

NOTE: The Christchurch glossy lifestyle monthly magazine AVENUES has taken the laudable initiative to start a debate on global warming, which will run over 5 months. I was invited to write the first article, titled “Global Warming and Cooling”, which appeared in the February issue. With an editorial introduction and some photographs added by the magazine, it covered 8 pages. Unfortunately, the magazine does not make its articles available on its website. There is therefore no Internet link available. Because there is much interest internationally for this debate, I have prepared the PDF document below, which contains my text and the illustrations I provided (Figures 1 and 3 have been simplified and redrawn by the magazine).

In the March issue will be an article by Professor Bryan Storey, who represents the opposite side of the debate. In the subsequent issue I am allowed to comment on his article and in the issue after that he is allowed to comment on mine. In the fifth month an independent, non-scientific, person will adjudicate on the debate. This debate has therefore some connotations to the famous Oxford debates.

Global warming and cooling

By Gerrit van der Lingen

Al Gore and a British Court Case.

Returning home from a recent trip to Europe, I read in a newspaper on the plane that former US Vice President Al Gore had been awarded the Nobel Peace Prize, jointly with the United Nations International Panel on Climate Change (IPCC). The Nobel Peace Prize Committee gave the following citation:

“for their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change.”

It is obvious that Gore received this prize for his movie *An Inconvenient Truth* and his book with the same title. Like so many others, I fail to see the connection between peace and the climate beliefs and actions of Al Gore and the IPCC.

In the same newspaper was another item about a court case in Britain. A lorry driver, father of two schoolchildren and a school governor, had taken the British Government to court over its decision to send 3400 free copies of Al Gore’s movie to all secondary schools in Britain (The High Court of Justice, Case CO/3615/2007). The judgement by Mr Justice Burton is available on the internet. Back home, I extracted the following comments from it:

The claimant alleged that the distribution of Gore’s movie to schools contravened sections of the Education Act of 1996, which requires that, ‘where political issues are brought to the attention of pupils . . . they are offered a balanced presentation of opposing views.’ The claimant’s council alleged that parts of Gore’s movie were factually incorrect, even when compared with the reports of the IPCC, and that it “promotes an apocalyptic vision.” The movie sent to schools was not accompanied by references to ‘opposing views.’ Teachers were referred to a Guidance Note on the internet, but those notes did not include any adequate discussion at all and only referred to organisations that support Gore’s views.

Based on evidence put before him (and one of the experts for the claimant was the New Zealander Bob Carter, professor of geology at James Cook University in Townsville) the judge identified nine ‘errors’ in the movie. Those are, in short :

1. Gore: A sea level rise of up to 20 feet (7 metres) will be caused by melting of either West Antarctica or Greenland in the near future.

Judge: This is distinctly alarmist. If the Greenland ice cap melted, sea level would indeed rise 7 metres, but *only* after and over thousands of years.

2. Gore: Low lying, inhabited, Pacific atolls are being inundated because of man-made global warming (MMGW), and citizens of these Pacific nations have all had to evacuate to New Zealand.

Judge: There is no evidence of any such evacuation having happened.

3. Gore: The 'Ocean Conveyor' current (including the North Atlantic Gulf Stream) could shut down because of the melting of the Greenland ice cap.

Judge: According to the IPCC, it is very unlikely that the Ocean Conveyor will shut down in the future, although it may slow down.

4. Gore: Two graphs from ice core data, covering the past 650,000 years, show a close correlation between temperature and carbon dioxide (CO₂), implying that the fluctuations of CO₂ caused the temperature to go up and down.

Judge: Although there is general scientific agreement that there is a connection, the two graphs do not establish what Mr Gore asserts. (van der Lingen: detailed observation of these graphs shows that, when the temperature goes up, it is *followed later* (800 years or more) by CO₂ going up. Temperature rise causes CO₂ to increase, not the other way round. Moreover, there is a perfectly good astronomical theory for the fluctuations of temperature, but none whatsoever for why CO₂ would go up and down.)

5. Gore: The melting of the snows of Mount Kilimanjaro in Africa is attributable to man-made global warming.

Judge: The scientific consensus is that it cannot be established that the recession of the snows on Mt Kilimanjaro is mainly attributable to human-induced climate change.

