

Action needed to save Reef from coral bleaching

Reducing the rate of greenhouse gas emissions could buy time for the Great Barrier Reef, which is likely to suffer accelerated levels of coral bleaching and death due to global warming, according to a report by the Australian Institute of Marine Science, CSIRO and CRC Reef Research Centre.

The report's authors studied coral bleaching at three reefs in the Townsville area. They used this information in a computer model that calculated how these reefs would react to rising sea temperatures as predicted by the Intergovernmental Panel on Climate Change.

"The computer model suggested that even under optimistic temperature scenarios, both the appearance and ecology of reefs would suffer," says report co-author Dr Janice Lough.

A change in appearance and ecology of reefs has the potential to affect tourism on the GBR, according to the report's authors. However, there was some cause for optimism, because the model showed that inshore reefs, which currently suffer more bleaching due to higher temperatures in shallower waters, seemed to be better adapted to higher temperatures and would suffer less under the predicted temperature rises in the long-term.

The report underlines the need to give coral reefs the best possible chance of recovering from bleaching by adequately protecting the Reef from other stresses that affect the resilience of reefs, for example by halting further declines in water quality and protecting biodiversity. This could improve the recovery of reefs after bleaching events.

According to report co-author Dr Roger Jones of CSIRO Atmospheric Research, the survival of the Reef into the next century relies on action to lower levels of greenhouse gases over the next 50 years.

"A reduction in emissions of greenhouse gases will be needed to limit the frequency of bleaching over the longer term and to ensure the future of the Reef as a viable coral ecosystem," Dr Jones said.

The report was written for the State of Queensland Greenhouse Taskforce. "Global Climate Change and Coral Bleaching on the Great Barrier Reef", by Terry Done, Peter Whetton, Roger Jones, Ray Berkelmans, Janice Lough, William Skirving and Scott Wooldridge is available on the internet on the link below.

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