

Predictions by climate models are flawed, says invited speaker at Sandia

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(Phys.org) -- Massachusetts Institute of Technology professor Richard Lindzen, a global warming skeptic, told about 70 Sandia researchers in June that too much is being made of climate change by researchers seeking government funding. He said their data and their methods did not support their claims.

“Despite concerns over the last decades with the greenhouse process, they oversimplify the effect,” he said. “Simply cranking up CO₂ [carbon dioxide] (as the culprit) is not the answer” to what causes climate change.

In an effort to shed light on the wide spectrum of thought regarding the causes and extent of changes in Earth’s climate, Sandia National Laboratories has invited experts from a wide variety of perspectives to present their views in the Climate Change and National Security Speaker Series.

Lindzen, the ninth speaker in Sandia’s Climate Change and National Security Speaker Series, is Alfred P. Sloan professor of meteorology in MIT’s department of earth, atmospheric and planetary sciences. He has published more than 200 scientific papers and is the lead author of Chapter 7 (“Physical Climate Processes and Feedbacks”) of the International Panel on Climate Change’s (IPCC) Third Assessment Report. He is a member of the National Academy of Sciences and a fellow of the American Geophysical Union and the American Meteorological Society.

For 30 years, climate scientists have been “locked into a simple-minded identification of climate with greenhouse-gas level. ... That climate should be the function of a single parameter (like CO₂) has always seemed implausible. Yet an obsessive focus on such an obvious oversimplification has likely set back progress by decades,” Lindzen said.

For major climates of the past, other factors were more important than carbon dioxide. Orbital variations have been shown to quantitatively account for the cycles of glaciations of the past 700,000 years, he said, and the elimination of the arctic inversion, when the polar caps were ice-free, “is likely to have been more important than CO₂ for the warm episode during the Eocene 50 million years ago.”

There is little evidence that changes in climate are producing extreme weather events, he said. “Even the IPCC says there is little if any evidence of this. In fact, there are important physical reasons for doubting such anticipations.”

Lindzen’s views run counter to those of almost all major professional societies. For example, the American Physical Society statement of Nov. 18, 2007, read, “The evidence is incontrovertible: [Global warming](#) is occurring.” But he doesn’t feel they are necessarily right. “Why did the American Physical Society take a position?” he asked his audience. “Why did they find it compelling? They never answered.”

Speaking methodically with flashes of humor — “I always feel that when the conversation turns to weather, people are bored.” — he said a basic problem with current computer climate models that show disastrous increases in temperature is that relatively small increases in atmospheric gases lead to large changes in temperatures in the models.

But, he said, “predictions based on high (climate) sensitivity ran well

ahead of observations.”

Real-world observations do not support IPCC models, he said: “We’ve already seen almost the equivalent of a doubling of CO₂ (in radiative forcing) and that has produced very little warming.”

He disparaged proving the worth of models by applying their criteria to the prediction of past climatic events, saying, “The models are no more valuable than answering a test when you have the questions in advance.”

Modelers, he said, merely have used aerosols as a kind of fudge factor to make their models come out right. (Aerosols are tiny particles that reflect sunlight. They are put in the air by industrial or volcanic processes and are considered a possible cause of temperature change at Earth’s surface.)

Then there is the practical question of what can be done about temperature increases even if they are occurring, he said. “China, India, Korea are not going to go along with IPCC recommendations, so ... the only countries punished will be those who go along with the recommendations.”

He discounted mainstream opinion that climate change could hurt national security, saying that “historically there is little evidence of natural disasters leading to war, but economic conditions have proven much more serious. Almost all proposed mitigation policies lead to reduced energy availability and higher energy costs. All studies of human benefit and national security perspectives show that increased energy is important.”

He showed a graph that demonstrated that more energy consumption leads to higher literacy rate, lower infant mortality and a lower number of children per woman.

Given that proposed policies are unlikely to significantly influence climate and that lower energy availability could be considered a significant threat to national security, to continue with a mitigation policy that reduces available energy “would, at the least, appear to be irresponsible,” he argued.

Responding to audience questions about rising temperatures, he said a 0.8 of a degree C change in temperature in 150 years is a small change. Questioned about five-, seven-, and 17-year averages that seem to show that Earth’s surface temperature is rising, he said temperatures are always fluctuating by tenths of a degree.

As for the future, “Uncertainty plays a huge role in this issue,” Lindzen said. “It’s not that we expect disaster, it’s that the uncertainty is said to offer the possibility of disaster: implausible, but high consequence. Somewhere it has to be like the possible asteroid impact: Live with it.”

To a sympathetic questioner who said, “You are like a voice crying in the wilderness. It must be hard to get published,” Lindzen said, adding that billions of dollars go into funding [climate](#) studies. “The reward for solving problems is that your funding gets cut. It’s not a good incentive structure.”

Asked whether the prudent approach to possible [climate change](#) would be to prepare a graduated series of responses, much as insurance companies do when they insure cars or houses, Lindzen did not shift from his position that no actions are needed until more data is gathered.

When another Sandia employee pointed out the large number of models by researchers around the globe that suggest increases in world temperature, Lindzen said he doubted the models were independently derived but rather might produce common results because of their common origins.

Provided by Sandia National Laboratories

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