(van der Lingen: There are many scientific papers pointing to deforestation of the slopes of Mt Kilimanjaro as the main cause for the melting of the snow cap. Moreover, the melting had already started in about the middle of the 19th century; long before human greenhouse gas emissions could have played a role.)

6. Gore: Lake Chad in Africa has dried up, caused by human greenhouse gas emissions.

Judge: It is generally accepted that the evidence remains insufficient to establish such an attribution. It is considered far more likely to be the result of other factors, such as population increase and over-grazing.

7. Gore: Hurricane Katrina and its consequent devastation of New Orleans were caused by man-made global warming.

Judge: It is common ground that there is insufficient evidence to show that. (van der Lingen: It is well-established that the devastation was mainly due to poorly maintained levees and the draining of protective wetlands. Moreover, there is abundant evidence that hurricanes have not increased in number or intensity during the last century.)

8. Gore: For the first time, they are finding polar bears that drowned while swimming distances of up to 60 miles looking for ice.

Judge: The only scientific study that could be found was of four polar bears that drowned because of a storm.

9. Gore: Coral reefs all over the world are bleaching because of man-made global warming.

Judge: The actual IPCC view is that, if temperatures were to rise 1 to 3 degrees, there would be increased coral bleaching, unless corals could adopt or acclimatise. But it is difficult to separate the effects of global warming from other stresses, such as over-fishing or pollution.

The judge realised that the distribution of Al Gore's movie to schools had already happened and could not be undone. However, as a result of considerable discussions in court, a new Guidance Note was produced to be distributed to all schools in hard copy. This Note addresses all the nine 'errors' identified and instructs teachers that they "must try to ensure that pupils are offered a balanced presentation of opposing views."

The claimant could not have mounted this legal challenge without the support of several MMGW 'agnostics.' Some of those are now planning to distribute 3400 copies of the documentary *The Great Global Warming Swindle* to all British secondary schools to counteract Gore's propaganda documentary. In contrast to *An Inconvenient Truth*, which was made by only one person, who is not even a scientist, this documentary presents the scientific views of a large number of well-qualified scientists. It was shown for the first time last March on Channel Four in the UK. It is now available on DVD (I hired a copy from Alice in Videoland, in High Street).

The High Court Judge necessarily was conservative and careful in his judgement. But in the present climate of what can only be described as 'global mass hysteria' about global warming, it is a remarkable and welcome judgement.

While the judge identified nine 'errors' in Gore's movie, it contains many more scientific errors and half-truths. A prominent British MMGW agnostic, Lord Monckton of Brenchley, identified 35 scientific errors (which he calls "inconvenient truths"), including the nine mentioned by the judge. His analysis can be found on the internet (<http://scienceandpublicpolicy.org/monckton/goreerrors.html>). These 35 errors form a superb, concise summary of most of the scientific arguments against the dogma of catastrophic MMGW. Many of these I have discussed myself in numerous lectures and articles. Let me just discuss two of them.

The miraculous survival power of the polar bear.

