

Another View On Climate Change

NIPCC Findings Contradict U.N. Report

Editor's Note: The following is the first of two parts on the science and policy of climate change. In part two, which will run in the September issue of *The American Oil & Gas Reporter*, the author will analyze current and proposed U.S. policies.

By S. Fred Singer

ARLINGTON, VA.—There has been increasing concern about global climate change on the part of the media, politicians and the public, stimulated by the idea that human activities may adversely influence global climate, and that government action is required to address this

"problem."

My purpose is to show this concern is misplaced, that human activities are not influencing global climate in a significant way, and that in any case, very little can be done about global climate. We should not waste scarce resources in trying to influence it. Climate will continue to change—as it always has—both warming and cooling on different time scales and for different reasons, completely unrelated to any human action. I will also argue that, should it occur, a modest warming on the whole is beneficial.

The evidence for these claims is based entirely on peer-reviewed scientific publications and is presented in the report,

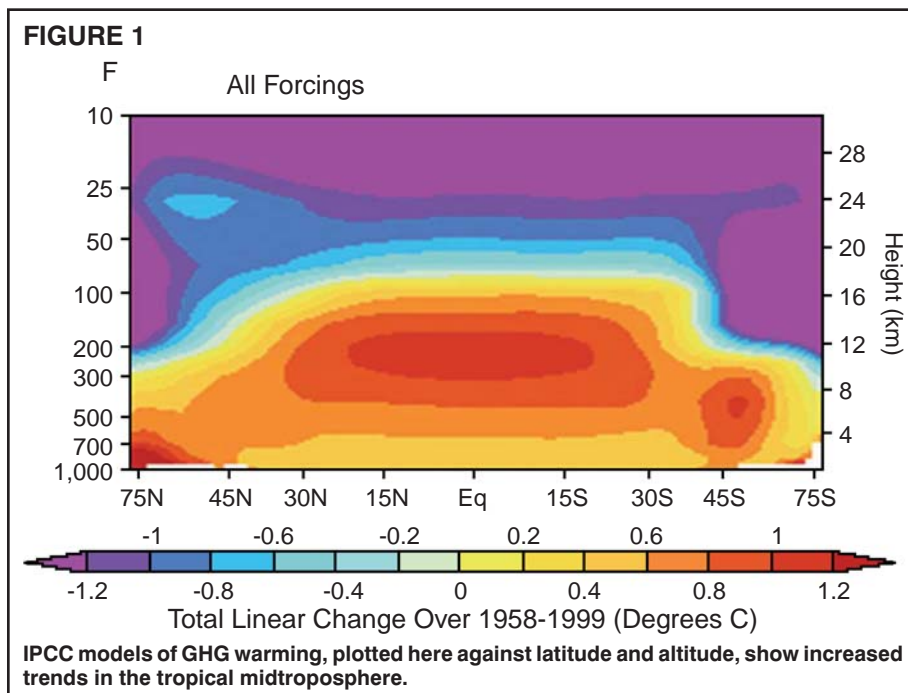
Nature—Not Human Activity—Rules the Climate, which is available at http://www.sepp.org/publications/NIPCC_final.pdf. This report, published in March 2008, was produced by a team of nearly 30 climate scientists from 16 nations, organized as the Nongovernmental International Panel on Climate Change (NIPCC).

