

Climatologists Face Inconvenient Truth

Data shows global temperatures aren't rising the way climate scientists have predicted. Now the Intergovernmental Panel on Climate Change faces a problem: publicize these findings and encourage skeptics -- or hush up the figures.

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For a quarter of a century now, environmental activists have been issuing predictions in the vein of the Catholic Church, warning people of the coming greenhouse effect Armageddon. Environmentalists bleakly predict global warming will usher in plagues of biblical dimensions -- perpetual droughts, deluge-like floods and hurricanes of unprecedented force.

The number of people who believe in such a coming apocalypse, however, has considerably decreased. A survey conducted on behalf of SPIEGEL found a dramatic shift in public opinion -- Germans are losing their fear of climate change. While in 2006 a sizeable majority of 62 percent expressed a fear of global warming, that number has now become a minority of just 39 percent.

One cause of this shift, presumably, is the fact that global warming seems to be taking a break. The average global temperature hasn't risen in 15 years, a deviation from climatologists' computer-simulated predictions.

This is a difficult state of affairs for the Intergovernmental Panel on Climate Change (IPCC), which will release its next assessment report on global warming on Friday, Sept. 27.

None of the authors involved in the report are allowed to comment publicly on the report's contents before its official release. Only after days of closed-door negotiations -- which begin in Stockholm this Monday, Sept. 23 -- will the international forecasting body release its findings.

This much, though, is certain -- the new predictions will be essentially the same as the old ones, albeit a little more precise. The only adjustment the IPCC is expected to make is an increase in the predicted rise of sea levels. The new report is expected to forecast that coastal waters may rise by between 29 and 82 centimeters (11 and 32 inches) by the end of the century.

The crucial question, however, is: How will the IPCC address the pause in global warming? And how reliable are the computer models on which the predictions are based, if they failed to foresee the current temperature plateau?

Germany : 'More Alarmist' Voice

In the lead-up to this week's conference, tensions have been high between the IPCC's climate researchers and the IPCC's government representatives, with Germany's governmental delegates playing a particularly questionable role.

The conference's participants will negotiate the creation of a 30-page summary for policymakers from the 1,000-page full report. Governments send representatives from their relevant ministries in order to have a hand in what message that summary will contain. In Germany's case, this means delegates from the Federal Ministries for the Environment and Research.

"If you are offering the choice between 'alarmist' and 'sceptic' then the German delegation is certainly more in

the direction of 'alarmist'. But this is too simple a distinction," says British climatologist Mike Hulme from King's College London, who has many years of experience with IPCC bureaucracy.

German Green Party politician Hermann Ott, on the other hand, is satisfied with Germany's conduct in the negotiations. Since Helmut Kohl's government, Ott says, there has generally been consensus on the significance of climate protection, making it possible for "a great deal of continuity and a high level of expertise" to develop within Germany's Federal Ministry for the Environment.

Despite resistance from many researchers, the German ministries insist that it is important not to detract from the effectiveness of climate change warnings by discussing the past 15 years' lack of global warming. Doing so, they say, would result in a loss of the support necessary for pursuing rigorous climate policies. "Climate policy needs the element of fear," Ott openly admits. "Otherwise, no politician would take on this topic."

Science vs. Climate Politics

Germany's Federal Ministry of Research would prefer to leave any discussion of the global warming hiatus entirely out of the new IPCC report summary. "In climate research, changes don't count until they've been observed on a timescale of 30 years," claims one delegate participating in the negotiations on behalf of German Research Minister Johanna Wanka of the Christian Democratic Union (CDU). The Ministry for the Environment's identical stance: "Climate fluctuations that don't last very long are not scientifically relevant."

At most, German delegates at the conference would be willing to include an admission that "the pace of temperature change has slowed" -- a reinterpretation that doesn't correspond to the latest research findings.

Germany's highest-ranking climate researcher, physicist Jochem Marotzke, director of the Max Planck Institute for Meteorology, in Hamburg, is fighting back against this refusal to face facts. Marotzke, who is also president of the German Climate Consortium and Germany's top scientific representative in Stockholm, promises, "We will address this subject head-on." The IPCC, he says, must engage in discussion about the standstill in temperature rise.

Marotzke calls the claim that a temperature plateau isn't significant until it has lasted for over 30 years unscientific. "Thirty years is an arbitrarily selected number," he says. "Some climate phenomena occur on a shorter timescale, some on a longer one." Climate researchers, Marotzke adds, have an obligation not to environmental policy but to the truth. "That obligates us to clearly state the uncertainties in our predictions as well," he says.

The researchers' problem: Their climate models should have been able to predict the sudden flattening in the temperature curve. Offering explanations after the fact for why temperatures haven't increased in so long only serves to raise doubts as to how reliable the forecasts really are.

Despite this, most Germans have not yet lost their faith in climate research. According to the SPIEGEL survey, 67 percent of Germans still consider the predictions reliable.

Possible Explanations for the Pause

In any case, scientists have discovered some possible indications as to why temperatures are not currently rising. One explanation involves the Pacific Ocean, which, calculations indicate, has absorbed an unusually large amount of heat from the Earth's atmosphere in recent years. "If this proves to be true, then the warnings are still in effect," Marotzke says. He explains that it would mean the greenhouse effect is adding more and more energy into the climate system, exactly as the simulations predict, just with a larger portion of that energy than expected disappearing temporarily into the ocean.

Another possible explanation is that the large quantity of soot emitted into the atmosphere by cars and factory smokestacks in Asia has had a cooling effect on the atmosphere. What will happen when China installs modern filtering systems on a massive scale in its vehicles and at its coal power plants? In this case, global warming would also then continue unchecked.

In other words, says glaciologist Heinz Miller at the Alfred Wegener Institute for Polar and Marine Research, "The stagnation in temperature does not negate the physical evidence of global warming." Still, he says, the IPCC needs to make clear to the public and politicians alike that "scientific study is not a guarantee for infallibility." Miller also believes, "There is still a considerable need for more research."

Environmental policymakers within the IPCC fear, though, that climate skeptics and industry lobbyists could exploit these scientific uncertainties for their own purposes. The IPCC's response has been to circle the wagons. To ensure it remains the sole authority on climate predictions, the panel plans not to publish the complete report for some time after the release of the summary and not even release transcripts from the negotiations in Stockholm.

This despite the IPCC's promise for more transparency after hair-raising mistakes in the last assessment report - - from 2007 -- emerged three years ago and tarnished the panel's credibility. One result of that scandal was a commitment to avoiding future conflicts of interest. Yet scientists who previously worked for environmental organizations still hold leading roles in the creation of the IPCC report. This includes at least two "coordinating lead authors" who are responsible for individual chapters of the report.