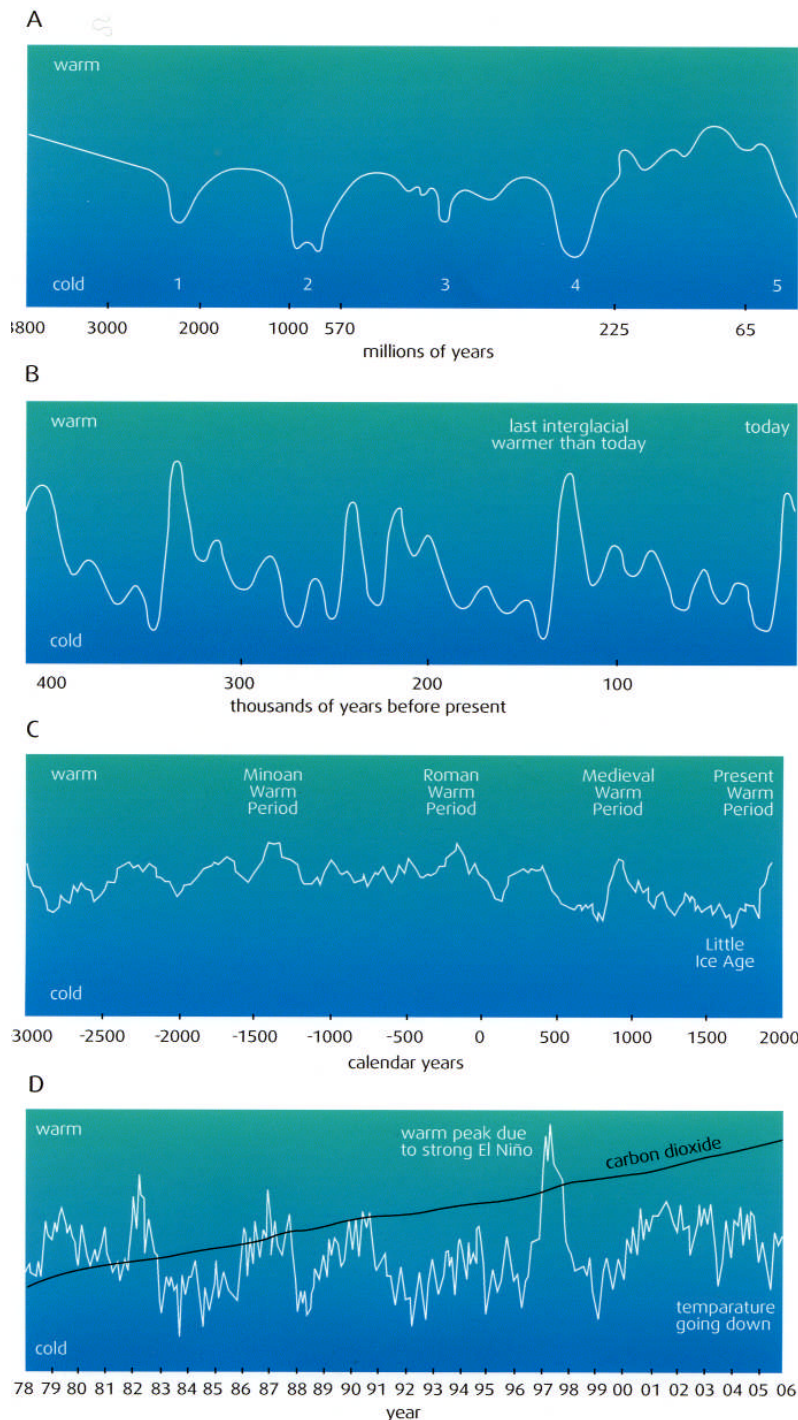
Polar bears have become the poster animals of the catastrophic MMGW movement, like the panda is for the World Wide Fund for Nature. Many environmental organisations are predicting the imminent extinction of polar bears because of MMGW. The Australian activist Tim Flannery recently predicted that polar bears could be extinct in 25 years. However, as with so many of the 'predictions' by global warming alarmists, a reality check shows this to be highly unlikely. First, some facts from the real world.

Yes, the Arctic has been warming. However, it was warmer in the thirties and forties. The North-West Passage was open to shipping in 1945 and Amundsen sailed through it in 1903. Much of the Arctic sea ice had also disappeared in 1817. There seems to be a natural variation between warming and cooling.

Sixty years ago, polar bear numbers had decreased to about 5000, mainly due to hunting. Since then hunting has been more strictly controlled and numbers have increased to about 25,000. According to research by the US Geological Survey, polar bear numbers may be near historic highs. Of the thirteen polar bear populations in

Canada (home to two-thirds of the world's polar bears), eleven are stable or increasing in numbers. Notwithstanding this, some environmental organisations want to have polar bears listed as 'threatened.' Their arguments are not based on real-world data, but on predictions from non-validated computer models.

Figure 1 – Historic climate variations



A – During the last 3.8 billion years, the Earth has experienced five ice age periods (numbered from 1 to 5). We are in the fifth ice age period. (Source: H.N.A. Priem, 2000). B – Glacials and Interglacials over the last 415,000 years, based on the Antarctic Vostok ice core. Source: A. Illarionov, 2004. C – Temperature record for the last 5000 years, based on the Greenland GISP2 ice core. Source: Grootes et al. 1993 and A.Illarionov, 2004. D – Global mid-troposphere temperatures for the last 28 years. Note the decrease in temperature in recent years. Source: The National Space Science and Technology Center, University of Alabama.