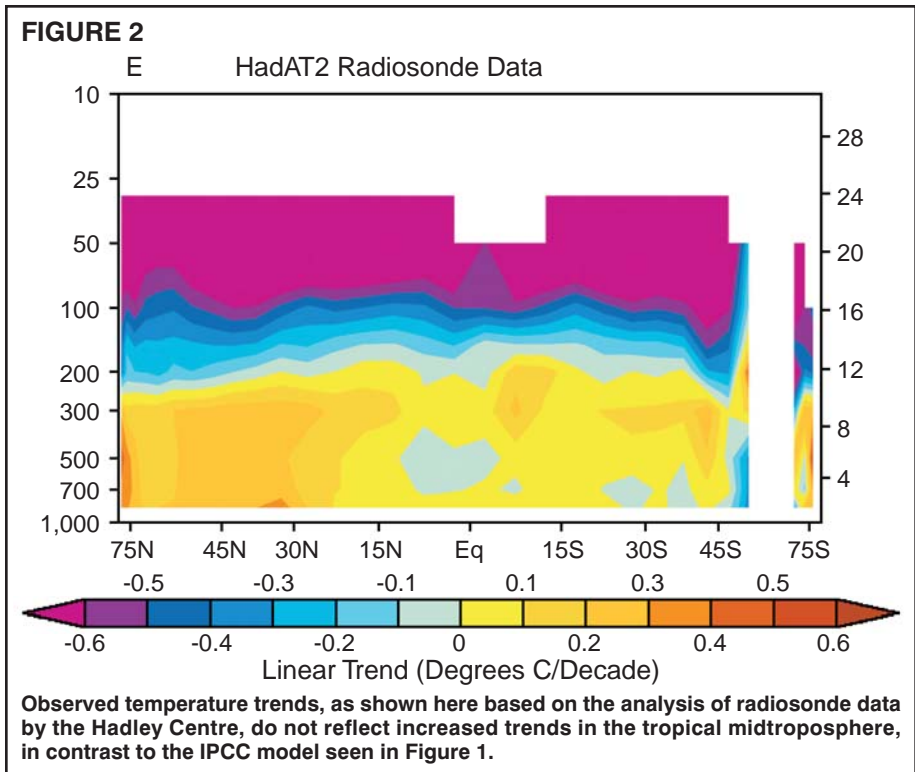
The NIPCC conclusions contradict directly those of the United Nation's Intergovernmental Panel on Climate Change, which claim near certainty for anthropogenic global warming (AGW) caused by the emission of greenhouse gases from generating and using energy. The NIPCC report shows that the evidence for AGW is not credible, and presents convincing evidence against AGW and for natural causes of climate change.

So the science appears to be settled, although not in the way Al Gore has been asserting. Carbon dioxide is not a pollutant.

There is, however, a serious problem. In the mistaken idea that something needs to be done to "combat global warming" and "save the climate," policies are arising that have the potential to distort energy decisions, and thereby severely damage national economies, make us poorer, and hurt standards of living.

This misdirection of resources will adversely affect human health and welfare in industrialized nations, and especially in developing nations. It can lead to social tensions within nations and to conflict between nations. If it was not for this potential of inflicting serious economic damage, one might consider the concern about climate change nothing more than another fad or a temporary human aberration. But once it affects energy policy, it becomes essential to understand the is-





That is an interesting correlation, but it doesn't establish a cause/effect relationship. During much of the last century, the climate cooled while CO₂ levels rose. And we should note that climate has not warmed in the past eight years, even though greenhouse gas levels have increased rapidly.

Many climate scientists, including those who worked on the United Nations' Intergovernmental Panel on Climate Change, have pointed out that computer models all show a global temperature increase. But the two dozen or so major GHG models give warming rates that differ by a factor three or more, depending on the assumptions fed into the model. So any agreement with observed rates of increase would be fortuitous and is unconvincing.

In its Third Assessment Report (2001), the IPCC claimed that the 20th century was the warmest in 1,000 years, supported by an analysis of proxy data (mainly from tree rings). Unfortunately for the IPCC, this hockey stick-shaped graph was based on a spurious statistical analysis and shown to be in error.

In its most recent report (2007), the IPCC claims that the global surface temperature of the 20th century can be reproduced by models that combine natural and anthropogenic climate-forcing factors. But as is discussed in the NIPCC report, this attempt turns out to be nothing more than an exercise in "curve-fitting" with the use of suitably chosen parameters.

We therefore conclude that there is no credible evidence whatsoever to support the IPCC's conclusion of anthropogenic

sue to avoid inflicting any severe societal harm.

Global Warming Is Natural

The most fundamental question of all is scientific: Is the observed warming of the past 30 years the result of natural causes or are human activities a contributing or even a main factor?

