

Congress of the United States

Washington, DC 20515

NATIONAL ACADEMY OF SCIENCES SAYS:
"POSSIBILITY OF ABRUPT CLIMATE CHANGE NEEDS RESEARCH AND ATTENTION"

December 13, 2001

Dear Colleague:

We would like to draw your attention to a new report from the National Academy of Sciences (NAS) which concludes that greenhouse gas emissions and other human alterations of the climate system may increase the possibility of large, abrupt, and unwelcome regional or global climatic events. New evidence shows that periods of gradual change in the Earth's past were punctuated by episodes of abrupt change, including temperature changes of about 18 degrees Fahrenheit, in only a decade – changes that likely could be accentuated by recent, severe human impacts on the global environment.

This report serves as a reminder that Congress must address greenhouse gas emissions in order to slow biodiversity loss and impacts to agriculture, and improve water, land, and air quality.

Copies of the report, entitled *Abrupt Climate Change: Inevitable Surprises*, may be obtained by contacting The National Academies at (202) 334-1601. Please find attached, the Washington Post coverage of the new report. For additional information or to join the Climate Change Caucus please contact us or our staff (Abbie Meador with Representative Olver 5-5335 or Sally McGee with Representative Gilchrest 5-5311).

Sincerely,


John W. Olver
Member of Congress


Wayne Gilchrest
Member of Congress

A Warning on Climate Change

Pollution's Effects Could Be Sudden, NAS Report Says

By ERIC PIANIN
Washington Post Staff Writer

While recent climate change studies have focused on the risks of a gradual rise in the Earth's temperature, a new National Academy of Sciences report has concluded that greenhouse gases and other pollutants could trigger large, abrupt and potentially disastrous climate changes.

Citing a wealth of paleontological evidence, historical observations and computer modeling analyses reaching back hundreds of centuries, researchers found evidence that, in some places, periods of gradual changes were punctuated by sudden temperature spikes of about 10 degrees Celsius in only a decade.

Roughly half of the warming that has occurred in the northern part of the Atlantic Ocean since the last ice age was achieved in only a decade, the report said. That warming was accompanied by significant climate changes across the globe, including flooding and drought, it said. Since then, less dramatic climate changes have occurred, affecting precipitation, hurricanes and the El Niño events that have disrupted temperatures in the tropical Pacific.

"Abrupt climate changes were especially common when the cli-

mate system was being forced to change most rapidly," the study states. "Thus, greenhouse warming and other human alterations of the earth system may increase the possibility of large, abrupt, and unwelcome regional or global climatic events."

The authors of the study, including panel chairman Richard Alley of Pennsylvania State University, hastened to add that "there is no need for undue alarm" and that societies have demonstrated they are good at adapting to serious climate change.

But the report offers a new wrinkle to the decades-long debate over global warming problems, and it likely will provide additional ammunition to European and Asian environmental leaders seeking to persuade the Bush administration to reconsider its opposition to a global warming treaty recently concluded in North Africa.

Jerry Taylor, director of natural resource studies for the libertarian Cato Institute, played down the report's significance. "It is not enough for a report to come out speculating about unknowables," he said. "It looks like warming is occurring and it is industrially induced. But it's been far less dramatic than the computer models say should have occurred by now."

Studies on human-induced global warming by the U.N.-sanctioned Intergovernmental Panel on Climate Change project that within the next hundred years the Earth's average surface temperature will increase by 1.4 to 5.8 degrees Celsius. The wide range of uncertainty in those estimates reflects both the different assumptions about future concentrations of greenhouse gases and aerosols in the various scenarios considered by the U.N. panel and the differing climate sensitivities of the various climate models used in the simulations.

Last June, another National Academy of Sciences panel of top U.S. scientists commissioned by the White House declared that global warming was a real problem and was getting worse. The panel said human activity was largely responsible but that natural factors could not be ruled out.