But just assuming for a moment that people like Flannery are right about the imminent demise of the polar bear. That would mean that polar bears must have become extinct many times before, during the last interglacial (when it was 4 to 5 degrees warmer than today for thousands of years), during the Holocene Climatic Optimum (4000-7000 years ago), and during the Minoan, Roman and Medieval Warm Periods (Figure 1, B&C). Why would it be that the polar bears are still with us? The answer is obvious. Like most bears they are very adaptable. For instance, their food sources range from seals to berry fruits.

Psychic glaciers.

We are being told that many glaciers around the world are retreating and that this is caused by MMGW. Yes, most glaciers (and ice caps) have been melting, but they have been doing this for the last 18,000 years (since the so-called Last Glacial Maximum), resulting in a sea level rise of 120 metres(!). On Figure 2 I have indicated the level of the Tasman Glacier 18,000 years ago. But there have also been periods of cooling during the present Interglacial warm epoch, like during the Little Ice Age (1300 to 1850 AD), when glaciers advanced again. But many glaciers must have anticipated the coming MMGW, as they started to retreat already, well before greenhouse gases started to increase. For instance, the Franz Josef Glacier started to retreat in 1750 and the Himalayan Gangotry Glacier in 1780. I already mentioned the snow cap on Kilimanjaro. I therefore call these glaciers ‘psychic.’

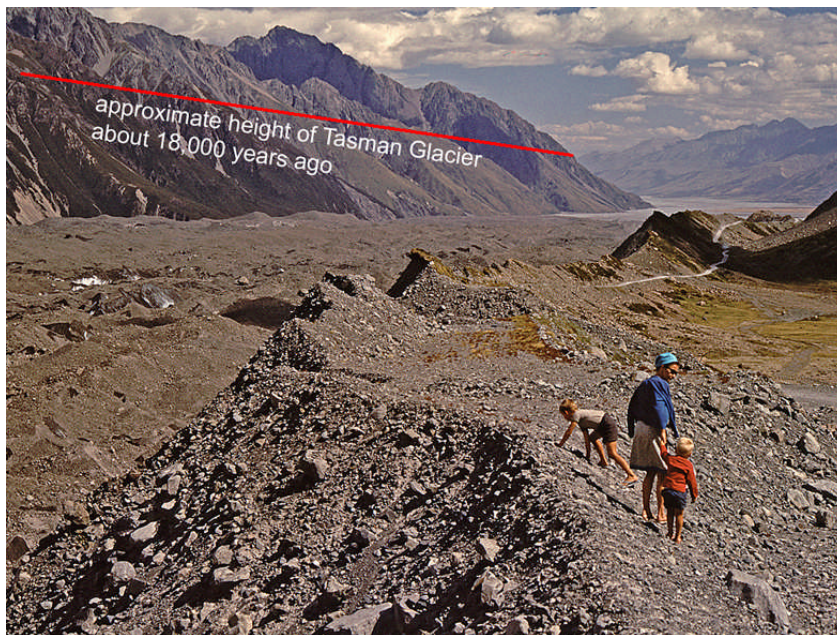


Figure 2. Photograph of the lower reaches of the Tasman Glacier (the ice is covered with rock rubble), taken in 1967 (the glacier has retreated further since). The red line indicates the approximate height of the glacier 18,000 years ago. Photograph Gerrit van der Lingen.

