Coral bleaching spreads to Maldives, devastating spectacular reefs

Exclusive: Images from the Indian Ocean archipelago reveal the extent of the longest global coral bleaching event in history

• Coral bleaching in the Maldives – in pictures



Coral bleaching in the Maldives, captured by the XL Catlin Seaview Survey. Richard Vevers of the Ocean Agency says the damage is 'truly haunting'.

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The longest global coral bleaching event in history is now devastating reefs in the crystal clear waters of the <u>Maldives</u>, with images released exclusively to the Guardian powerfully illustrating the extent of the damage there.

Photographed by the XL Catlin Seaview Survey, the images captured the event in May as it moved beyond the now devastated <u>Great Barrier Reef</u> and into waters further west.

"The bleaching we just witnessed in the Maldives was truly haunting," said Richard Vevers, founder of the Ocean Agency.

Coral bleaching in the Maldives – in pictures

"It's rare to see reefs bleach quite so spectacularly. These were healthy reefs in crystal clear water at the height of an intense bleaching event. The flesh of the corals had turned clear and we were seeing the skeletons of the animals glowing white for as far as the eye could see – it was a beautiful, yet deeply disturbing sight."

The Maldives is series of coral atolls, built from the remains of coral. The livelihoods of people there depend on the reefs through tourism, fisheries and as a wave-break that helps

prevent inundation on low-lying islands.

The photographs were part of <u>an ongoing project</u>, in partnership with Google, the University of Queensland and the US National Oceanic and Atmospheric Agency to capture the global bleaching event as it moves around the world.

"We've been following this third global bleaching event since the start nearly two years ago and just when you think you've seen the saddest sight you'll ever see, you see something even worse," Vevers said.



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The livelihoods of people in the Maldives – a series of coral atolls – depend on the reefs. Photograph: XL Catlin Seaview Survey

The event started in mid 2014 in the Pacific Ocean around Hawaii, which then got hit again in 2015. In early 2016 it spread to the Great Barrier Reef where 93% of its nearly 3,000 reefs were hit by bleaching.

Western Australia's reefs in the Indian Ocean have also experienced severe bleaching.

When Noaa <u>declared the event was a global bleaching event</u> in October 2015, Mark Eakin, Noaa's Coral Reef Watch coordinator, said it could last well into 2016. That prediction appears to be proving correct.

"The current global bleaching event is already lasted longer than any previous bleaching event and is likely to last until at least the end of the year," he said.

The bleaching event started with an El Niño that appeared to be developing in Pacific Ocean, in 2014, warming the waters there, but which failed to eventuate. It was then combined with a large patch of unusually warm water, nicknamed "the blob", that lurked around the Pacific, as well as an extreme El Niño that eventually did develop in 2015.

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Coral bleaching on the Great Barrier Reef worse than for decades

Extreme El Niños, which spread warm water across the Pacific and warm the globe, were not

seen before 1982 and have occurred three times since. Extreme El Niños are expected to increase in frequency as a result of climate change.

Those El Niños were also occurring in an ocean where the surface has already warmed by 1C, putting corals near their thermal limits.

When coral sits in water that is too warm for too long, it gets stressed and expels the algae that provides it with about 90% of its energy. If it stays stressed for more than a couple of weeks it starts to starve, become diseased, and dies.

A new study has found the conditions that led to the devastating bleaching on the Great Barrier Reef were made 175 times more likely by climate change, and on the current trajectory, would become the average conditions by the 2030s.