At first glance, it is quite plausible that humans are warming the climate. After all, burning fossil fuels to generate energy releases large quantities of carbon dioxide. Its atmospheric level has been increasing steadily since the beginning of the Industrial Revolution and is now 35 percent higher than it was 200 years ago. Also, we know from direct measurements that CO₂ is a greenhouse gas, which strongly absorbs infrared (heat) radiation. So the idea that burning fossil fuels causes an enhanced greenhouse effect needs to be taken seriously.

The issue then becomes one of numbers. How important is this human greenhouse effect in relation to natural factors that can warm the climate, much as they did in the past without any human presence? For example, the geologic record shows a persistent cycle of warming and cooling of about 1,500 years length, extending back at least 1 million years.

The basic problem then is how to tell the cause of warming.

Many politicians simply appeal to an imagined "scientific consensus." There are two things wrong with that. First, there is no scientific consensus; and sec-

ond, that is not how science works. Every scientific advance comes from a minority—sometimes a single person—of scientists who do not go along with the majority view. Think of Galileo or Einstein.

But aren't glaciers melting, and isn't sea ice shrinking? Yes, but that is not proof for human-caused warming. Any kind of warming, whether natural or anthropogenic, will melt ice. To claim that melting glaciers prove a human effect is bad logic.

What about the fact that CO₂ levels are increasing along with temperatures?

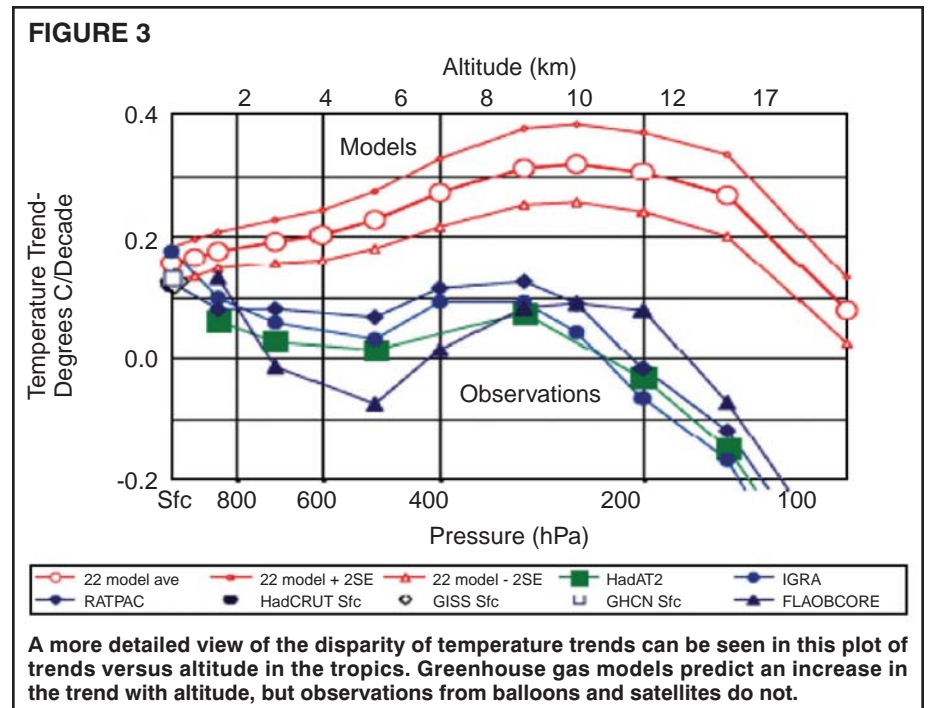
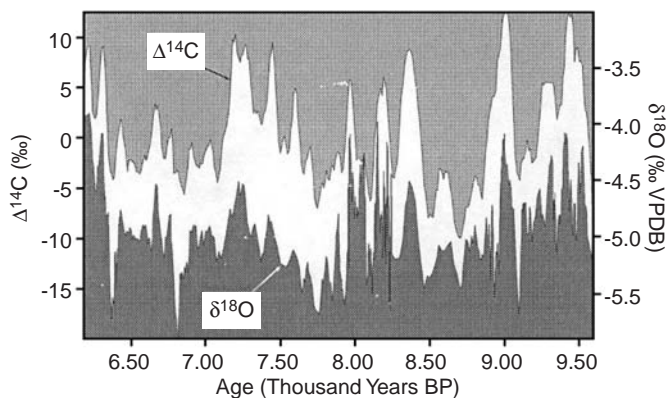


FIGURE 4A

Values of carbon-14 (produced by cosmic rays, hence a proxy for solar activity) correlate extremely well with oxygen-18 (climate proxy) in data from a stalagmite in Oman. The time interval in Figure 4A runs from about 9,600 years to 6,200 years before present (BP).