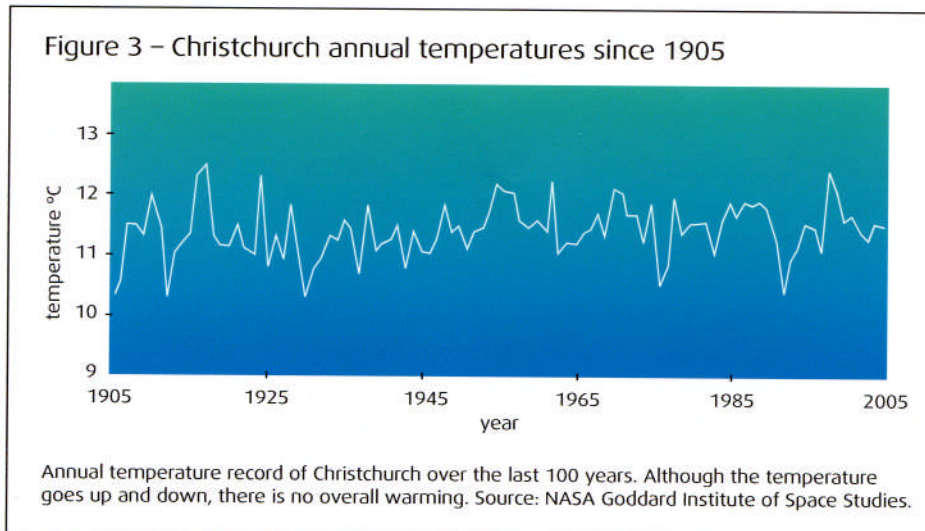
Triumph of the will.

From the British High Court and Lord Monckton’s identification of many (and no doubt deliberate) errors in Al Gore’s movie, it’s clear that his movie can be classified as a propaganda documentary. During the court case, council for the claimant drew comparisons with Nazi and Leninist/Stalinist propaganda films. Although this seems a bit far-fetched, one cannot help but draw comparisons with that (in)famous Nazi

propaganda film, *Triumph of the Will* (*Triumph des Willens*), made by the legendary German film-maker Leni Riefenstahl. Her propaganda documentary of the 1934 Nuremberg Rally of the Nazi Party was made on the order of Hitler. It was a slick, superbly made film, setting new technical and artistic standards for documentary film-making, notwithstanding the fact that it was blatant Nazi propaganda. It was awarded several international film awards. As such it can be compared with Gore's movie, which is also a very well-made, slick propaganda movie, rewarded with an Oscar. There are other parallels. Riefenstahl's film was shown in German cities to record audiences and, like in the U.K., school children were obliged to see it. However, there is one major difference. Riefenstahl's film was in German and was mainly shown to the German public, and as such can be considered as having had limited propaganda value in a global sense. Gore's movie, on the other hand, has a huge global propaganda reach.

Several commentators have pointed to more sinister aspects of the present MMGW hysteria. Proposals made to curb greenhouse gas emissions will result in a substantial reduction of democratic and personal freedoms. For instance, the British Government has proposed measures along the lines of what is called "Contraction and Conversion" (see www.gci.org.uk/main.html). Under this system, each individual on Earth would be allocated a permit to emit an equal amount of greenhouse gas. This means that an Amerindian in the warm Amazon jungle would be allocated the same allowance as a person in cold Helsinki. If the person in Helsinki wants to use more than the person in the Amazon, he would have to buy emission permits from the Amazonian. This system is proposed under the principle of global equity. This would mean a return to war-time ration books. Almost all human activities would be strictly controlled, from air travel (air miles), to food consumption patterns (food miles), to the choice of cars, housing, etc. All this would require an immense, all-pervasive, global, bureaucratic control and administration system. Stalin and Hitler would have been green with envy. All these measures will also put severe breaks on economic developments. The cost of living will go up dramatically and poor people will be hit the hardest.

There are other matters in the MMGW debate that hark back to the Nazi era. People who dare to criticise the catastrophic MMGW dogma have been compared to Holocaust deniers. Even worse, some MMGW promoters are demanding that these 'deniers' should be dragged before a Nuremberg-type tribunal. They maintain that "the science has been settled." Apart from the fact that science is never settled, they refuse to debate the science in public. Several prominent academics have challenged Al Gore to a public, televised debate. He always refuses. This is not surprising, as he must know that he cannot win such a debate. The simple truth is that there is no scientific evidence for catastrophic global warming caused by human carbon dioxide emissions. The only 'evidence' is based entirely on computer models. Because climate is a chaotic, non-linear system, it does not lend itself to computer modelling. No wonder these models give wildly different results. They depend on what initial parameters are being used. Such parameters can be tweaked to obtain the desired outcome. I therefore call these modellers 'tweakers.' Their virtual world has nothing to do with the real world. Nature refuses to obey the IPCC and its computer models. Take for instance the temperature record of Christchurch for the last one hundred years. Temperatures have fluctuated, but there has been no overall increase (Figure 3). Global warming is passing us by.



