

ARC Centre of Excellence for Coral Reef Studies Media Release

July 10, 2008

CORAL DECLINE TO HIT RICH AND POOR

The gradual disintegration of the world's coral reefs under climate change will have significant impacts on food supplies, international tourism, water quality and the safety of coastal communities.

Marine researchers at the International Coral Research Symposium (ICRS) in Fort Lauderdale, Florida, this week are exploring the longer term consequences of widespread loss of corals due to global warming and ocean acidification.

Chair of the Climate Change session, Professor Ove Hoegh-Guldberg of the ARC Centre of Excellence for Coral Reef Studies and University of Queensland, says there is now convincing science coming through to indicate that reefs everywhere are in trouble.

“The evidence suggests reef systems are becoming more brittle, as a result of bleaching, disease and the effects of acidifying water – and this means we are likely to see more moonscape-like areas where reefs once used to be. This will be accompanied by a switch from the spectacularly colourful fish that people normally associate with reefs to much fewer and plainer ones.”

The decline in reefs has importance for the 500 million humans, mainly in developing countries, who depend on coral reefs for food and/or their livelihoods, while tourism industries in both developed and developing countries are likely to suffer he said.

“The loss of reefs will also expose coastal communities, already facing rising sea levels, to a greater risk from storm surges and tsunamis – as reefs currently provide a protective barrier against these,” he says.

“This will be accompanied by murkier, less productive waters as water quality suffers.”

Professor Hoegh-Guldberg says researchers have found evidence that the rate at which coral reefs have been deteriorating and disappearing has accelerated in the last five years. “For the past 30 years the loss has been between 1-2 per cent of the world's coral per year. The latest data suggests the rate is now around 2 per cent a year. This doesn't give us much time.”

Recent evidence that sea levels are rising at nearly twice the rate predicted by the Intergovernmental Panel on Climate Change (IPCC) also poses a risk to coral reefs.

“Healthy corals can keep up with these sorts of sea level rises – but some reefs which are damaged or weakened may be at risk of ‘drowning’ – being thrust into depths where they can no longer get the light they need for photosynthesis. All this aside, however, sea level on its own is not a major factor at this point.”

At the same time Prof. Hoegh-Guldberg says that emerging evidence indicates some corals have suffered a 20 per cent reduction in their growth rates, which researchers consider to be due to the rising acidification of sea water making it harder for them to build their chalky skeletons. “This apparent drop in calcification is bound to be a real issue for discussion at the symposium,” he says.

Most disturbing of all were recent claims by some atmospheric researchers that the level of CO₂ has been underestimated, and may be closer to 410 parts per million, than to the 385 estimated by the IPCC.

“If we continue on the pathway that we are on right now, we get to levels where you are looking at the total loss of reef structures worldwide. Under those conditions you just don’t have corals – no corals, and you also lose 50% of the fish and other species that live in and around corals,” he said.

“If we are already at 410ppm then we are facing a planetary emergency which should require urgent action to cap oil, gas and coal production worldwide immediately. We can’t fool around with a situation that is rapidly spiraling out of control. We can’t play with a situation that is so dangerous.”

“You might say – well, that is big. Cap oil, gas and coal? But with no other solutions in front of us, then it would be foolhardy and unethical for us not to consider these urgent actions,” he emphasized.

More information:

Prof. Ove Hoegh-Guldberg, CoECSR and UQ, 0401 106 604 or 07 3371 2135

oveh@uq.edu.au.

Liz Neeley, ICRS media, +1 425 301 8019

Jan King, UQ Communications Manager, 07 3365 1120

Jenny Lappin, CoECSR, + 61-(0)7 4781 4222

www.coralcoe.org.au

International Coral Reef Symposium:

http://www.nova.edu/ncr/11icrs/media_newsroom.html