

Climate Change, 2007

M. H. Saier Jr.

Published online: 15 March 2007
© Springer Science + Business Media B.V. 2007

On February 2, 2007, the Intergovernmental Panel on Climate Change (IPCC) released a 21-page report, updating the one previously released in 2001. This report represents the consensus views of 2,500 top scientists and policy makers concerned with all aspects of global warming. These people derive from 130 nations, representing many diverse views, values and concerns. Yet they are unified by the overwhelming evidence concerning climate change. The report blames humans for the global warming “runaway train,” and this conclusion has now been stated with much greater certainty than ever before. Officials in the United Nations and elsewhere have issued statements to the effect that: “The debate about global warming and its causes is now over. It’s time to act.”

In previous years, the most significant effort to curb greenhouse gas emissions in developed countries was the Kyoto Protocol. The implementation of this accord has been thwarted by the resilience of the U.S. and Australian governments to agree to abide by it. Additionally, increased CO₂ production by developing countries such as India and China has resulted in very substantial increases in worldwide CO₂ production rather than the hoped for decline. The report notes that temperatures could easily increase 7°F and

cause an ocean rise of two feet by the end of this century. The former would cause a huge shift in precipitation patterns and ocean currents while the latter would displace over 300 million people who live near the coasts, forcing them to abandon their homes.

In response to the report, former U.S. Vice President Al Gore, a long-time champion of environmental protection, said, “The degree of certainty, which was already very high, is now as close to certainty as scientists are willing to say.” However, Bush administration officials downplayed the U.S. contribution to global warming. Samuel Bodman, energy secretary under Bush said, “We are a small contributor when you look at the rest of the world.” Yet, the U.S. is, in fact, the single largest contributor to global warming, producing more than 25% of the world’s CO₂ in spite of its relatively small population, only 4.5% of the total. Compare these figures with those of China, which with 20% of the world’s population produces 14.5% of the CO₂. Americans should be careful not to point the finger at others when they themselves are at fault.

The 2007 IPCC report notes that while the data keep improving, and certainty is now essentially absolute, scientists have known for years what is at stake. The last 6 years have been among the seven hottest years in recorded history, and 2007 is likely to be the hottest of all. The last time the polar regions were warmer for an extended period of time was

M. H. Saier Jr. (✉)
Biological Sciences, University of California at San Diego,
La Jolla, CA 92093-0116, USA
e-mail: msaier@ucsd.edu

roughly 125,000 years ago. That warming was caused by a change in the Earth's orbit. Yet no such orbital change accounts for the current warming. The panel concluded that human activities largely, and possibly entirely, are responsible.

The immediate and long-term consequences of global warming will be droughts, heat waves, a retreat of the polar caps and more intense hurricanes. In another hundred years, as much as half of Florida and Louisiana may be under water. Particularly in the U.S. Southwest, higher temperatures with less rainfall and loss of the water supply from snow packs in the Rocky Mountains could be devastating. Changing conditions will create a desert climate for the millions of people who live in these regions. All of the tropical and subtropical parts of the globe will also become dryer. The probable consequences will be: "The fire next time."

Recent scientific projections indicate that the rate of species extinction, currently 25,000 times the natural rate in the absence of human activities, is accelerating. By 2050 at least one-quarter of all living species currently on Earth will be extinct. A major part of this loss is attributed to global warming. Moreover, recent reports indicate that man-made

greenhouse gas production has increased as much as four fold within the past 10 years. Our problem is compounded every year, and no one is really doing anything about it. If this trend continues, the projections of the 2007 IPCC report will have substantially underestimated the dire consequences of our activities.

Referring to the 2007 report, Moira Chapin of *Environment California* remarked, "Sections of the report read like the Book of Revelations." Yuo de Boer of the U.N. noted that "The findings leave no doubt as to the dangers that mankind is facing. They must be acted upon without delay." French President Jacques Chiroc echoed these words saying, "Now is not the time for half measures. We are in truth on the historic doorstep of the irreversible." But Bodman, representing the American government, said that the U.S. would not cap emissions because that might lead to transfer of jobs and industries abroad. This from a government that provided a huge rebate for hummer buyers while cutting funding for research on renewable energy. Some officials just cannot, or do not want to, comprehend the magnitude and importance of the problem. And the consequences will be suffered throughout the entire world.