

Climatology's great dilemma

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Image: Getty

Climate science is, once again, on the horns of a very uncomfortable dilemma. Whatever the Intergovernmental Panel on Climate Change (IPCC) chooses to do in the next few weeks its decision looks set to explode in its face.

Crises are something of a feature of the IPCC. Since its First Assessment appeared back in 1990, each of the panel's periodic pronouncements on the global climate has plunged it into controversy. In the Second Assessment of 1995, the report's headline claim – that a 'fingerprint' of manmade global warming had been detected – caused uproar when it was discovered that it had been inserted into the text at the last moment. Loud allegations that the report had been doctored for political ends followed. Then, in 2001, the infamous, but scientifically peripheral Hockey Stick graph, with its claim that modern temperatures are unprecedented, was hyped by the Third Assessment as though it were conclusive evidence of a human influence on the climate. The chickens came home to roost at the time of the Fourth Assessment in 2007, when thousands of emails were leaked from the University of East Anglia, revealing the extraordinary efforts to keep evidence that the Hockey Stick was flawed out of the final report.

With the Fifth Assessment now only days away, the scientists and politicians who formulate the final report have to work out how they are going to avoid yet another crisis. To do this they need to concoct a story that will explain away a very inconvenient contradiction.

The various drafts of the report have been well leaked to the media, and it looks as though the headline stories are going to be something along the lines of 'Science is now more certain than ever that mankind is warming the planet' and, more controversially, 'Most of the warming in the second half of the 20th century was down to greenhouse gases'. How do scientists purport to know this? The answer is that their computer models tell them so: the models only reproduce the observed warming when they incorporate increases in greenhouse gases.

But there's a problem. While the climate models confidently predicted that temperatures would maintain an inexorable rise in the 21st century, in fact, although more and more greenhouse gases have been pumped into the atmosphere, the global temperature has resolutely refused to budge.

So the IPCC's dilemma is this. How can it expect the public to believe that recent warming is mostly manmade when the models on which it has based this claim have been shown to be fatally flawed?

In the latest draft of the report, scientists seem to have been admirably honest about the hiatus in temperature rises, explaining that its causes are a mystery. For their pains, they have apparently had the text flung back at them by government reviewers along with a demand that they explain what is happening. Governments, you see, need to be able to fend off sceptic arguments.

It will not be an easy task. However the IPCC chooses to deal with the problem the repercussions are unpleasant. They might try to explain away the warming hiatus in some way: the in-vogue explanation is that the heat that should have been in the atmosphere has escaped, undetected, to the deep oceans. Evidence to support this idea is, however, scant at best, and going down this route is going to involve the IPCC admitting that there is much about the climate system that is not yet understood. This will be a hard act to carry off while simultaneously claiming that they are certain that mankind caused most of the recent warming.

An alternative explanation has even more unpleasant consequences for the climate 'machine'. If the globe hasn't warmed because the impact of carbon dioxide on the climate is less than previously thought (a suggestion for which there is, incidentally, abundant supporting evidence) then the need for dramatic policy responses, and all the grants and subsidies and wind farm feed-in tariffs that result, dissolves away.

The word from within the IPCC is that a new generation of climate scientists is trying to tell the climate story, warts and all. But it is also said that they have been brought to the point of despair by the old guard, who want at all costs to avoid giving ammunition to sceptics.

Who will win out? And what damage will be done to the IPCC by whatever decision it eventually takes? In the next few days we will get an idea.