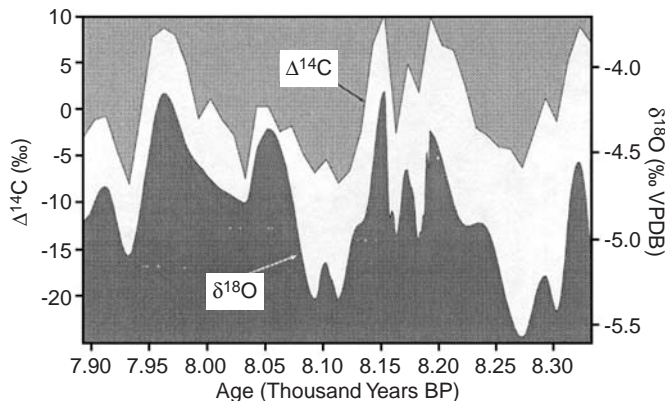
FIGURE 4B

Figure 4B shows a particularly well-resolved time interval from 8,350 to 7,900 years BP. It would be difficult to explain this detailed correlation except through the modulation of galactic cosmic rays by changes in solar wind and magnetic activity.

warming.

The Fingerprint Method

Fortunately, there is a generally agreed-to method that can be used to check whether the observed warming is anthropogenic. It relies on comparing the observed pattern of warming with the one calculated from GHG models. Essentially, we try to see if the “fingerprints” match.

The fingerprint is the pattern of warming; that is, the rate of warming at different latitudes and altitudes. Model calculations displayed by the IPCC show that GHG warming should give increasing rates as one goes from the surface up into the atmosphere, peaking at about 10 kilometers, where the rate of increase is about a factor of three greater than the surface rate, and is quite pronounced in all the models (Figure 1).

The observed pattern, however, does not show any increase at all. In fact, data from balloon-borne radiosondes show a slight decrease over the equator (Figure 2). Essentially the same information also can be displayed in a direct comparison (Figure 3).

Evidently, the observed and calculated fingerprints don’t match, indicating that the human contribution to warming is too small to be discerned. The cause of warming must therefore be natural, either an internal oscillation of the atmosphere-ocean system or an external effect, perhaps stemming from the sun.

This significant result emerges not only from the IPCC’s data, but also from data and graphs accumulated in the Climate Change Science Program’s Report 1.1, published by the federal government in April 2006. Figures 1 and 2 are taken directly from this report, which can be accessed at <http://www.climatechange.gov/Library/sap/sap1-1/finalreport/default.htm>.

It is surprising, perhaps, that few have noticed the evident disparity between the observed and calculated patterns, and drawn the obvious conclusion that the anthropogenic effect on climate is still too small to be noticeable.

Some Scientific Questions

So why do GHG models give temperature trends that are so much larger than those observed? The answer lies in the proper evaluation of “feedback” within the models. The problem is that in addition to CO₂, the real atmosphere contains water vapor, which is the most powerful greenhouse gas.

Every one of the climate models calculates a positive feedback from water vapor, which amplifies the effect of the CO₂ increase—on average, by a factor of two to three. But it is quite possible that the water vapor feedback is negative rather than positive, and thereby reduces the CO₂ effect.

There are several possibilities here, some of which are quite complicated. For example, it is easy to see that when increased CO₂ produces a warming of the ocean, a higher rate of evaporation may lead to more cloudiness, provided the atmosphere contains a sufficient number of cloud condensation nuclei. These low clouds reflect solar radiation and thereby cool the earth.

Climate researchers also have discovered other possible feedbacks, and are busy evaluating which ones enhance the effect of increasing CO₂ and which ones will diminish it.

