

# Geological Community Arm-waving On Climate Change

## From Dr Cedric Griffiths

It was with great sadness I read the letter from Phil Playford in the latest edition of *PESA News Resources*. When is my profession going to reach maturity? We surely have to move on from the plaintiff cry of 'trust me – I'm a geologist – climate change has happened before'.

If geology's going to move out of the 18th century 'stamp collector' mode and become a science, it needs to practice the time-honoured scientific process of observation, deduction and prediction.

The likes of Carter, Plimer and now Playford (CPP) have certainly brought the attention of the media to observations that have been in geological literature for decades, if not centuries. But unfortunately they fall short on the *deduction* and *prediction* side.

While biologists, meteorologists and climate scientists are busy applying their knowledge (derived from a combination of observations and numerical models/hypotheses) to testable predictions of value to society, all the geological community seems capable of is a load of arm-waving. Could it be that geology has played a minimal role in the IPCC because it has not shown itself capable of making a quantitative contribution to forecasting?

CPP between them have around a century of experience in observing palaeoclimate indicators. If any geologists were in a position to use their knowledge to make testable predictions concerning future sea levels, temperatures and storm frequencies, they'd include these three eminent professionals. Governments around the world, and the societies they represent, are in desperate need of quantitative assistance from professionals.

What do CPP predict the global sea level will be in 2050 or 2100? How often and how far south will cyclones impact Australian coastal communities and offshore infrastructure? Should coastal infrastructure be designed on the basis of a present-day 1,000 year storm probability becoming a 100 year storm probability or a 10,000 year storm probability by 2050? How about river flood frequencies and magnitudes affecting inland communities over the next century?

Are these highly qualified and much published professional geologists really saying the near future is beyond quantitative geological

understanding? That all the considerable funds spent by the Australian community on their research and geological field observations over the past 50 years hasn't enabled them to say what the sea level, ice coverage or climate will be like in 50 years time or 10,000 years time?

I'd be very disappointed if the sum total of their contribution to this debate is the statement that those who don't consider anthropogenically influenced global warming to be invalid are part of "the greatest self-organised scientific and political conspiracy the world has ever seen". This smacks more of faith than science. Surely our understanding progresses faster

by presenting alternative testable hypotheses rather than by denigrating fellow professionals and branding them conspirators.

Let us see some science in the form of quantitative, testable predictions, from CPP. If anthropogenically influenced global warming isn't considered then provide an alternative testable hypothesis. Tell us what temperatures, sea levels, ice coverage, storm and flood frequencies communities around the world can expect in the short, medium and long-term future based on CPP's clearly superior understanding of global processes. The world is waiting. ■