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Climate Change Science: Time for "Team B"?

By Steven F. Hayward

The Intergovernmental Panel on Climate Change (IPCC) is currently working on its fourth assessment report. Despite the IPCC's noble intent to generate a scientific consensus, a number of factors have compromised the research and drafting process, assuring that its next assessment report will be just as controversial as previous reports in 1995 and 2001. Efforts to reform this large bureaucratic effort are unlikely to succeed. Perhaps the time has come to consider competition as the means of checking the IPCC's monopoly and generating more reliable climate science.

As the Intergovernmental Panel on Climate Change (IPCC) moves toward the release of its fourth assessment report (fourth AR) in 2007, the case of Chris Landsea offers in microcosm an example of why the IPCC's findings are going to have credibility problems.

Last month Landsea, a climate change scientist with the U.S. National Oceanic and Atmospheric Administration (NOAA), resigned as a participant in the producing the report. Landsea had been a chapter author and reviewer for the IPCC's second assessment report in 1995 and the third in 2001, and he is a leading expert on hurricanes and related extreme weather phenomena. He had signed on with the IPCC to update the state of current knowledge on Atlantic hurricanes for the fourth report. In an open letter, Landsea wrote that he could no longer in good conscience participate in a process that is "being motivated by pre-conceived agendas" and is "scientifically unsound."[1]

Landsea's resignation was prompted by an all too familiar occurrence: The lead author of the fourth AR's chapter on climate observations, Kevin Trenberth, participated in a press conference that warned of increasing hurricane activity as a result of global warming.[2] It is common to hear that man-made global warming represents the "consensus" of science, yet the use of hurricanes and cyclones as a marker of global warming represents a clear-cut case of the consensus being roundly ignored. Both the second and third IPCC assessments concluded that there was no global warming signal found in the hurricane record. Moreover, most climate models predict future warming will have only a small effect—if any—on hurricane strength. "It is beyond me," Landsea wrote, "why my colleagues would utilize the media to push an unsupported agenda that recent hurricane activity has been due to global warming."[3] Landsea's critique goes beyond a fit of pique at the abuse of his area of expertise. The IPCC, he believes, has become thoroughly politicized, and is unresponsive to criticism. "When I have raised my concerns to the IPCC leadership," Landsea wrote, "their response was simply to dismiss my concerns."[4]

Landsea's frustration is not an isolated experience. MIT physicist Richard Lindzen, another past IPCC author who is not participating in the fourth report, has written: "My experiences over the past 16 years have led me to the discouraging conclusion that we are dealing with the almost insoluble interaction of an iron triangle with an iron rice bowl." (Lindzen's "iron triangle" consists of activists misusing science to get the attention of the news media and politicians; the "iron rice bowl" is the parallel phenomenon where scientists exploit the activists' alarm to increase research funding and attention for the issue.[5]) And Dr. John Zillman, one of Australia's leading climate scientists, is

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another ex-IPCC participant who believes the IPCC has become "cast more in the model of supporting than informing policy development."[6]

And when the IPCC is not ignoring its responsible critics like Landsea and Lindzen, it is demonizing them. Not long ago the IPCC's chairman, Dr. Rajendra Pachauri, compared eco-skeptic Bjørn Lomborg to Hitler. "What is the difference between Lomborg's view of humanity and Hitler's?" Pachauri asked in a Danish newspaper. "If you were to accept Lomborg's way of thinking, then maybe what Hitler did was the right thing."[7] Lomborg's sin was merely to follow the consensus practice of economists in applying a discount to present costs for future benefits, and comparing the range of outcomes with other world problems alongside climate change. It is hard to judge what is worse: Pachauri's appalling judgment in resorting to *reductio ad Hitlerum*, or his abysmal ignorance of basic economics. In either case, it is hard to have much confidence in the policy advice the IPCC might have.

Can the IPCC Be Reformed?

In the abstract the IPCC deserves it due. There has never been a large public policy issue as dependent on thorough science as climate change. The effort to get to the bottom of climate change is perhaps the largest scientific inquiry in human history. It requires the coordination of thousands of specialists, the development of whole new scientific techniques, and the refinement of elaborate computer models that need weeks to run on the most powerful supercomputers. Even discounting for the inherent weaknesses of computer models for any subject, this kind of sustained effort is likely to generate valuable and practical knowledge in the fullness of time. Producing coherent reports at regular intervals that combine all this work is an extraordinary feat.