A quite different question, but scientifically interesting, is what the natural factors are that influence climate. This is a big subject about which much has been written. Natural factors include volcanic eruptions, continental drift and mountain building, changes in the Earth’s orbit, and

of course, solar variability.

Different kinds of influences operate on different time scales. But on a time scale important for human experience—typically decades—solar variability may be the most important. Scientists have been able to trace the impact of the sun on past climate using proxy data, since thermometers were not available. A common proxy for temperature is the ratio of the heavy oxygen isotope, oxygen-18, to the most common form, oxygen-16. The solar influence can manifest itself in a variety of ways:

- Directly, by fluctuations of solar irradiance (total energy), which has been measured in satellites and is related to the sunspot cycle;
- By the much larger variability of the ultraviolet portion of the solar spectrum, which in turn affects the amount of ozone in the stratosphere; and
- Variations in the solar winds that modulate the intensity of cosmic rays striking the earth.

In turn, cosmic rays produce cloud condensation nuclei within the lower atmosphere and thereby affect cloudiness. So ultimately, solar wind can control cloudiness, and thereby affect climate.

A good example of the effect of solar wind on climate is shown in Figures 4A and 4B. Here the oxygen-18 data come from a stalagmite in a cave in Oman. The carbon-14 data are directly related to the intensity of cosmic rays striking the Earth’s atmosphere. In Figure 4A, one sees a remarkably detailed correlation covering more than 3,000 years. Figure 4B shows a blown-up portion of 400 years duration, where one can see that the correlation is almost on a year-to-year basis).

While this research cannot establish the detailed mechanism of climate change, the existence of a causal connection is quite

clear. Since the stalagmite temperature cannot affect the sun, it is the sun that must affect climate.

Policy Consequences

If this line of reasoning is correct—and we think it is—then the influence of greenhouse gases on climate is not important. Natural factors cannot be controlled; natural climate changes are unstoppable. All sorts of consequences follow from this simple conclusion:

- Controlling CO₂ emissions from burning fossil fuels is pointless, expensive, and even counterproductive.
- No matter what kind of mitigation scheme is used, controlling CO₂ emissions also is hugely expensive. Ditto for sequestering CO₂, and double ditto for the Kyoto Protocol to limit GHG emissions.
- Developing nonfossil-fuel energy sources such as ethanol and hydrogen often is counterproductive. Both of these fuels have to be manufactured, often through investing great amounts of ordinary energy. They provide little if any reduction in CO₂ emissions and depending on their manufacture, little reduction in oil imports.
- Wind and solar power are uneconomic and require huge subsidies. If one wants to have energy sources that do not emit CO₂, then nuclear energy is readily available.
- Substituting natural gas for coal to generate electricity is uneconomic. Natural gas is better used as a home heating fuel, and in compressed form as a substitute for oil in transportation.
- Extraterrestrial electric power generation, for example by a solar power satellite system, becomes less attractive.

None of this, meanwhile, argues against energy conservation. On the contrary, conserving energy reduces waste, saves money and lowers energy prices, irrespective of what one may think about climate change.

Why The Panic?

This has been a rational discussion. We ask the important question on whether there is an appreciable anthropogenic warming. We establish that the data do not indicate this, and therefore mitigation by controlling GHG emissions is pointless. So how does one explain the supposed scientific consensus on global warming and the IPCC conclusion that current warming is “very likely” (meaning more than 90 percent) attributable to human causes?

How does one explain the public reaction? We have governors calling for limiting CO₂ emissions from automo-

biles. Mayors are calling for mandatory CO₂ controls. The U.S. Supreme Court has declared CO₂ is a pollutant that may have to be regulated. We have all the industrialized nations signed to the Kyoto Protocol (with the exception of the United States). And we have ongoing demands for even more stringent controls beyond 2012 when Kyoto expires.

At the same time we have what amounts to widespread cheating. A feature of the Kyoto Protocol, called the Clean Development Mechanism, allows a CO₂ emitter (i.e., an energy user) to buy “indulgences” by supporting some fanciful scheme in developing nations that may reduce potential CO₂ emissions there. We have “emission trading” among countries that have ratified Kyoto, which allows them to sell certificates of unused emission quotas. In many cases, the initial quota was simply given away by governments to power companies and other entities, which in turn collect a “windfall” fee from consumers.

