As I write, the city of New Orleans is under water for the second time in less than one month, and perhaps as many as 1,000 of its inhabitants are dead from Hurricane Katrina and its aftermath. Hurricane Katrina is being called the costliest natural disaster ever to hit the United States. But it has also been labeled the worst “unnatural” disaster, as human decisions are thought to have played a major role in increasing the human toll, especially in New Orleans.

It is not just the appropriateness of government responses to the disaster that is in question; the debate also encompasses the human causes behind the occurrence of the disaster itself. The sapping of ground water has been blamed for subsidence of the city ever further below sea level, while engineering of the Mississippi River basin in order to prevent floods and aid navigation has led to the loss of more than 1,500 square miles of Louisiana’s coastland in the last 50 years. One of the issues raised in the media and in scientific circles, however, concerns human activities with less direct effects but perhaps just as lethal. A long-term human-induced change in the global climate is now thought by some researchers to be implicated in increasing the severity and frequency of extreme weather events such as the Category 5 Hurricane Katrina.

The United States, however, has never supported concrete global commitments to reverse its continually growing use of fossil fuels and the resultant greenhouse gas emissions that are at the root of the climate change phenomenon. An analysis of the history of climate change negotiations and a breakdown of the domestic interests that are potentially affected explains why opposition has, up to now, prevailed within the United States.
The Phenomenon of Global Climate Change

The theory of global warming is much older than the theory of ozone depletion, having first been postulated in 1896 by a Swedish chemist, Svante Arrhenius. The “greenhouse” metaphor had already been used as early as the 1830s to describe the effect of the earth’s atmosphere on its surface, but it was Arrhenius who first calculated that human activities such as the burning of fossil fuels might alter the natural climate (Schröder 2001, 10).

The sun radiates infrared light on the earth. The earth’s atmosphere is associated with a greenhouse because the gases within it act like a greenhouse in delaying the escape of infrared radiation back into space. Naturally occurring greenhouse gases (GHGs), including water vapor and carbon dioxide, make up about 1 percent of the earth’s atmosphere and are in fact what makes life possible on earth, trapping the heat of the sun and keeping the earth as much as 30 °C warmer than it would otherwise be. However, anthropogenic—or human-made—GHGs, such as carbon dioxide emitted from fossil fuel burning, methane and nitrous oxide produced by farming activities and changes in land use, and several industrial gases that do not occur naturally, have thickened the natural blanket of GHGs in the atmosphere with unprecedented speed. This is the “enhanced” or “anthropogenic” greenhouse effect.

There is an almost universal scientific consensus that anthropogenic GHG emissions are likely to warm the surface and lower atmosphere of the earth. Such global warming is, in turn, predicted to cause changes in cloud cover, precipitation and wind patterns, and the duration of seasons—in other words, climate change. Indeed, there are numerous signs, such as possible increases in the intensity of hurricanes as mentioned above, that some of these effects may already be occurring. Concentrations of GHGs in the atmosphere were estimated in 1992 to be some 25 percent over their pre-industrial levels (Stone 1992, 446); it is currently predicted that they could double or even triple their pre-industrial levels during the twenty-first century.

The Global Climate Regime and the Criteria of Effectiveness

The UN Framework Convention on Climate Change (UNFCCC), signed at the UN Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992, and its 1997 Kyoto Protocol form the two binding agreements that I here label the “global climate regime.” Intended to address the threats that climate change may pose to humans, this regime has shown itself to be almost entirely ineffective in mitigating the problem despite the entry into force of both the Convention and, in 2005, the Protocol that lays out specific commitments.