The IPCC process suffers from a number of immense difficulties, however. Many of them are endemic to the necessary bureaucratic organization of the effort. The UN Framework Convention on Climate Change that established the IPCC back in 1992 arguably preordained the outcome of the effort by charging the IPCC with the task of identifying a level of stable greenhouse gas concentrations beyond which the planet may not exceed without great harm. And although climate science is still in its relative infancy in many ways (comparable perhaps to genetics in 1950), the policymakers want to know the answer to this immense question *right now*. Given the vocal constituencies that cluster around the UN's diplomatic circus, it would be surprising if the IPCC process came out with anything other than a bias toward alarmism.

A close reading of past IPCC reports finds occasional admissions that their reach exceeds their grasp. The third AR (2001) candidly acknowledges the myriad of linkages and the cascading levels of uncertainty in the whole enterprise, concluding that decision-making in such an environment depends on "society's attitude toward risk," which "is likely to vary from country to country, and from generation to generation." In other words, the IPCC is not yet able to give policy advice—and probably won't be for a very long time. The parallel diplomatic process that generated the Kyoto Protocol—before much of the science came in, it should be noted—reinforced the bias toward climate alarmism. Rumors abound of political pressures voiced to the managers of the IPCC to "sex up" their reports, and past summaries for policymakers of the IPCC's scientific work, written by non-scientists, have attracted swarms of controversy about their accuracy and rectitude.[8] Dissenting voices in such a process will face great resistance, as dissenting voices do in most bureaucratic organizations.

Beyond mere organizational problems are more fundamental factors. The nature of the issue and the history of past environmental alarms (e.g., the population bomb, resource scarcity, and so forth) meant that early on the issue broke down into rigid categories of "true believers" or "alarmists," and "skeptics"—terms that carry a pejorative connotation when used today. The heat over the issue has tended to drive scientists toward one camp or the other, which is one reason why many open-minded scientists avoid the issue or decline to participate in the IPCC process. Hence the scientists and experts participating in each iteration have become increasingly self-selected toward those with a bias toward climate alarmism. Although the IPCC's reports pass through elaborate peer reviews, controversy surrounds many basic issues, and a number of errors or weak conclusions have gotten through.

Time for "Team B"?

The time has come to question the IPCC's status as the near-monopoly source of information and advice for its member governments. It is probably futile to propose reform of the present IPCC process. Like most bureaucracies, it has too much momentum and its institutional

interests are too strong for anyone realistically to suppose that it can assimilate more diverse points of view, even if more scientists and economists were keen to join up. The rectitude and credibility of the IPCC could be best improved not through reform, but through competition. The model for how climate science might be improved perhaps can be found in the field of intelligence in the 1970s.

By the mid-1970s it became clear that the Central Intelligence Agency's annual assessments of the military activities of the Soviet Union had consistently underestimated their prodigious arms buildup.[9] This produced great unhappiness among the policymakers, especially defense planners and arms control negotiators, who were using the CIA's assessments to make decisions. Rather than root out the problems at the CIA that led to this consistent bias, the President's Foreign Intelligence Advisory Board embraced a competitive solution: it set in motion "Team B," a team of experts who were given access to the complete raw data as the CIA's regular assessment team (which became known as "Team A" for the exercise). The CIA naturally resisted this proposal, and it was rejected for a time. Only the accession of a new CIA director—whose named happened to be George H. W. Bush—made the Team B process possible. Because the two teams were to exchange drafts of their assessments, a predictable thing happened: Team A's official assessment became a lot more tough-minded, much closer to what Team B produced—and much more accurate, as subsequent history proved.[10] Right away it is possible to speculate that the formation of a competitive Team B for climate change will put the IPCC on its best behavior and likely improve the rectitude of its process.

