

FAILURE OF THE DOHA CLIMATE CONFERENCE

“Some of the potential risks could be irreversible and could accelerate the process of global warming. Melting of permafrost in the Arctic could lead to the release of huge quantities of methane. Dieback of the Amazon forest could mean that the region starts to emit rather than to absorb greenhouse gases. These feedbacks could lead to warming that is at least twice as fast as current high-emission projections, leading to temperatures higher than seen in the last 50 million years. There are still uncertainties about how much warming would be needed to trigger these abrupt changes. Nevertheless, the consequences would be catastrophic if they do occur.” Stern Report Discussion Paper, January 31, 2006.

Despite clear and unanimous warnings from the scientific community, the United Nations Climate Conference in Doha (Cop 18) failed to reach an agreement sufficiently strong to avoid dangerous climate change. The problem encountered by the conference was a deep disagreement between developed and developing countries. The developing countries correctly maintained that historically, they have not been to blame for emission of greenhouse gases. Meanwhile, the industrialized countries pointed to the future, saying (also correctly) that unless the developing countries accepted their future responsibilities, there would be no hope of avoiding disaster. The only concrete achievement of Cop 18 was an extension of the Kyoto agreement, but because the largest polluters, (e.g China, the United States and India) are outside this agreement, its extension is not enough to prevent catastrophic climate change.

The IPCC and Stern reports

Models put forward by the Intergovernmental Panel on Climate Change (IPCC, 2007 Report) suggest that if no steps are taken to reduce carbon emissions, a temperature increase of 1.4-5.6 degrees C will occur by 2100¹. Global warming may have some desirable effects, such as increased possibilities for agriculture in Canada, Sweden and Siberia. However, most of the expected effects of global warming will be damaging. These unwanted effects

¹relative to 1990 temperatures.

include ocean level rises, extreme weather conditions (such as heat waves, hurricanes and tropical cyclones), changes in the patterns of ocean currents, melting of polar ice and glaciers, abnormal spread of diseases, extinctions of plant and animal species, together with aridity and crop failures in some areas of the world which are now able to produce and export large quantities of grain.

According to a report presented to the Oxford Institute of Economic Policy by Sir Nicholas Stern on 31 January, 2006, areas likely to lose up to 30% of their rainfall by the 2050's because of climate change include much of the United States, Brazil, the Mediterranean region, Eastern Russia and Belarus, the Middle East, Southern Africa and Southern Australia. Meanwhile rainfall is predicted to increase up to 30% in Central Africa, Pakistan, India, Bangladesh, Siberia, and much of China.

Stern and his team point out that "We can... expect to see changes in the Indian monsoon, which could have a huge impact on the lives of hundreds of millions of people in India, Pakistan and Bangladesh. Most climate models suggest that the monsoon will change, although there is still uncertainty about exactly how. Nevertheless, small changes in the monsoon could have a huge impact. Today, a fluctuation of just 10% in either direction from average monsoon rainfall is known to cause either severe flooding or drought. A weak summer monsoon, for example, can lead to poor harvests and food shortages among the rural population - two-thirds of India's almost 1.1 billion people. Heavier-than-usual monsoon downpours can also have devastating consequences..."

In some regions, melting of glaciers can be serious from the standpoint of dry-season water supplies. For example, melts from glaciers in the Hindu Kush and the Himalayas now supply much of Asia, including China and India, with a dry-season water supply. Complete melting of these glacial systems would cause an exaggerated runoff for a few decades, after which there would be a drying out of some of the most densely populated regions of the world.

