IPCC report criticized by one of its lead authors

Politics, not science, drives the United Nations' work on climate change, warns Dr. Richard Lindzen, one of the world's leading atmospheric physicists

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The Third Assessment Report (TAR) of the United Nations' Intergovernmental Panel on Climate Change (IPCC), expected to be released sometime in 2001, is already coming under heavy criticism from various directions. But none has been more devastating than the one delivered on March 1 by one of the report's lead authors.

Dr. Richard S. Lindzen, the Alfred P. Sloan professor of meteorology at the Massachusetts Institute of Technology and one of the world's leading atmospheric scientists, told a standing-room only audience at a briefing sponsored by the Cooler Heads Coalition in the U.S. Senate Environment Committee Room, that the IPCC process is driven by politics rather than science.

What are some of the problems with the IPCC process, according to Lindzen? It uses summaries to misrepresent what scientists say. It uses language that means different things to scientists and laymen. It exploits public ignorance over quantitative matters. It exploits what scientists can agree on, while ignoring disagreements, to support the global warming agenda. And it exaggerates scientific accuracy and certainty and the authority of undistinguished scientists.

No consensus here

The "most egregious" problem with the IPCC's forthcoming report, said Lindzen, "is that it is presented as a consensus that involves hundreds, perhaps thousands, of scientists . . . and none of them was asked if they agreed with anything in the report except for the one or two pages they worked on."

Indeed, most press accounts covering the January release of the TAR's "Summary for Policymakers" characterized the report as the work of 2,000 (3,000 in some instances) of the world's leading climate scientists. IPCC's emphasis, however, isn't on getting qualified scientists, but on getting representatives from over 100 countries, said Lindzen. The truth is only a handful of countries do quality climate research. Most of the so-called experts served merely to pad the numbers.

"It is no small matter," said Lindzen, "that routine weather service functionaries from New Zealand to Tanzania are referred to as 'the world's leading climate scientists.' It should come as no surprise that they will be determinedly supportive of the process."

The IPCC clearly uses the Summary for Policymakers to misrepresent what is in the report, said Lindzen. He gave an example from the chapter he worked on, chapter 7, addressing physical processes.

The 35-page chapter, said Lindzen, pointed out many problems with the way climate computer models

treat specific physical processes, such as water vapor, clouds, ocean currents, and so on. Clouds and water vapor in clouds, for example, are badly misrepresented in the models. The physics are all wrong, he said. Those things the models do well are irrelevant to the all-important feedback effects.

"The treatment of water vapor in clouds is crucial to models producing a lot of warming," explained Lindzen. "Without them [positive feedbacks], no model would produce much warming."

The IPCC summarizes the 35-page chapter in one sentence: "Understanding of climate processes and their incorporation in climate models have improved, including water vapor, sea dynamics and ocean heat transport."

That, said Lindzen, does not summarize the chapter at all. "That is why a lot of us have said that the document itself is informative; the summary is not."

Lindzen briefly discussed a paper he published in the March 2001 issue of the Bulletin of the American Meteorological Society, clarifying the water vapor feedback issue. Using detailed daily measurements, Lindzen and his coauthors from NASA showed that cloud cover in the tropics diminishes as temperatures rise, cooling the planet by allowing more heat to escape.

"The effect observed," said Lindzen, "is sufficient such that if current models are absolutely correct, except for missing this, models that predict between 1.5 and 4.5 degrees warming go down to about .4 to 1.2 degrees warming."

Not the way science is done

The IPCC claims its report is peer-reviewed, which simply isn't true, Lindzen said. Under true peer-review, he explained, a panel of reviewers must accept a study before it can be published in a scientific journal. If the reviewers have objections, the author must answer them or change the article to take reviewers' objections into account.

Under the IPCC review process, by contrast, the authors are at liberty to ignore criticisms. After having his review comments ignored by the IPCC in 1990 and 1995, Lindzen asked to have his name removed from the list of reviewers. The group refused.

The IPCC has resorted to using scenario-building in its policymakers' summary to paint a frightening picture not supported by the science, Lindzen charged. Ignoring the science allows the IPCC to build a scenario, for example, that assumes man will burn 300 years' worth of coal in 100 years. They plug that into the most sensitive climate model available and arrive at a truly frightening global warming scenario.

"People wouldn't normally take that very seriously," said Lindzen, "but I think the IPCC understands the media will report the top number. I don't think, any longer, that this is unintentional."

The IPCC also exploits what scientists do agree on to support its agenda, according to Lindzen. For example, Lindzen said, scientists can more-or-less live with the idea conveyed in the IPCC report that everything is connected to everything else, and everything is uncertain.

Lindzen himself doesn't think these ideas are particularly reasonable. But politicians and environmentalists take this minimal area of agreement, and then claim that anything can cause anything and we must act to stop it.

Scientists agree, for example, that atmospheric concentrations of greenhouse gases have increased over the last 100 years. They also generally agree the climate has warmed slightly. Uncertainties remain, however, regarding even those basic propositions. Contrary to the impression given by the IPCC, there is no widespread agreement on what these two "facts" mean for mankind. Yet they are deemed by the

IPCC sufficient to justify precipitous action.

Fun with numbers

Perhaps Lindzen's most devastating critique is aimed at the IPCC's use of statistics.

The IPCC's infamous hockey stick graph, for example, shows global temperatures have been stable or falling over the last 1,000 years, and that only in the industrial age has there been an unnatural warming of the planet. But if you look at the margin of error in that graph, "You can no longer maintain that statement," said Lindzen.

Lindzen also noted the margin of error used in the IPCC report is much smaller, a 60 percent confidence level, than traditionally used by scientists, who generally report results at the 95 or even 99 percent confidence level. The IPCC is thus publicizing results much less likely to be correct than scientific research is generally expected to be.

To illustrate his point, Lindzen showed estimates of some of the most precise numbers in physics with their error bars. He showed different measurements of the speed of light, for instance, from 1929 to the 1980s. The error bars for the estimated speed of light in 1932 and 1940 do not even include the value we think is the correct speed of light today. "Error bars should not be taken lightly," warned Lindzen. "There is genuine uncertainty in them."

Incentives matter

"Scientists are human beings," Lindzen concluded, "subject to normal instincts and weaknesses." They respond to incentives just like everyone else. "Current government funding creates incentives to behave poorly by maintaining the relevance of the subject," he said, noting that on some issues financial support for science depends on "alarming the world."

Indeed, Lindzen noted, Mario Molina and Sherwood Rowland were awarded the 1995 Nobel Prize in chemistry for their work on ozone depletion--not for alerting the world, but for "alarming" it. "You don't want scientists to get hooked on this as the key to fame and glory," he warned.

There's little doubt, Lindzen said, that the IPCC process has become politicized to the point of uselessness. He advised U.S. policymakers simply to ignore it.