It may be said that something like a Team B approach to climate change has already been done, in the form of the National Research Council's 2001 report, "Climate Change Science: An Analysis of Some Key Questions."[11] This is the report whose finding that "the recent [climate] changes observed over the last several decades are likely mostly due to human activities" was widely reported in the media, though the rest of the same sentence was not: "but we cannot rule out that some significant part of these changes is also a reflection of natural variability." In other words, the degree of uncertainty is still very large, a point the NRC report made more emphatically deep in its main text: "Without an understanding of the sources and degree of uncertainty, decision makers could fail to define the best ways to deal with the serious issue of global warming."[12]

The NRC report was more of a peer review than an independent assessment. Another potential "Team B" effort one might point to is the U.S. Climate Change Science Program, an offshoot of the U.S. Global Change Research Project, an ambitious national attempt to push ahead with research on a broad range of environmental issues related to climate.[13] This in an interagency effort combining the talents of thirteen federal agencies from the Pentagon and Department of Agriculture to the Smithsonian Institution. It will undoubtedly produce important work and has already produced several policy assessments of climate issues.

However, many people involved with the U.S. research program are involved closely with the IPCC process, and a reciprocal influence is to be expected. A genuinely independent climate assessment process would need to build from the ground up, recruiting a team wholly independent of the IPCC's personnel, and funded adequately to conduct original research, computer modeling, and consultations on a scale similar to the IPCC. Congress might consider earmarking a portion of current climate science appropriations for a competitive effort, perhaps in collaboration with Australia, Russia, Italy, Japan, and other nations that have expressed reservations about the Kyoto process.

Getting the Baseline Right

Short of a full-scale replica of the IPCC, a number of other national and international institutions could be brought into the issue in a serious way, starting with the U.S. Treasury Department and other finance ministries, along with the Organization for Economic Co-operation and Development (OECD). Thus far finance ministries have shown little interest in the economics of global warming.[14] One reason for this is underappreciated: the IPCC members with coalition parliamentary governments tend to turn over the climate portfolio to the greenest members of their coalition (or to the Green Party itself in the case of some European countries), who are naturally enthusiastic about the issue but are not always well versed in economics, while finance ministries concentrate on more near-term issues.

Closer involvement of finance ministries is the recommendation of David Henderson, the former chief economist of the OECD and one of the leading critics of the IPCC "milieu" (as he calls it).[15] Henderson is among the growing number of economists who have raised serious questions about the economic

underpinnings of the IPCC's assessment process. At issue is whether the emissions forecasts that are the primary inputs to the climate models are sound and realistic. Future greenhouse gas emissions are a function of world economic growth and energy consumption. Estimating growth and consumption several decades out from now is perhaps an impossibility; the IPCC came up with forty different scenarios, none of which can be assigned a probability. Henderson and others have pointed to serious methodological anomalies and difficulties of a highly technical nature in the IPCC's calculations, which the critics argue have resulted in unreasonably high emissions forecasts.[16] Everyone recalls the first lesson of computer science class: garbage in, garbage out. If future greenhouse gas emissions are badly overestimated, then even the perfect computer climate model will spit out a false temperature prediction. To their credit, a number of climate experts who might be considered part of the "alarmist" camp have agreed with Henderson and argued that this crucial question should be addressed as carefully and objectively as possible.

It is not clear as of this writing whether the IPCC is going to perform a new set of emissions forecasts for the fourth assessment report or use the same set of forecasts that were used in the third. At the moment the IPCC is being opaque on this subject while their "scoping" meetings for the fourth report are underway. There are some encouraging reports that the IPCC will incorporate the criticisms of its past forecasting efforts into the next round. If the old emissions projections are used it will assure a garbage-in, garbage-out result, and there will be a new round of controversy over the IPCC's report. The IPCC's reaction to Henderson's original critique was startling; it issued a vituperative press release blasting Henderson and his colleague Ian Castles for peddling "disinformation."[17] Some scientists and economists connected with the IPCC have said publicly that the press release was a regrettable error. But it is typical of the increasingly arrogant IPCC leadership. Meanwhile, the British House of Lords Select Committee on Economic Affairs has opened an investigation.

Hitherto economic analysis of climate change has concentrated on what the Kyoto Protocol compliance costs might be, a subject that is not part of the IPCC process at all, while most attention on the IPCC process has been directed to narrowing the uncertainties of the climate models themselves. An independent economic analysis of the front end of the climate change process would be a useful starting point for finance ministries or a Team B to enter the fray.