MMGW believers also spread the myth that there is virtual unanimity among scientists that human carbon dioxide emissions are causing catastrophic global warming. Nothing could be further from the truth. There are thousands of scientists who disagree with this dogma and hundreds of them are actively involved in debating the science. In New Zealand they have organised themselves in the New Zealand Climate Science Coalition (www.climatescience.org.nz).

Global warming and cooling.

Climate has always changed, often dramatically and on all time scales (Figure1). For instance, during the last three billion years the Earth has experienced five major ice age periods. We are living in the fifth, which started 2.8 million years ago. Each ice age period is characterised by a series of ice ages ('glacials') and warmer in-between periods ('interglacials'). During our ice age period, the planet has been in the grip of ice ages for 90 per cent of the time. Only for ten per cent of the time it was warmer, like the interglacial we are living in now. These variations had nothing to do, of course, with human greenhouse gas emissions. The generally accepted theory is that these large variations are caused by changes in the way the Earth moves around the sun, changes in the tilt of the Earth's axis, and the wobble of that axis. These are called the Milankovitch cycles (after a Serbian astronomer). Smaller climate variations are caused by changes in solar activity, mainly sunspots. According to astrophysicists, the sun has been more active in the last 50 years than in the last 8000. Solar activity also influences the number of intergalactic cosmic rays reaching the

Earth. Cosmic rays seem to have an influence on low cloud formation, and low clouds have a cooling effect.

There is a good correlation between temperature and sunspots. During the coldest period of the Little Ice Age, at the end of the 17th century, there was a 70-year period with virtually no sunspots (the so-called 'Maunder Minimum'). There was maximum sunspot activity during the Medieval Warm Period. There is also good correlation between temperature and sunspot cycle lengths during the 20th century. There is no correlation at all between temperature and carbon dioxide. In recent years many peer-

reviewed, scientific articles have been published, pointing to good correlations between the present 11-year sunspot cycle and various weather patterns, such as rainfall. Climate is extremely complex. It would take me far too long to discuss other important natural factors, like El Niños and La Niñas. Climate science is still in its infancy. The IPCC and its acolytes are doing science a big disservice by basically saying that the natural causes of climate change in the past have stopped working, and have now been replaced by a simplistic, singular cause: human carbon dioxide emissions.

As it is *very likely* (to borrow a favourite term from the IPCC) that the sun is the major driver of climate change, always has been and always will be, one wonders what the future holds. Astrophysicists from the UK, Finland, The Netherlands, Germany and Russia have been predicting that we are entering a cooling period, because of an anticipated decrease in solar activity. Their opinion is based on the analysis of sunspot cycles. Such an analysis has a large degree of uncertainty, of course. But world temperatures have not gone up over the last eight years (Figure 1D) while carbon dioxide levels have. Two months ago, the European Alps received the largest snow dump in forty years. South America just went through its coldest winter in decades. Sea ice around the Antarctic reached its largest extent since satellite measurements began in 1979. On January 11 it snowed in Baghdad, an event not seen in living memory. All this could still be coincidental, of course. The belief that we can control the climate is too absurd for words. All we can do is try to adapt to climate change, be it warming or cooling.

Dr Gerrit van der Lingen studied geology at Utrecht University in The Netherlands. The subject of his PhD thesis was the geology and structure of an area in the central Spanish Pyrenees. His first job was in Surinam, South America, where he worked in the Amazon jungle for three years. In 1965, he came to New Zealand to join the Sedimentology Laboratory of the NZ Geological Survey. He worked as a private consultant from 1990 and was a Research Associate at the University of Canterbury. From 1991 to 2002 he was involved in paleoclimate research, studying ocean sediment cores from the Tasman Sea and Southern Ocean. He has retired from paid research, but remains active as a climate change consultant and man-made global warming agnostic, giving lectures and writing articles. He is a foundation member of the New Zealand Climate Science Coalition.