

The Australian Academy of Science is releasing *The science of climate change: questions and answers* and it is must reading no matter what your view is of Global Warming. It is a consensus overview by Australia's most expert climate scientists, overseen by the Academy, to explain what we know, and we do not know about anthropogenic climate change, and how we might mediate future changes.

As a Nobel Prize winner, I get to travel the country and the world and talk about the wonder of science. It never ceases to amaze me how most of the policy, business, and political leaders I meet immediately apologise about their lack of knowledge of science, except it seems, when it comes to climate science – where everyone seems to have a fully formed expert opinion. Facts are bandied about for or against climate change and from my perspective, misconceptions abound on all sides of the argument.

The confusion is not surprising – climate science is a very broad and complicated subject with experts working on different aspects of it world wide. More surprising is the supreme confidence by non-experts (scientists and non-scientists alike) of their specific knowledge of the subject.

I am a full time scientist whose area of expertise intersects with certain aspects of climate science, but I too am not an expert on climate science – and I defer to the Academy's expert panel and their findings in this report:

Earth's climate has changed over the past century. The atmosphere and oceans have warmed, sea levels have risen, and glaciers and ice sheets have decreased in size. The best available evidence indicates that greenhouse gas emissions from human activities are the main cause. Continuing increases in greenhouse gases will produce further warming and other changes in Earth's physical environment and ecosystems.

However, my own scientific opinions in my areas of expertise are consistent with their conclusions. But are the Academy's view above endorsed by every expert? No! Like all areas of science, ideas are contested, and this has led to a lot of confusion and I dare say delusion in some cases, within the broader community. The body of science evidence on climate change is not contained in one paper, one set of observations, or by one person – rather it encompasses thousand's of people's ideas and observations. This is why it is so important for the country's pre-eminent scientific body to write this document, synthesizing all of this disparate information into a coherent assessment of the science. It means that the nation's decision makers have the most informed scientific opinion on the subject, so that they can stop arguing about the science, and instead focus on their job, which is figuring out the most appropriate policy response to climate change given our current state of knowledge.

Scientists will continue their climate investigations – and the facts and conclusions in this document will be challenged – this is the scientific process that has served humanity so well. There is potential for our understanding to

change into the future, but *The science of climate change: questions and answers* is analogous to getting a medical diagnosis from a panel of the country's best doctors. And while some might search around for a different opinion until they get the answer they want to hear, this is the path for suboptimal outcomes. For the future health of our world and our country, Australians, let's quit self-diagnosing on climate change, and act on the expert opinion. We are 99% certain that human's activities are changing the Earth's climate and what we do now and into the future will strongly influence the world's weather in the decades and centuries to come.