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Reprinted 10/11/17

Great Barrier Reef devastated: Before and after images show Cyclone It's damage to reef

By Conor Duffy

Updated 16 Jun 2014, 8:49pm

PHOTO: The Great Barrier Reef before Cyclone Ita (above) and badly damaged after Cyclone Ita (below).

MAP: Cairns 4870

Stunning before and after pictures that show the exact extent of the damage Tropical Cyclone Ita caused to the Great Barrier Reef have been released by an environmental research team.

While much of far north Queensland was spared the worst of the cyclone, the storm was still a category five when it crossed sections of the outer reef.

Using cutting edge technology, a research team from the Catlin Seaview Survey and the University of Queensland have precisely documented the impacts the storm had on sections of the reef.

PHOTO: The Great Barrier Reef before Cyclone Ita (above) and badly damaged after Cyclone Ita (below).

With extensive photographs and vision of the reef from a previous trip, the team returned to see how things had changed since Cyclone Ita and hoped to create an underwater google map of the reef.

"As soon as we dived into the water, there were areas that were completely devastated," marine biologist Anjani Ganase said.

"A lot of the fragile corals, the more branching corals, were basically turned into rubble."

Richard Vevers, project director for the Catlin Seaview Survey, said he had never seen such destruction.

"It was just unlike anything I've seen before. You can't even imagine the force to turn some of these boulders over and just turn them about and certain sites we went to it was quite eye-opening," Mr Vevers said.

When the divers sank to the bottom to carry out their work they found the reef had changed so much in places, it was unrecognizable from their previous visit.

"We were very well prepared so we had our images, we knew exactly what we were looking for," Mr Vevers said.

"We had the GPS location where it was taken but we jumped in the water and everything had changed. You had three-meter corals that had been tossed over so all our reference points were gone."

The expedition took place early last month in the ribbon reefs north-east of Cairns where the team spent a week photographing the area.

The problem is if we get too many of these storms coming through, and this region has seen two very large storms in only three years, the reef just doesn't have time to recover.

Richard Vevers, project director for the Catlin Seaview Survey.

Ms Ganese used a motorized scooter to operate the team's custom-designed SV2 camera which captured 360-degree images.

"Our surveys are about 45 minutes long and during that time we use the scooters to cover about two kilometres of reef in length and we have the images being taken every three seconds," Ms Ganese said.

"So on average, for a dive, we have about 900 to 1,000 images per camera."

In contrast, the team also reported that next to the flattened reef were sections that had been almost untouched.

Scientists will now examine why those differences occur.

"You have such channeled force in some areas which has completely smashed those sites, but 50 meters away there's a site with really quite fragile fan corals which haven't been affected hardly at all," Mr Vevers said.

It is expected to take areas of the reef as much as a decade to recover from the cyclone damage and the team is concerned climate change will see more storms in the area.

PHOTO: Before and after images show damage caused to Great Barrier Reef after Cyclone Ita. (Supplied)

"As the planet warms, we're going to see more frequent storms and we're going to see larger storms, and a coral reef will typically take around 10 years to fully recover from a cyclone which is a natural occurrence," Mr Vevers said.

"The problem is if we get too many of these storms coming through, and this region has seen two very large storms in only three years, the reef just doesn't have time to recover," he said.

When the team returned to land, they worked with the University of Queensland (UQ) on the Gold Coast, to painstakingly match the before and after shots.

Manuel Gonzalez from UQ says the images will help inform future research.

"Precisely that sort of information about what is left and what was there before will give us the insights of what are the trends of the coral reef, or how the reef will look in the future based on what is left in those reefs," he said.

Mr Gonzalez says the research will help prioritize work to conserve the Great Barrier Reef.

"If you know how much a reef can be affected by cyclones you can try and control or prioritize other effects that are happening on the reef to make sure that the coral reef will persist in time.

"By saying that, I'm talking about nutrient, pollution, overfishing ... that can combine together with cyclones to erode the structure of the reef over time."

Topics: great-barrier-reef, oceans-and-reefs, environment, environmental-management, environmental-impact, cyclone, cairns-4870,townsville-4810, mackay-4740, qld

First posted 16 Jun 2014, 7:37am

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