

MY THOUGHTS ON GLOBAL WARMING – COMPETING INFORMATION CREATES QUESTIONS

Stephen L. Bakke, December 2007 and April 2011

Competing Information Creates Questions

Here I present two sides of the debate. First I state either an assertion by many alarmists or a common impression held by many in the general public – this followed by the argument from dissenters, or information which seems to contradict the assertion.

- *Assertion or Common Impression:* CO₂ is a significant portion of total greenhouse gases. *Competing Information:* CO₂ comprises 3.6% of total greenhouse gases (the largest by far is water vapor).
- *Assertion or Common Impression:* Humans contribute a large portion of the greenhouse effect. *Competing Information:* Humanity is responsible for about one-quarter of one percent of the greenhouse effect. The effect of ocean biologic activity, volcanoes, decaying plants, animal activity, etc. account for almost 17 times more than humanity. The balance, approximately 95% of the total, is the result of water vapor.
- *Assertion or Common Impression:* CO₂ causes warming which increases water vapor in the upper atmosphere, thus amplifying warming. *Competing Information:* Probably not true because there is no available evidence that upper atmosphere water vapor is increasing.
- *Assertion or Common Impression:* Human's are emitting significant percentages of total CO₂ production. *Competing Information:* Humans contribute approximately 3.4% of annual CO₂ levels compared to 96.6% by nature. Several of the above items emphasize the insignificance of the human "share" or contribution. While humans do contribute to climate change, given the proportions we have seen here, how can humans make the compelling difference being attributed to them by the alarmists?
- *Assertion or Common Impression:* CO₂ is at or approaching historically high levels. *Competing Information:* During the Cambrian Period (550 million years ago) there was an explosion of life forms when CO₂ was 18 times higher than today, and during the Jurassic Periods (dinosaurs were prominent – less than 200 million years ago) CO₂ levels were up to 9 times higher than today.
- *Assertion or Common Impression:* The earth's present average temperature is at relatively high historically levels. *Competing Information:* At present, the average global temperatures are at very low levels if all historically available information is considered – back many centuries, millennia and far beyond.

- *Assertion or Common Impression:* There is absolute certainty that temperature and CO2 levels are closely related. *Competing Information:* Over very long periods of time, covering even millions of years of available data, there is no close relationship between CO2 levels and temperature. However, over the much shorter term (looking at the last 400,000 years), it is clear that the two have moved together, i.e. positively correlated, but with temperature fluctuations occurring **in advance of** CO2 fluctuations (so, what is causing what?).
- *Assertion or Common Impression:* We are at the start of a warming period. *Competing Information:* Historical data suggests that we are currently at the tail end of a warm period.
- *Assertion or Common Impression:* If we look at the much more recent term, we are at a relatively high point for surface temperatures. *Competing Information:* During Roman and medieval times, the Earth was as warm or warmer than it is today. If we look at the last 3 millennia, we are at a very low point in surface temperatures. And if we look at the past century, the Earth's average temperature has risen a little less than 1 degree Celsius, with almost half of this warming occurring before 1940. But note that greenhouse gas emissions began to rise substantially only after 1950. There's some contradiction here.
- *Assertion or Common Impression:* The industrial age has caused an increase in CO2 levels with the increases accelerating greatly in recent decades. *Competing Information:* Partly in agreement – the CO2 increases since the beginning of the industrial revolution (approximately 1750) have been significant, about 35%. But 80% of that increase occurred prior to 1950.
- *Assertion or Common Impression:* The U.S. is taking less action to control CO2 emissions than Europe, wherein reside many of our biggest critics. *Competing Information:* The U.S. has slowed the growth of its emissions far more than the European Union – despite larger population growth and higher economic growth. And in 2006, it was recently announced that the U.S. emissions of CO2 showed an absolute decrease.
- *Assertion or Common Impression:* The debate is over and the science is decided. An insignificant percentage of scientists disagree with the seriousness of the situation presented by Al Gore regarding human contribution to climate change. *Competing Information:* According to a recent survey, approximately 56 percent of climate scientists worldwide believe humans are the cause of global warming.
- *Assertion or Common Impression:* Climate change models predict a high level of global temperature increase in the next century. *Competing Information:* The IPCC presents ranges of information with 6 degrees Celsius at the extreme for the increase in the next century. These models are subject to error and are coming under increased scrutiny. Models already need adjustment as shown in other sections of this report. Both James Hansen of NASA, the father of the greenhouse

theory, and Richard Lindzen of MIT, considered by many the most renowned climatologist in the world, agree that even if nothing is done to restrict greenhouse gases, the world will only see a global temperature increase of about 1 degree C in the next 50 to 100 years. Hansen and his colleagues “predict additional warming in the next 50 years of 0.5 plus or minus 0.2 degree C...” Note that the total increase in average global temperatures over the past century was 0.6 degree C.

