

BRIEF ANALYSIS

No. 230

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Myths of Global Warming

The Clinton administration has decided to commit the United States to finalizing a treaty in December 1997 that would impose legally binding, internationally enforceable limits on the production of greenhouse gases, primarily carbon dioxide (CO₂). That decision was based on the belief that global warming is significant, that humans are its primary cause and that only immediate government action can avert disaster.

Yet there is no scientific consensus that global warming is a problem or that humans are its cause. Even if current predictions of warming are correct, delaying drastic government actions by up to 25 years will make little difference in global temperature 100 years from now. Proposed treaty restrictions would do little environmental good and great economic harm. By contrast, putting off action until we have more evidence of human-caused global warming and better technology to mitigate it is both environmentally and economically sound.

Much of the environmental policy now proposed is based on myths. Let's look at the four most common.

Myth #1: Scientists Agree the Earth Is Warming. While ground-level temperature measurements suggest the earth has warmed between 0.3 and 0.6 degrees Celsius since 1850, global satellite data, the most reliable of climate measurements, show no evidence of warming during the past 18 years. [See Figure I.] Even if the earth's temperature has increased slightly, the increase is well within the natural range of known temperature variation over the last 15,000 years. Indeed, the earth experienced greater warming between the 10th and 15th centuries — a time when vineyards thrived in England and Vikings colonized Greenland and built settlements in Canada.

Myth #2: Humans Are Causing Global Warming. Scientists do not agree that humans discernibly influence global climate because the evidence supporting that theory is weak. The scientific experts most directly

concerned with climate conditions reject the theory by a wide margin.

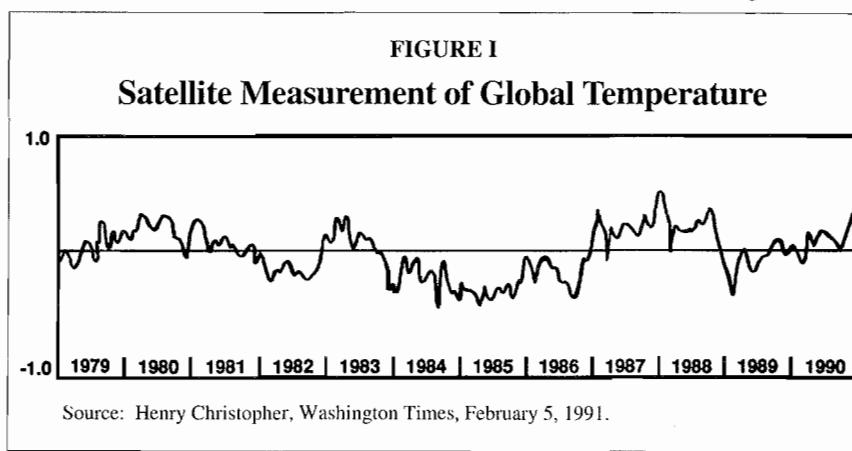
- A Gallup poll found that only 17 percent of the members of the Meteorological Society and the American Geophysical Society think that the warming of the 20th century has been a result of greenhouse gas emissions — principally CO₂ from burning fossil fuels. [See Figure II.]
- Only 13 percent of the scientists responding to a survey conducted by the environmental organization Greenpeace believe catastrophic climate change will result from continuing current patterns of energy use.

■ More than 100 noted scientists, including the former president of the National Academy of Sciences, signed a letter declaring that costly actions to reduce greenhouse gases are not justified by the best available evidence.

While atmospheric carbon dioxide has increased by 28 percent over the past 150 years, human-generated carbon dioxide could have played only a small part in any warming, since most of the warming occurred prior to 1940 — before most human-caused carbon dioxide emissions.

Myth #3: The Government Must Act Now to Halt Global Warming. The belief underlying this myth is that the consequences of near-term inaction could be catastrophic and, thus, prudence supports immediate government action.

