN-137-Hope for GBR-AU

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Successful trial of 'coral IVF' gives hope for Australia's Great Barrier Reef





By <u>Rebecca Wright</u> and <u>Ivan Watson</u>, CNN Updated 1:09 AM ET, Fri June 8, 2018

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Cairns, Australia (CNN)A coral fertility treatment designed to help heal damaged parts of Australia's Great Barrier Reef is showing signs of success and now needs to be scaled up to create a bigger impact, the



lead scientist tells CNN.

Peter Harrison, a professor at Southern Cross University in Australia, said he is "excited by the results" which show the experimental process known as "coral IVF" is working on a small scale. Recently returned from a trip to the reef, Harrison said his team managed to "significantly increase"

the numbers of baby coral on reefs at Heron Island and One Tree Island, where they laid millions of coral larvae 18 months ago.

"There's a very clear outcome, the higher the numbers of larvae that you put into the reef system, the more coral recruits you get," Harrison said. "The pilot studies at small scales are giving us hope that we will be able to scale this up to much larger reef scales."



The 2,300km-long (1,500 miles) Great Barrier Reef -- a UNESCO World Heritage Site -- lost around half of its coral in the past few years after two mass bleaching events in 2016 and 2017, a pattern repeated on coral reefs around the world.

Photos: Australia's Great Barrier Reef suffers 'extreme' coral bleaching There are 'winners' and 'losers' among corals as they respond to the accumulating impacts of climate change. Hide Caption 1 of 14





Photos: Australia's Great Barrier Reef suffers 'extreme' coral bleaching There are variations in the appearance of severely bleached corals. Here, the coral displays pink fluorescing tissue signalling heat stress. Hide Caption 2 of 14

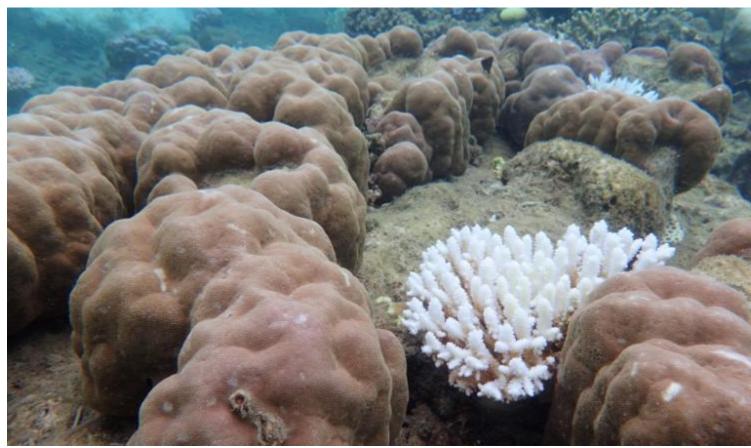




Photos: Australia's Great Barrier Reef suffers 'extreme' coral bleaching The different color morphs of Acropora millepora, each exhibiting a bleaching response during mass coral bleaching event. Hide Caption 3 of 14

Photos: Australia's Great Barrier Reef suffers 'extreme' coral bleaching A bleached Acropora colony. Hide Caption 4 of 14





Photos: Australia's Great Barrier Reef suffers 'extreme' coral bleaching A severely bleached branching coral amongst the minimally bleached boulder coral. Hide Caption 5 of 14







The bleaching occurs when warmer ocean temperatures caused by climate change put major stress on coral organisms, turning them white. If they don't have time to recover, they eventually die. The coral IVF project is designed to help reefs repopulate faster to help speed up the recovery time after a bleaching event.

In the most recent Australian summer, there was little or no coral bleaching, but scientists expect it to start happening with increasing frequency as the planet continues heating up.





Healthy coral that survived the 2016 and 2017 mass bleaching events on the Great Barrier Reef. The program is one of a number of experimental projects underway in Australia to try to find ways to save what's left of one of the seven natural wonders of the world. In April, the Australian government announced <u>a funding package of nearly \$400 million</u> (A\$500 million) which will be spent on different projects working towards reef preservation and protection.

"The Great Barrier Reef, like many reefs around the world, has suffered from almost catastrophic loss of the coral community, and what this larval restoration hopes to do is to enable the process of coral community and therefore reef recovery to occur at much faster scales than would occur naturally," Harrison said.



He adds that projects like his will help to keep different species of coral in existence "while working out how to deal with the loss of reefs and how to deal with climate change."

"The reality is that we know that the global political and financial system is not supportive of an immediate change in carbon emissions,



so what we're facing is increasing stress on natural systems, and we can no longer afford to do nothing," Harrison said.

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There are conflicting views among scientists on this sort of project. Critics argue that the money and resources would be better dedicated to finding ways to tackle climate change rather than focusing on small-scale projects.

"There are a range of views in the scientific community about whether these methods are worth trying," said Sean Connolly, a professor in marine biology at James Cook University in Townsville, and a co-author of a major report into coral bleaching and climate change.

"If we stabilize the climate then there's a chance these methods will work. If we don't stabilize the climate then I don't think they have a good chance of working," he added.

Harrison plans to do further similar experiments on a bigger scale in the northern area of the Great Barrier Reef later this year.

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