- *Assertion or Common Impression:* Sea levels are rising at record levels. *Competing Information:* Sea levels have been rising since the Earth began to come out of the last ice age. However, the rate of sea level rise since 1961 (less than 1/8 inch) is far lower than the historical average.
- *Assertion or Common Impression:* Melting of the Arctic ice cap is contributing to the rising sea levels. *Competing Information:* The Arctic ice cap is floating and any floating ice that melts adds no volume to the water in which it was floating (remember that floating ice displaces an equal mass of water).
- *Assertion or Common Impression:* The polar bear population is decreasing. *Competing Information:* There are approximately 20 different polar bear “populations” (or geographical groups) in the world. Only two of these are decreasing, and recreational hunting can account for the reduction in at least one of these two groups. Curiously, the two populations which are decreasing are in habitats which show measured cooling in recent years. Overall, polar bear numbers increased dramatically from around 5,000 in the 1950s to as many as 25,000 today. This is higher than at any time in the 20th century.
- *Assertion or Common Impression:* Hurricanes are becoming more powerful and prominent in recent years. *Competing Information:* Neither the number, nor the strength of hurricanes has increased outside the normal range since approximately 1945. Data indicates that for the time around 1950 and 1965, more hurricanes occurred than in recent years.
- *Assertion or Common Impression:* Global warming is increasing weather related deaths. *Competing Information:* Worldwide weather related deaths have declined dramatically over the past eight decades due to the fact that while small numbers of heat related deaths can be attributed to global warming as it advances, a far greater number of cold related deaths are avoided. Al Gore used an example of a European country that suffered several dozen more deaths in a recent heat wave. What was omitted was that the same year, which was warmer than normal, exhibited far fewer cold related deaths than normal – the net result was a significant reduction of “temperature” related deaths overall for the year in question. A good example of partial truths being told.
- *Assertion or Common Impression:* Malaria deaths are increasing due to global warming. *Competing Information:* Rather than warming being the problem, DDT is the problem – not the use of it but the lack of use of it. Many millions of

people have died needlessly from malaria since the use of DDT was eliminated several decades ago. It is now generally accepted that using DDT in the right volumes is very safe and effective – even indoors! In the case of malaria, the amount necessary to kill the offending mosquitoes is very small. Its acceptance is slowly coming back but must overcome an unfair stigma. As a footnote to this point, the elimination of DDT came almost directly as a result of Rachel Carson's 1962 book "Silent Spring" in which she made largely unfair and unsubstantiated attacks on DDT and other "Killer Chemicals". Incidentally, Al Gore has pledged his loyalty to Ms. Carson – his environmental mentor.

- *Assertion or Common Impression:* Droughts are occurring more frequently due to global warming. *Competing Information:* Natural variability has produced more frequent and longer droughts in the past than we experience today.
- *Assertion or Common Impression:* There are no advantages to CO₂ increases. *Competing Information:* Historical records, and laboratory results, show that plants grow bigger and faster with increased levels of CO₂. It is like a plant food and most plants evolved at times when CO₂ levels were much higher than today.
- *Assertion or Common Impression:* The Kyoto Protocol is essential to stopping global warming. *Competing Information:* This is an international treaty designed to reduce greenhouse gas emissions from industrial countries an average of 5% below their 1990 levels by 2012. Even if all of the countries complied, the Earth would be only marginally cooler by 2100 (less than .2 degree Celsius).
- *Assertion or Common Impression:* Developed countries alone can prevent global warming. *Competing Information:* Developing countries currently don't have to comply with the treaty. Greenhouse gas concentrations will continue to increase despite CO₂ cuts in developed countries because the fast growing developing countries (China, India, South Korea, Brazil, and Indonesia) will account for as much as 85% of the projected increase over the next two decades.
- *Assertion or Common Impression:* Al Gore's presentation addresses the concept of thermohaline circulation in the oceans. He uses the term "ocean conveyor" and says global warming will "shut down" this circulation, thereby plunging Europe into an ice age. *Competing Information:* Disruption perhaps, "shut down" no – it is universally accepted that the thermohaline circulation cannot be and will not be shut down by global warming. Mr. Gore's co-winner of the Nobel, the IPCC also takes exception to his assertion.
- *Assertion or Common Impression:* Mr. Gore says that in each of the last four interglacial warm periods it was changes in carbon dioxide concentration that caused changes in temperature. *Competing Information:* It was the other way around. Changes in temperature preceded changes in CO₂ concentration by between 800 and 2800 years. One of Mr. Gore's scientific sources also points out

