International concern over coral bleaching on the Great Barrier Reef.

An international network of scientists is concerned about the recent development of severe coral bleaching on inshore reefs in the Great Barrier Reef Marine Park.

Scientists from the University of Queensland recently visited the inshore reefs surrounding the Keppel Islands.

The University of Queensland's Professor Ove Hoegh-Guldberg, who chairs the Bleaching Working Group for the Coral Reef Targeted Research & Capacity Building for Management Program (CRTR), said he was amazed by what he had seen.

"Corals at the Keppels are completely bleached and we are only halfway through January," he said.

"How this will develop across the Great Barrier Reef is the number one question right now."

The CRTR Program is the largest international network of coral reef scientists in the world. Funded by the World Bank, the Global Environment Facility, UQ, the program aims to expand our understanding of the problems that underlie the decline of coral reefs across the planet.

Linking over 100 scientists across the globe, the Program is coordinated by UQ.

Corals are animals that live with tiny plant-like organisms called dinoflagellate, which capture the energy of the sun and pass it to the coral. Together, these tiny organisms build the huge limestone structures known as coral reefs.

Coral reefs have recently been experiencing a global decline.

Professor Hoegh-Guldberg said declining water quality, destructive fishing and now global climate change were all contributing to this decline.

"Climate Change is perhaps the most worrying aspect of these problems," he said.

"Projections from over 40 climate models suggest that our oceans will warm by as much as 3-4 degrees Celsius in the next 100 years.

"This will have a huge impact on the health of these important ecosystems."

US satellite agencies, NASA and NOAA, have both been providing critical assistance to scientists as they begin to unravel the reasons for the current bleaching event.

Waters during the past 4 months have been well above the long-term averages. In early January, messages were sent from US oceanographers studying the imagery that bleaching was imminent on the southern end of the Great Barrier Reef.

"We were all very concerned when we saw the temperature readings for December," Professor Hoegh-Guldberg said.

"The traces suggest we are tracking the temperature profile of 2001-2002, which led to the worst incidence of coral bleaching in the recorded measurements for the Great Barrier Reef.

“In that event, over 60 percent of the Great Barrier Reef bleached and up to 5 percent of reefs suffered serious damage.”

The 2006 Great Barrier Reef event comes soon after the worst incidence of coral bleaching in the Caribbean in October 2005.

Professor Robert Van Woesik from Florida Institute of Technology and a member of the World Bank-GEF program visited sites along the Mexican Yucatan coast and was concerned by what he saw.

“It was a fairly extensive bleaching event - time will tell whether there was large scale mortality or not,” he said.

“Large corals do have some ability to bounce back - on the other hand, this was an unusually warm event.”

The CRTR Program is planning to develop a solid scientific basis from which to approach questions about the impact of global warming on coral reefs.

The Program’s Executive Officer Melanie King said it was building scientific networks and capacity through joint activities and scholarships.

“If we can get the best science available into the hands of reef managers and policy makers, we will take a huge step towards working out what we can do in response to these problems,” she said.

The Program is currently working with the Great Barrier Marine Park Authority to help understand the patterns of bleaching throughout the entire Great Barrier Reef, and to link scientific research with management solutions.

Scientists throughout the World Bank-GEF network are now on high alert.

“We need to see how this event unfolds. Let’s hope it is not of the same scale as that in 1998, which destroyed 16 percent of the world’s coral reefs,” Ms King said.

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