However, a 1995 analysis by proponents of global warming theory concluded that the world's governments can wait up to 25 years to take action with no appreciable negative effect on the environment. T.M.L. Wigley, R. Richels and J.A. Edmonds followed the common scientific assumption that a realistic goal of global warming policy would be to stabilize the concentration of atmospheric CO₂ at approximately twice preindustrial levels, or 550 parts per million by volume. Given that economic growth will continue with a concomitant rise in greenhouse gas emissions, the scientists agreed that stabilization at this level is environmentally sound as well as



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politically and economically feasible. They also concluded that:

- Governments can cut emissions now to approximately 9 billion tons per year or wait until 2020 and cut emissions by 12 billion tons per year.
- Either scenario would result in the desired CO₂ concentration of 550 parts per million.
- Delaying action until 2020 would yield an insignificant temperature rise of 0.2 degrees Celsius by 2100.

In short, our policymakers need not act in haste and ignorance. The government has time to gather more data, and industry has time to devise new ways of reducing greenhouse gas emissions.

Myth #4: Human-Caused Global Warming Will Cause Cataclysmic Environmental Problems. Proponents of the theory of human-caused global warming argue that it is causing and will continue to cause all manner of environmental catastrophes, including higher ocean levels and increased hurricane activity. Reputable scientists, including those working on the Intergovernmental Panel on Climate Change (IPCC), the United Nations organization created to study the causes and effects of global climate warming, reject these beliefs.

Sea levels are rising around the globe, though not uniformly. In fact, sea levels have risen more than 300 feet over the last 18,000 years — far predating any possible human impact. Rising sea levels are natural in between ice ages. Contrary to the predictions of global warming theorists, the current rate of increase is slower than the average rate over the 18,000-year period.

Periodic media reports link human-caused climate changes to more frequent tropical cyclones or more intense hurricanes. Tropical storms depend on warm ocean surface temperatures (at least 26 degrees Celsius) and an unlimited supply of moisture. Therefore, the reasoning goes, global warming leads to increased ocean surface temperatures, a greater uptake of moisture and

destructive hurricanes. But recent data show no increase in the number or severity of tropical storms, and the latest climate models suggest that earlier models making such connections were simplistic and thus inaccurate.

- Since the 1940s the National Oceanographic and Meteorological Laboratory has documented a decrease in both the intensity and number of hurricanes.
- From 1991 through 1995, relatively few hurricanes occurred, and even the unusually intense 1995 hurricane season did not reverse the downward trend.
- The 1996 IPCC report on climate change found a worldwide significant increase in tropical storms unlikely; some regions may experience increased activity while others will see fewer, less severe storms.

Since factors other than ocean temperature such as wind speeds at various altitudes seem to play a larger role than scientists previously understood, most agree that any regional changes in hurricane activity will continue to occur against a backdrop of large yearly natural variations.

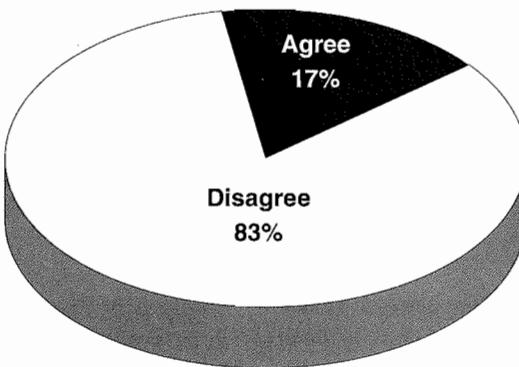
What about other effects of warming? If a slight atmospheric warming occurred, it would primarily affect nighttime temperatures, lessening the number of frosty nights

and extending the growing season. Thus some scientists think a global warming trend would be an agricultural boon. Moreover, historically warm periods have been the most conducive to life. Most of the earth's plant life evolved in a much warmer, carbon dioxide-filled atmosphere.

Conclusion. As scientists expose the myths concerning global warming, the fears of an apocalypse should subside. So rather than legislating in haste and ignorance and repenting at leisure, our government should maintain rational policies, based on science and adaptable to future discoveries.

This Brief Analysis was prepared by H. Sterling Burnett, environmental policy analyst with the National Center for Policy Analysis.

FIGURE II
Do Scientists Think Human Actions Are Causing Global Warming?



Source: Gallup poll of the Meteorological Society and the American Geophysical Society.