

Climate change

– new findings and unintended consequences



Lord Stern talks at the Intergovernmental Panel on Climate Change in Copenhagen, Denmark.

The Copenhagen conference on climate change demonstrated that scientists are trying hard to communicate their work to the public. But some of the media headlines the conference generated showed that this process still needs work, as **Hazel Jeffery** and **Peter Cox** explain.

The Copenhagen Climate Change: Global Risks, Challenges & Decisions conference in March 2009 gathered together more than 2000 of the world's top climate scientists. The stated aim of the congress was: 'To provide a synthesis of existing and emerging scientific knowledge necessary in order to make intelligent societal decisions concerning application of mitigation and adaptation strategies in response to climate change'.

The conference was motivated by a desire to inform the climate policy discussions due to take place in December 2009 (UNFCCC 15th Conference of the Parties), in the same Copenhagen conference centre. Climate scientists have typically maintained some distance from policy, having indirect input through the systematic review process of the Intergovernmental Panel on Climate Change (IPCC).

Climate scientists at the meeting showed a new willingness to influence the political debate surrounding climate change more directly. But there are many potential pitfalls in the communication of science to policy-makers, especially when the media are involved, and several of these were demonstrated at the conference.

The opening statements from the conference chair, Katherine Richardson, conveyed a suspicion of the media and the

imprecise way it can present information. However, it was clear that the conference organisers were also strongly encouraging the media to get the message out. Environmental journalists attended in some numbers, so the conference received a significant amount of airtime during that week. But was this coverage balanced?

The assembled journalists were typically there because they believe climate change is a newsworthy issue, and so in some sense the scientists were preaching to the converted portion of the media. This has its advantages of course – these journalists are less likely to attack the scientific results presented for political reasons.

But it also has its dangers – this portion of the media is much more likely to report research that implies ‘it’s even worse than we thought’, than research that implies the opposite. The media’s coverage of

key research presented at the conference showed this bias, with Stefan Rahmsdorf’s suggestion that sea-level could rise twice as quickly as estimated by the IPCC causing a big stir, while Jonathan Bamber’s research suggesting that the Greenland ice-sheet could survive far beyond a two-degree global warming, fell on deaf ears.

Scientists can also have unintended effects on policy, if they communicate very policy-relevant research at a particularly sensitive time during negotiations. An example of this danger came in the parallel session on climate tipping points, where a team from the Met Office-Hadley Centre presented innovative work suggesting that the Amazon rainforest could already be committed to climate-driven Amazon ‘dieback’.

Previous climate-carbon cycle simulations produced by the Hadley Centre

doomed’, were therefore predictable, but risked undermining the post-Kyoto negotiations on avoided deforestation, as some other media-friendly scientists were remarkably quick to point out.

Many believe that avoided deforestation offers the chance to save Amazonia from the even more immediate dangers of logging, as well as providing a motivation for transition economies such as Brazil to enter binding post-Kyoto agreements. We strongly suspect that the scientists and journalists involved in this particular story would be in favour of saving the forests through this means, but ironically their interaction in this case could inadvertently have had the opposite effect.

Given these pitfalls and dangers, is it really worth trying to communicate climate science to policy-makers and the public through the media? Given the importance of climate to human well-being, and humanity’s role as the primary cause of contemporary climate change, we think the clear answer to this question is ‘yes’. However, there is a long way for us to go before we can communicate effectively across the science-policy interface.

This was beautifully illustrated in the final plenary session of the conference which included a debate between the Danish Prime Minister and some of the key scientists present. The Danish Prime Minister asked what seemed to be a very straightforward question: ‘Is the 2°C limit for global warming still considered ‘safe’? Yes or No!’

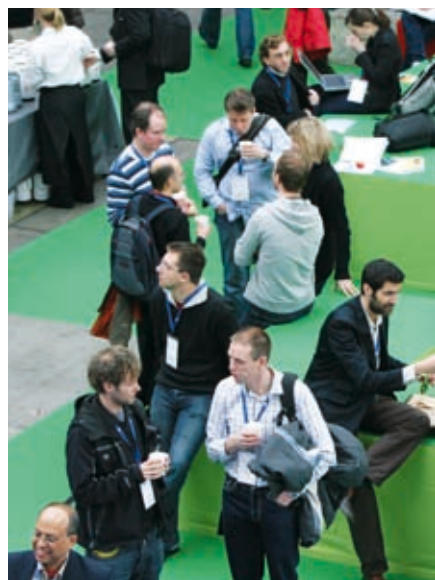
The renowned German climate scientist Stefan Rahmsdorf replied in the manner most scientists at the conference would have done: ‘This is not the sort of question that has a yes or no answer’. There has never been a clearer demonstration of the difficulties of communicating imprecise knowledge to an interested policy-maker!

Nevertheless, some very clear and positive messages did emerge from the conference, especially with regard to the opportunities that the green economy presents. As Lord Stern said, ‘It is the right time to invest in environmental technology because it’s cheap. Invest now for the future.’ Despite the science-policy communication difficulties we believe very few people at the conference would have disagreed with the sentiment. ♦

There is a long way to go before we can communicate effectively across the science-policy interface.



Stage-managed communication between scientists and the Danish Prime Minister (far right) at the Copenhagen Climate Congress.



have shown a tendency for the Amazonian rainforest to become unsustainable under many 21st-century climate-change scenarios. But these scenarios typically produced significant dieback of the forest from about the middle of the 21st century onwards. The new study looked at the ‘commitment to dieback’ by running the modelled forest to a steady state at each CO₂ level, and came to the alarming conclusion that large parts of the forest would dieback even if CO₂ could be miraculously stabilised at current levels.

Climate scientists are fully aware of the uncertainties which are inherent in climate projections, but even well-informed journalists may not be. The resulting headlines, such as ‘Amazon rainforest

MORE INFORMATION

Hazel Jeffery, Head of Strategic Management, NERC, email: haje@nerc.ac.uk
Professor Peter Cox, Met Office Chair in Climate System Dynamics, University of Exeter