

Science or silence? My battle to question doomsayers about the Great Barrier Reef



By [Professor Peter Ridd](#) | [Fox News](#)



FILE -- A man snorkels in an area called the "Coral Gardens" near Lady Elliot Island, on the Great Barrier Reef, northeast of Bundaberg town in Queensland, Australia, June 11, 2015. (REUTERS/David Gray)

Around the world, people have heard about the impending extinction of the Great Barrier Reef: some 133,000 square miles of magnificent coral stretching for 1,400 miles off the northeast coast of Australia.

The reef is supposedly almost dead from the combined effects of a warming climate, nutrient pollution from Australian farms, and smothering sediment from offshore dredging.

Except that, as I have said publicly as a research scientist who has studied the reef for the past 30 years, all this most likely isn't true.

And just for saying that – and calling into question the kind of published science that has led to the gloomy predictions – I have been served with a gag order by my university. I am now having to sue for my right to have an ordinary scientific opinion.



My emails have been searched. I was not allowed even to speak to my wife about the issue. I have been harangued by lawyers. And now I'm fighting back to assert my right to academic freedom and bring attention to the crisis of scientific truth.

The problems I am facing are part of a "replication crisis" that is sweeping through science and is now a serious topic in major science journals. In major scientific trials that attempt to reproduce the results of scientific observations and measurements, it seems that around 50 percent of recently published science is wrong, because the results can't be replicated by others.

And if observations and measurements can't be replicated, it isn't really science – it is still, at best, hypothesis, or even just opinion. This is not a controversial topic anymore – science, or at least the system of checking the science we are using, is failing us.

The crisis started in biomedical areas, where pharmaceutical companies in the past decade found that up to 80 percent of university and institutional science results that they tested were wrong. It is now recognized that the problem is much more widespread than the biomedical sciences. And that is where I got into big trouble.

I have published numerous scientific papers showing that much of the "science" claiming damage to the reef is either plain wrong or greatly exaggerated. As just one example, coral growth rates that have supposedly collapsed along the reef have, if anything, increased slightly.

Reefs that are supposedly smothered by dredging sediment actually contain great coral. And mass bleaching events along the reef that supposedly serve as

evidence of permanent human-caused devastation are almost certainly completely natural and even cyclical.

These allegedly major catastrophic effects that recent science says were almost unknown before the 1980s are mainly the result of a simple fact: large-scale marine science did not get started on the reef until the 1970s.

By a decade later, studies of the reef had exploded, along with the number of marine biologists doing them. What all these scientists lacked, however, was historical perspective. There are almost no records of earlier eras to compare with current conditions. Thus, for many scientists studying reef problems, the results are unprecedented, and almost always seen as catastrophic and even world-threatening.

The only problem is that it isn't so. The Great Barrier Reef is in fact in excellent condition. It certainly goes through periods of destruction where huge areas of coral are killed from hurricanes, starfish plagues and coral bleaching. However, it largely regrows within a decade to its former glory. Some parts of the southern reef, for example, have seen a tripling of coral in six years after they were devastated by a particularly severe cyclone.

Reefs have similarities to Australian forests, which *require* periodic bushfires. It looks terrible after the bushfire, but the forests always regrow. The ecosystem has evolved with these cycles of death and regrowth.

The conflicting realities of the Great Barrier Reef point to a deeper problem. In science, consensus is not the same thing as truth. But consensus has come to play a controlling role in many areas of modern science. And if you go against the consensus you can suffer unpleasant consequences.

The main system of science quality control is called peer review. Nowadays, it usually takes the form of a couple of anonymous reviewing scientists having a quick check over the work of a colleague in the field.

Peer review is commonly understood as painstaking re-examination by highly qualified experts in academia that acts as a real check on mistaken work. It isn't. In the real world, peer review is often cursory and not always even knowledgeable. It might take reviewers only a morning to do.

Scientific results are rarely reanalyzed and experiments are not replicated. The types of checks that would be routine in private industry are just not done.

I have asked the question: Is this good enough quality control to make environmental decisions worth billions of dollars that are now adversely affecting every major industry in northeast Australia?

Our sugar industry has been told to make dramatic reductions in fertilizer application, potentially reducing productivity; our ports have dredging restrictions that threaten their productivity; scientists demand that coal mines be closed; and tourists are scared away because the reef is supposedly almost dead – not worth seeing anymore.

Last August I made this point on Sky News in Australia in promotion of a chapter I wrote in "[Climate Change: The Facts 2017](#)," published by the Australian free market think tank the Institute of Public Affairs.

"The basic problem is that we can no longer trust the scientific organizations like the Australian Institute of Marine Science, even things like the Australian Research Council Centre of Excellence for Coral Reef Studies ... the science is coming out not properly checked, tested or replicated and this is a great shame because we really need to be able to trust our scientific institutions and the fact is I do not think we can any more," I said.

The response to these comments by my employer, James Cook University, was extraordinary.

Rather than measured argument, I was hit with a charge of academic serious misconduct for not being "collegial."

University authorities told me in August I was not allowed to mention the case or the charges to anybody – not even my wife.

Then things got worse. With assistance from the Institute of Public Affairs, I have been pushing back against the charges and the gag order – leading the university to search my official emails for examples of where I had mentioned the case to other scientists, old friends, past students and my wife.

I was then hit with 25 new allegations, mostly for just mentioning the case against me. The email search turned up nothing for which I feel ashamed. You can [see for yourself](#).

We filed in court in November. At that point the university backed away from firing me. But university officials issued a "Final Censure" in my employment file and told me to be silent about the allegations, and not to repeat my comments about the unreliability of institutional research.

But they agreed that I could mention it to my wife, which was nice of them.

I would rather be fired than accept these conditions. We are still pursuing the matter in court.

This case may be about a single instance of alleged misconduct, but underlying it is an issue even bigger than our oceans. Ultimately, I am fighting for academic and scientific freedom, and the responsibility of universities to nurture the debate of difficult subjects without threat or intimidation.

We may indeed have a Great Barrier Reef crisis, but the science is so flawed that it is impossible to tell its actual dimensions. What we do know for certain is that we have an academic freedom crisis that threatens the true life of science and threatens to smother our failing university system.

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