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Page: 3
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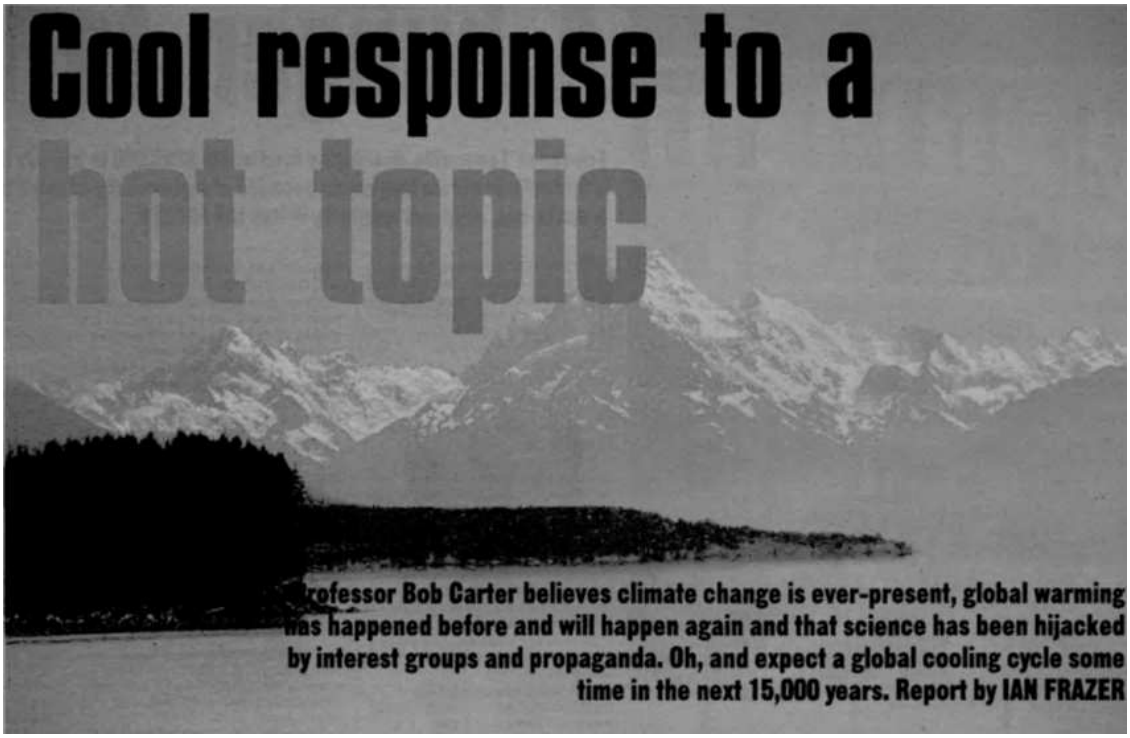
Cool response to a hot topic



Professor Bob Carter believes climate change is ever-present, global warming has happened before and will happen again and that science has been hijacked by interest groups and propaganda. Oh, and expect a global cooling cycle some time in the next 15,000 years. Report by IAN FRAZER

THE devil's advocate in Australia's climate change debate can be found with difficulty in a demountable office on JCU's scrubby fringe.

Professor Bob Carter's isolation from hourly tides of lecture and tutorial traffic seems appropriate, given his life-long study of geological events spanning millions of years.

Yet reporters from around Australia have no problem finding him when looking for a salty quote on what he calls "panic-button" issues, from greenhouse gasses to Armageddon.

His arguments that climate change is an aeons-old phenomenon and that global surface temperature increases during the 20th century are related to natural cycles have been reported in the metropolitan press for at least two years.

He has also written about his fears for the practice of science, which he believes is ailing because of the government's focus on funding "useful" projects for "national priorities" resulting in a culture of second-guessing likely winners, at the expense of disinterested research and advice.

"Such disinterested advice is now part of history," he wrote in the *Institute of Public Affairs Review* last December.

"It has been replaced by science advocacy and spin to a degree that many of the public have lost their trust in science altogether."

Prof Carter was on the *7.30 Report* on ABC TV the night before our interview on Tuesday, commenting on a call by the Australian Climate Group for a 60 per cent cut in greenhouse gas emissions by 2050.

The group of scientists, chosen last year by World Wildlife Fund Australia and the Insurance Australia Group, issued a report on Monday asserting that the world's temperature was rising unusually quickly and that global warming could threaten millions of lives.

Two members appeared in the segment. CSIRO atmospheric researcher Dr Graeme Pearman said it was clear that the increase in the Earth's average temperature in the past 20 years was evidence of climate change.

Tony Coleman, chief risk officer with the Insurance Australia Group, said he anticipated an increase in severe storms and more cyclones, droughts and floods, and that premiums might have to be adjusted for these risks.

Prof Carter responded that the report was a political document, arguing for social measures.