Notes

1. Chris Landsea, "Why I Must Resign," Canada's *Financial Post*, January 20, 2005.

2. Kevin Trenberth is a meteorologist with the National Center for Atmospheric Research.

3. Critics of the bloody crossroads of science and politics are fond of recurring to Stephen Schneider's incautious statement: "On the one hand, as scientists we are ethically bound to the scientific method. . . . On the other hand, we are not just scientists but human beings as well. . . . To avert the risk [of potentially disastrous climate change] we need to get some broad based support, to capture the public imagination. That of course means getting loads of media coverage. So we have to offer up some scary scenarios, make simplified dramatic statements and little mention of any doubts one might have. . . . Each of us has to decide what the right balance is between being effective, and being honest. I hope that means being both." From Jonathan Schell, "Our Fragile Earth," *Discover* (October 1989): 47.

4. Chris Landsea, "Why I Must Resign."

5. Richard Lindzen, "Climate Alarm: Where Does It Comes From?" remarks to the George C. Marshall Institute, December 1, 2004, available at http://www.marshall.org/article.php?id=264.

6. J. W. Zillman, *Bulletin of the Australian Meteorological and Oceanographic Society* 16, no. 85 (2003).

7. Quote appeared in the Danish newspaper *Iyllandposten*, April 21, 2004; see Iain Murray, "Adolf Lomborg?" available at http://www.techcentralstation.com/051104C.html.

8. For example, the original draft of the 2001 IPCC "Summary for Policy Makers" read as follows: "From the body of evidence since IPCC (1996), we conclude that there has been a discernible human influence on global climate. Studies are beginning to separate the contributions to observed climate change attributable to individual external influences, both anthropogenic and natural. This work suggests that anthropogenic greenhouse gases are a substantial contributor to the observed warming, especially over the past 30 years. However, the accuracy of these estimates continues to be limited by uncertainties in estimates of internal variability, natural and anthropogenic forcing, and the climate response to external forcing." This wording was changed to: "In the light of new evidence and taking into account the remaining uncertainties, most of the observed warming over the last 50 years is likely to have been due to the increase in greenhouse gas concentrations."

9. "Surely no failure of American intelligence," wrote Angelo Codevilla, a former senior staff member of the Senate Intelligence Committee during the 1970s, "compares in seriousness to this NIE's [National Intelligence Estimate] misprision of the size, scope, and purpose of Soviet strategic forces between 1965 and 1979." From Angelo Codevilla, *Informing Statecraft: Intelligence for a New Century* (New York: Free Press, 1992), 223.

10. The story is ably told by Richard Pipes, "Team B: The Reality Behind the Myth," *Commentary* (October 1986).

11. Committee on the Science of Climate Change of the National Research Council, *Climate Change Science: An Analysis of Some Key Questions* (Washington, D.C.: National Academy Press, 2001).

12. Ibid., 22–23.

13. Further information is available at www.usgcrp.gov and www.climatescience.gov.

14. As *The Economist* magazine put the question: "You might think that a policy issue which puts at stake hundreds of billions of dollars of global output would arouse at least the casual interest of the world's economic and finance ministries. You would be wrong." From "Hot Potato Revisited," *The Economist* (November 8, 2003): 96.

15. Henderson made this recommendation at an AEI conference last November (see www.aei.org/eventsummary939), and more recently to an inquiry of the British House of Lords.

16. See Ian Castles and David Henderson, "The IPCC Emission Scenarios: An Economic-Statistical Critique," *Energy and Environment* 14, no. 2 (2003): 159–185; and Ian Castles and David Henderson, "Economics, Emissions Scenarios and the Work of the IPCC," *Energy and Environment* 14, no. 4 (2003): 415–435, available at http://miranda.ingentaselect.com/vl=2058055/cl=146/nw=1/rpsv/cw/mscp/0958305x/contp1.htm. The IPCC responded in several articles: Nebojsa Nakicenovic, et al., "IPCC SRES Revisited: A Response," *Energy and Environment* 14, no. 2 (2003): 187–214, available at http://miranda.ingentaselect.com/vl=2058055/cl=146/nw=1/rpsv/cw/mscp/0958305x/v14n2/s5/p187; and Arnulf Grübler, et al., "Emissions Scenarios: A Final Response," *Energy and Environment* 15, no. 1 (2004): 1–11, available at http://thesius.ingentaselect.com/vl=5780684/cl=26/nw=1/rpsv/cw/mscp/0958305x/v15n1/s3/p11.

17. A toned-down version of the IPCC's press release is available at http://www.ipcc.ch/press/pr08122003.htm.