All of this has become a huge financial racket that will make the U.N.’s “Oil for Food” program in Iraq look like peanuts. It is worth noting that these schemes do not reduce the total emissions into the atmosphere, so there is no effect on the climate—not even in theory. It may take some time, however, before people become wise to these scams.

Why then is there widespread belief in catastrophic climate change and the increasing public demand for governments to do something about it? By now there are tens of thousands who are benefiting directly from the climate scare—at the expense of the ordinary consumer.

Environmental organizations such as Greenpeace, the Sierra Club, Environmental Defense, etc., are consuming billions of dollars a year. Government subsidies in the United States are running at about that level. The various trading programs will soon be at \$100 billion a year, with large fees paid to brokers—and even larger sums to those who operate the scams. In other words, many people have discovered they benefit from climate scares. The longer we wait to expose them, the harder it will be to do something about these entrenched interests.

There are, of course, many sincere believers in global warming catastrophes, and it may be difficult to reach them. Their number is growing rapidly as school children are brainwashed by propagandistic books and movies.

Benefits Of Warming

The irony is that a warmer climate with more carbon dioxide is beneficial

rather than damaging. Economic studies have demonstrated that a modest warming and higher CO₂ levels will increase gross national product and raise standards of living, primarily by improving agriculture and forestry. It’s well known that CO₂ is plant food and essential to the growth of crops and trees—and ultimately to the well-being of animals and humans.

It’s not in Al Gore’s movie, but there are many positive sides to global warming:

- Northern homes could save on heating fuel.
- Rust Belt cities may stop losing snowbirds to the South.
- Canadian farmers could harvest bumper crops.
- Greenland may become awash in cod and oil riches.
- Shippers could count on an Arctic shortcut between the Atlantic and Pacific.
- Forests may expand.
- Mongolia could see a go-go economy.

This is all speculation of course—even a little facetious. But still, might there be a silver lining for the frigid regions of Canada and Russia? “It’s not that there won’t be bad things happen in those countries,” says economics professor Robert O. Mendelsohn of the Yale School of Forestry & Environmental Studies. “But the idea is that they will get such large gains, especially in agriculture, that they will be bigger than the losses.”



S. FRED SINGER

S. Fred Singer is an atmospheric physicist, professor emeritus of environmental sciences at the University of Virginia, and former director of the U.S. Weather Satellite Service. His most recent book, “Unstoppable Global Warming—Every 1,500 Years,” presents the evidence for natural climate cycles of warming and cooling. He is the organizer of the Nongovernmental International Panel on Climate Change and editor of the NIPCC’s report, “Nature, Not Human Activity, Controls the Climate.” Singer participated in the United Nations’ Intergovernmental Panel on Climate Change as a reviewer.

Mendelsohn looked at how gross domestic product around the world would be affected under different warming scenarios through 2100. Canada and Russia tend to come out as clear gainers, as does much of northern Europe and Mongolia. This is largely because of projected gains in agricultural production in those areas.

The world faces many difficult problems. We have societal problems such as poverty, disease, lack of sanitation and clean water. We have security problems arising from global terrorism and the proliferation of nuclear weapons. Any of these is vastly more important than the imaginary problem of anthropogenic

global warming. It is a great shame that so many of our resources are being diverted from real problems to nonproblems. Perhaps in 10 or 20 years this will become apparent to everyone, particularly if the climate should stop warming or even cool.

But the greatest danger may come from expanding government regulation and the inevitable growth of bureaucracies imbued with a zeal to control population behavior in order to reduce emissions. There will have to be reporting, monitoring, inspection, sanctions, and endless lawsuits. It is the loss of freedom that concerns so many of us . . . all be-

cause of an imaginary threat.

We can only hope that sanity will prevail against the onslaught of propaganda such as Al Gore's *An Inconvenient Truth* and the incessant misinformation generated by the media. Thus far, the imposed costs are still modest, although not transparent, hidden in taxes and in charges for electricity and motor fuels.

But I am an optimist and believe that sound science and good sense will prevail before climate fears generate an economic catastrophe and threaten our constitutional rights. □