"It is important that the public understand that one statement can be made – climate is always changing. It is changing at the moment," he said.

"I think we need a lot more caution, I would say, less hysteria."

The segment opened with Bondi Beach bathers speculating anxiously on the balmy winter weather – a device that bothered Prof Carter because of its assumptions of links between climate and weather.

"The Bondi Beach top and tail . . . was a classic example of how the Australian media trivialises the debate," he e-mailed the *Bulletin* later.

"Of course a bird in a bikini on Bondi Beach far outreaches, in public influence, an ageing professor.

"But that aside, using such a story device and then asking the same tourists what they think of the climate (when . . . they are experiencing the weather) is undoubtedly one of the

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reasons why the public continues to be confused on this issue."

Prof Carter, who retired in 1999 as head of the School of Earth Sciences at JCU to the backwater of the Marine Geophysical Laboratory, said on Tuesday he had no sense of being part of a "debate".

"Discussion on climate change is being advanced by propaganda – it's not a debate," he said.

The disaster movie *The Day After Tomorrow* was part of the same discourse.

"I loved it apart from the end when the US President confessed the catastrophe had happened because of we'd all been naughty boys . . . that's propaganda."

He assumes reporters contact him because he has investigated geological evidence of climate change for 30 years. However, he also knows many of his peers are loath to speak out on the complex and politically charged subject of climate change.

"Climate change is an incredibly diverse topic," he said.

"Not a single scientist in the world knows how climate works. Most experts know a lot about a small area.

"You are aware that if you move more than 1mm out of your expertise there are hundreds of others who know you are skating on thin ice."

His present work, funded by public research agencies, centres on analysis of core samples of Cenozoic sediments, deposited over the past 65 million years in the south-west Pacific, off New Zealand and the Great Barrier Reef.

He is investigating what he describes as "rapid climate change in the geological record", based on analysis of core samples from across the South Island of New Zealand and 120km off the east coast.

He will travel to the US next month to study core samples drilled in 1989 by the internationally but no longer Australian-funded Ocean Drilling Program.

His most recent paper co-authored with Paul Gammon and published last month in *Science*, dealt with climate change in the Southern Hemisphere during the past 3.9 million years, based on analysis of seabed sediment from New Zealand glaciers.

He used gamma ray isotopes, assumed to have been produced by the potassium-rich detritus of glaciers, as signatures for climate change, and correlated low gamma levels with warm inter-glacial times, such as now.

Prof Carter told the *Bulletin* he had found a correlation between glaciation in New Zealand and Antarctica suggesting that the "signal" for climate change was probably sent through the atmosphere, rather than oceans. This meant that changing temperatures in Antarctica could be a major component of world climate change.

He said the only certainty about global warming was that it would be followed sometime in the next 15,000 years by global cooling.

The core samples showed a cycle of glacial events in the past 4 million years, the last of which ended 10,000 years ago. Scientists agree that this pattern is regulated by the Earth's orbit around the sun predicted and described by Serbian geophysicist Milutin Milanovitch in 1920.

"The present warm period has lasted for 10,000 years and for certain climate is going to get colder," Prof Carter said.

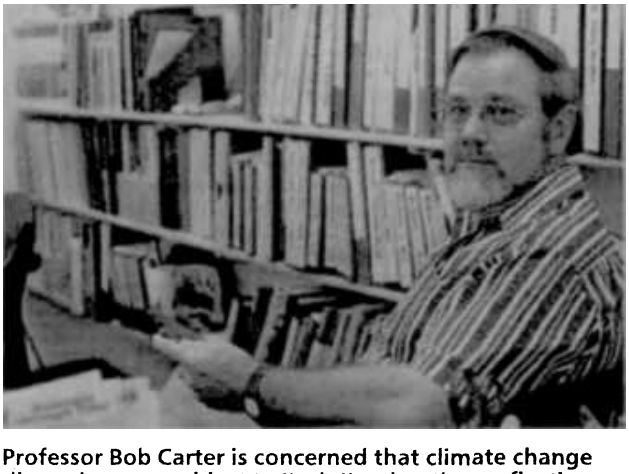
The change might have already begun, perhaps ameliorated by carbon dioxide emissions from agriculture dating back to the dawn of civilisation.

But beyond the vexed question of human influence on climate, scientists had recorded natural climatic variations in cycles ranging from 11 to 100,000 years.

The most sensible hypothesis was that recent increases in average global temperatures reflected one or more of these cycles.

"Dispassionate research is required into these issues," he said.

"We should be concerned to understand climate change, which is always occurring naturally, but on the basis of facts, not hysteria."



Professor Bob Carter is concerned that climate change discussions are subject to "spin" rather than reflecting impartial research *PHOTO: STEWART McLEAN* sm022061

Rock samples such as those above give a "big picture" view of climate change over the millennia

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