

Could global warming even be beneficial?

A controversial challenge to conventional thought

While US government officials have declared repeatedly that global climate change science is "settled" and "compelling", a report released by the Center for the Study of American Business at Washington University, finds that increased global warming is likely to be minor and could even be beneficial.

In *What Do We Know About Human Influence on Climate Change?*, atmospheric physicist S. Fred Singer reviews the state of climate change research and makes the following findings:

- 1) Any warming from the growth of greenhouse gases is likely to be minor, and, thus, difficult to detect above the natural fluctuations of the climate.
- 2) The impacts of global warming, and of higher CO₂ levels, are likely to be beneficial for human activities – especially agriculture.
- 3) The ultimate goal of the 1997 Kyoto Protocol on global climate change is still undefined; it could be a higher or lower level of greenhouse gas emissions.
- 4) The Kyoto Protocol, while economically harmful, would be ineffective in reducing the calculated temperature increase.

The most widely quoted attempt to address climate changes of the past and to speculate about the future, is the series of reports produced by the United Nations Intergovernmental Panel on Climate Change (IPCC). In its most recent report, the IPCC arrived at the ambiguous conclusion that "the balance of evidence suggests there is a discernible human influence on global climate."

Dr. Singer notes in the CSAB report that there must be a human influence on some features of the climate, locally, if not globally. The important question is whether the available evidence supports the results of general circulation models (GCMs). Unless validated, Singer warns, the predictions of future global warming based on these models cannot be relied on.

The Earth's climate has never been steady; it has either warmed or cooled without any human intervention. The measured temperature variations have often been large and rapid – larger and more rapid than those predicted by cli-

mate models for the year 2100. In the last 3,000 years, temperatures in the North Atlantic have changed by as much as 3°C within a few decades. During the most recent Ice Age, the variability was even greater. "Is the climate more stable during warmer periods? We cannot be sure, but the evidence points in this direction," Singer says.

The CSAB study reports that longer-term climate changes seem to be linked to continental drift and other tectonic events. Shorter variations, on the time scale of decades, appear to be caused by atmosphere-ocean interactions and changes in ocean circulation. Alternatively, they could be due to external causes, such as the slight variations in the general solar irradiance (the so-called solar "constant") or in the highly variable solar activity. But for reasons as yet unexplained, the rate of increase of greenhouse gases in the atmosphere has *slowed* considerably in the last decade or so. "Perhaps the strongest argument against an appreciable human contribution comes from the observed cooling between 1940 and 1975 and the lack of warming since 1979 (in the weather balloon and satellite data)," Dr. Singer says.

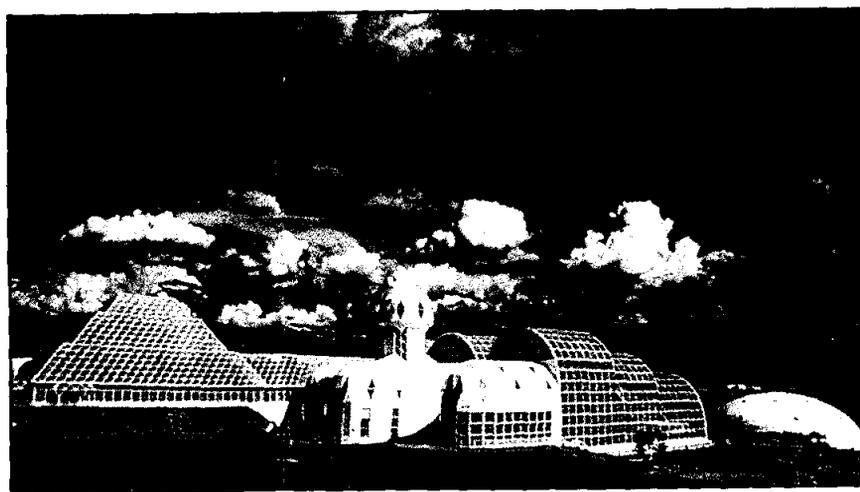
Climate catastrophists warn that global climate change will result in in-

creased frequency and severity of storms and a rapid rise in sea levels. But Dr. Singer notes: "The empirical evidence displayed in the IPCC report shows a *decline* in hurricanes over the last 50 years in both frequency and intensity." In addition, sea-level rise is found to slow during periods of temperature increases, suggesting that a future modest warming should slow down, not accelerate, the ongoing rise of sea levels.

The CSAB study concludes that the 1997 Kyoto Protocol (calling for an average cut in greenhouse gas emissions of 5.2 percent from 1990 levels by industrialized nations by the year 2010) is not sufficient to reduce significantly the growth of greenhouse gases in the atmosphere; therefore, its effect on temperature would be imperceptible. Further, a warming, from whatever cause, is more likely to produce economic benefits than economic losses.

The Center for the Study of American Business is a nonprofit research organization at Washington University in St. Louis, that conducts scholarly research on issues affecting the American business system. S. Fred Singer, Ph.D., is an atmospheric physicist and professor emeritus of environmental sciences at the University of Virginia.

A different point of view....



Biosphere 2 in Arizona's Sonoran Desert. Photo - Volvo.

When I attended a seminar at Biosphere 2, the prevailing evidence presented supported global warming theories. The Biosphere, in the Sonoran Desert, is managed by Columbia University. It was our cover story in June 1998. – Tom Davey