

Climate Change 2 — Is It Real?

Some individuals deny global climate change. That is, they deny that there really is a global long-term change in weather patterns, or that the change is caused by human activity, or that the change amounts to a substantial threat, or that there is anything we can do about it. Although they are passionate in their beliefs, they are in the minority. The majority of scientists believe that global climate change is real, that humans contribute to it, and that it poses a significant threat. Very few, if any, scientific bodies of national or international standing deny that human activities are impacting global climate.ⁱ

More than a decade ago, the United Nations established a body of scientific experts called the Intergovernmental Panel on Climate Change, and tasked them with reviewing the scientific literature on global climate change to determine if it is real, if it is a significant threat, what its causes are, and what can be done about it. Their most recent report was published in 2007. It was written by dozens of scientists and reviewed by over 2,000 scientists worldwide. The authors looked at over 6,000 scientific studies and reached many, many conclusions. We will look at some of them in coming papers. Here, let me simply note that they concluded that “warming of the climate system is unequivocal,”ⁱⁱ that human activities have made a substantial contribution to the warming,ⁱⁱⁱ that the warming has had dozens of effects around the world,^{iv} that the observed changes are not consistent with patterns that would be expected from naturally occurring processes,^v and that future projections suggest the changes are likely to present serious challenges.^{vi}

Those who deny the reality of global climate change note that some of the science on which the IPCC has based its conclusions is not fully certain, and that some of their work is based on projections that cannot be fully tested until the future actually arrives. They are correct in these assertions. What they cannot produce, however, is an equivalent body of evidence that points to other conclusions.

An analogy may be useful here. During the 1930s, the situation in Asia and in Europe deteriorated steadily. Japan conquered large portions of China. The Nazis came to power in Germany, conquered most of Western Europe, and attacked Great Britain. The situation looked bad, and yet one could not prove that the U.S. would be drawn into the conflict. If we were, one could not know for certain when and how it would occur, in what way, or how bad the conflict would be. Isolationists used this uncertainty to argue that America should not get involved—World War I had been a terrible affair, after all. They strongly advocated doing nothing that would put us into the conflict. But we didn’t have to go find World War II. When the Japanese attacked Pearl Harbor, World War II found us. And because we had done nothing, we were unprepared.^{vii}

In a similar fashion, we do not know exactly when, where, and how global climate change will affect us, and in what way. Deniers use this to argue that it is not a serious problem, that we should do nothing. But the evidence piles up. We won’t have to go find climate change; it will find us. Policy makers are rarely able to wait for perfect knowledge before making decisions. We would be foolish not to protect ourselves as best we can.

ⁱ A list of scientific bodies that have endorsed the reality and importance of climate change includes: the Declaration of the Joint Science Academies of the G8+5 nations, the U.S. National Research Council, the American Meteorological Society, the American Geophysical Union, the American Institute of Physics, the American Astronomical Society, the American Physical Society, the Federal Climate Change Science Program, the American Association for the Advancement of Science, the Stratigraphy Commission of the Geological Society of London, the Geological Society of America, the American Chemical Society, Engineers Australia, and the Canadian Meteorological and Oceanographic Society. At least one review claims that there are no remaining scientific bodies of national or international standing that reject the basic findings of human influence on climate. For a summary of the statements by each of the above bodies, see *Scientific opinion on climate change*. Wikipedia. Retrieved online 2/18/2008 at

[H\[http://en.wikipedia.org/wiki/Scientific_opinion_on_climate_change\]\(http://en.wikipedia.org/wiki/Scientific_opinion_on_climate_change\)](http://en.wikipedia.org/wiki/Scientific_opinion_on_climate_change)H. In 2008, the Heartland Institute held a conference to refute the reality of climate change. The list of sponsors was dominated by conservative and libertarian think tanks, organizations that contain in their mission statement the purpose of promoting a particular political perspective. According to the Heartland Institute's website, enrollment was limited to 500, and the conference was most appropriate for those who have already been active in refuting the notion of global climate change. This is not how scientific inquiry is ordinarily conducted, and it suggests the perspective of the conference is predetermined, rather than developed from an objective analysis of the evidence. As this example shows, there are voices arguing against the reality of global climate change. They may be well funded and politically active, but they do not represent scientific bodies with national or international standing.

ⁱⁱ IPCC. (2007.) Summary for Policymakers. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, p. 5.

ⁱⁱⁱ id., p. 3, 10-11.

^{iv} id., p. 5-9.

^v id., p. 9.

^{vi} id., p. 12-17.

^{vii} The history of the period leading up to World War II is a very large topic, indeed. Lots of good history books exist. Another place one can begin are two articles on Wikipedia: *Events preceding World War II in Europe*, Wikipedia, retrieved online 2/16/2008 at http://en.wikipedia.org/wiki/Events_preceding_World_War_II_in_Europe, and *Events preceding World War II in Asia*, Wikipedia, retrieved 2/16/2008 at http://en.wikipedia.org/wiki/Events_preceding_World_War_II_in_Asia.