The threat of feed-back loops

The (700 page) Stern Report was made public on October 30, 2006. It explores not only the scientific basis for predictions of global warming but also the possible economic consequences. Unless we act promptly to prevent it, the Stern Report states, global warming could render swaths of the planet

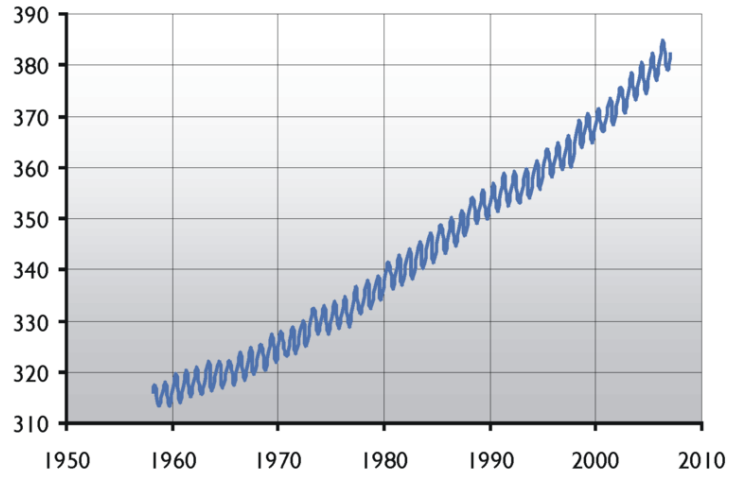


Figure 1: *Atmospheric CO₂ concentrations measured at Mount Loa, Hawaii*

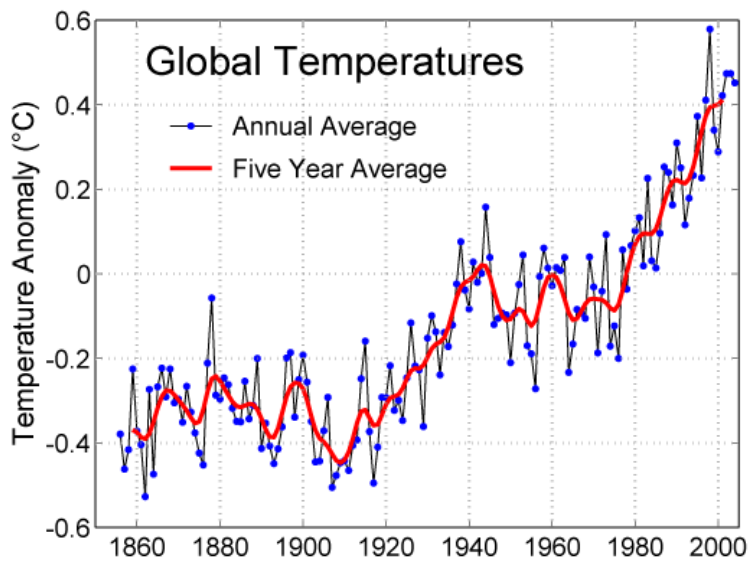


Figure 2: *Global temperatures during the last two centuries*

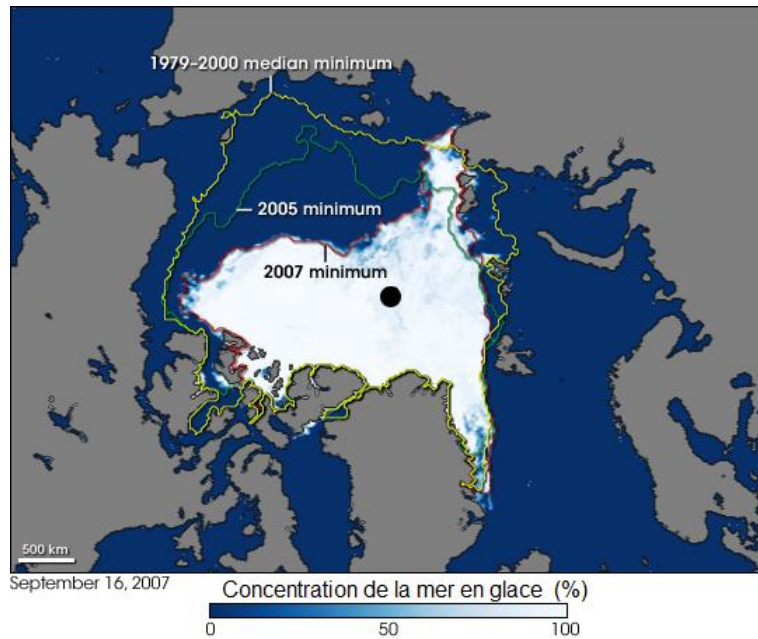


Figure 3: *Recent loss of Arctic ice, as measured by NASA's Aqua satellite*

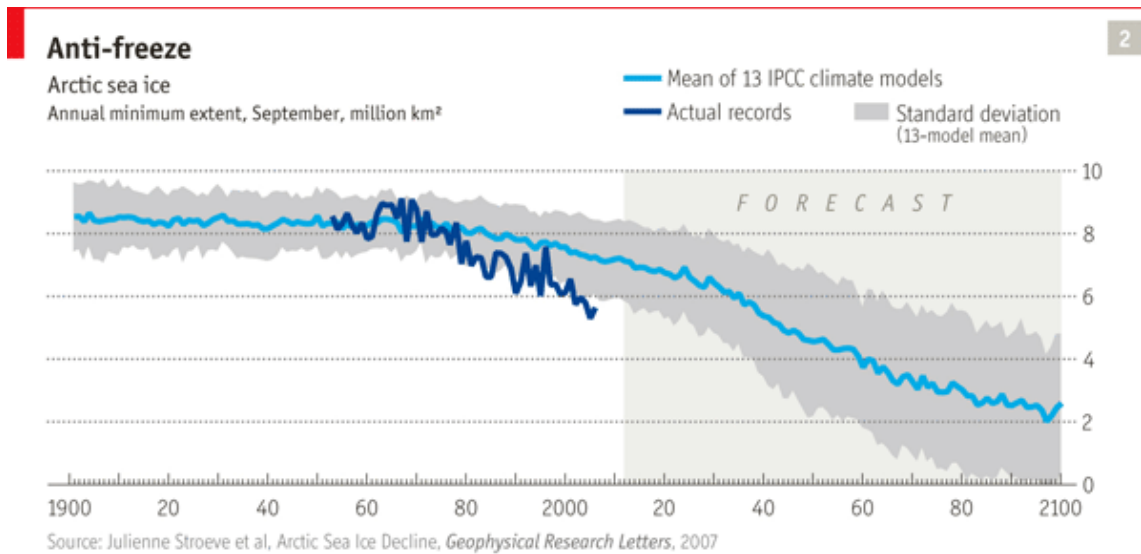


Figure 4: *The actual rate of loss of arctic ice is much faster than predicted.*

uninhabitable, and lead to a global famine of completely unprecedented proportions.

Particularly worrying is the threat posed by methane clathrates in permafrost regions and in the oceans. Methane clathrates are icelike structures containing both water molecules and the greenhouse gas methane, which is 40 times as powerful as CO₂ in trapping the sun's heat. According to Wikipedian "Recent estimates constrained by direct sampling suggest the global inventory occupies between one and five million cubic kilometres (0.24 to 1.2 million cubic miles) This estimate, corresponding to 500-2500 gigatonnes carbon (Gt C), is smaller than the 5000 Gt C estimated for all other fossil fuel reserves but substantially larger than the 230 Gt C estimated for other natural gas sources. The permafrost reservoir has been estimated at about 400 Gt C in the Arctic, but no estimates have been made of possible Antarctic reservoirs. These are large amounts, for comparison the total carbon in the atmosphere is around 700 gigatons." Higher temperatures in permafrost areas and in oceans could release these enormous quantities of methane into our atmosphere. The result would be the total melting of the Greenland ice cap and much of Antarctica's ice, leading to a 7-14 meter rise in ocean levels.

To avoid these catastrophic events, prompt international action is needed. Tragically, at the Doha Conference, this action was blocked by commercial interests.

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