this error. The scientific literature is almost unanimous on this as pointed out by the judge in the British lawsuit referred to on page 6.

- *Assertion or Common Impression:* Mr. Gore says global warming has been melting the snows of Mount Kilimanjaro in Africa. *Competing Information:* The melt of this glacier began 125 years ago. More of the glacier had disappeared before Hemingway wrote “The Snows of Kilimanjaro” in 1936 than afterward. Temperature at this glacier has never risen above freezing. The likely cause is climate shifts exacerbated by imprudent regional deforestation – thus the area can’t melt but has been drying. The “melting” is most likely just evaporation.
- *Assertion or Common Impression:* Hurricane Katrina was man-made according to Al Gore – global warming was the cause. *Competing Information:* Refer to a prior comment on the data related to hurricanes and global warming on page 11. It was not a record setting storm for intensity. The damage and suffering was exceptional due to the failed levee and other failed infrastructure.
- *Assertion or Common Impression:* Arctic temperature increase has caused the massive melting of the icecap. *Competing Information:* In November 2007, a team of NASA and university scientists detected an ongoing reversal in Arctic Ocean circulation triggered by atmospheric circulation changes that vary on decade-long time scales. And in December 2007 it was determined that fewer clouds resulted in more sunshine, thereby warming arctic waters more than normal. This is attributed to normal weather pattern variability. These phenomena contributed to Arctic melting previously attributed exclusively to temperature increase. This, in part, helps me accept the difficult concept that overall, the Arctic has in fact been cooling over the past 60 years, and is now 1 degree Celsius cooler than it was in the 1940s. There were many reports that the so-called “Northwest Passage” was free of ice in 2007 and that this was the first time since records began – but these records go back only to the 1970s. In fact, the Northwest Passage had also been open for shipping in 1945. In 1903 the great Norwegian explorer Roald Amundsen passed through it in a sailing ship. This is not the thing upon which myths are made – it apparently was very real, very recently.
- *Assertion or Common Impression:* Again referring to Mr. Gore addressing glacial melt, he states that 40% of the world’s population gets their water supply from Himalayan glacial melt waters and that these are failing because of global warming. *Competing Information:* They don’t, and they are not. The water comes almost entirely from snow melt and not from ice melt. And over the past 40 years there has been no decline in the amount of snow melt in Eurasia.
- *Assertion or Common Impression:* Al Gore represents that glaciers worldwide are disappearing. *Competing Information:* The glacial melt began in the 1820s, long before humans could have had any effect, and has continued at a uniform rate since. It has shown no acceleration since humans began increasing the quantity of

CO₂ in the atmosphere. In fact, total ice volumes in three of the last four Ice Ages were lower than they are today. Man-made global warming certainly had nothing to do with that.

- *Assertion or Common Impression:* Greenland ice is breaking up and in serious decline endangering many things including the sea levels, ocean currents, and European climate. *Competing Information:* There are areas in Greenland where the ice has been reducing. But only Greenland's southern glaciers are melting. A 2006 study in the Journal of Geophysical Research demonstrated that Greenland is in a prolonged cold spell unequalled since the 1910s. The December 2005 issue of Journal of Glaciology reports that the Greenland ice sheet is, overall, growing and thickening rather than shrinking. This was from a study conducted by Norwegian, Russian, and American scientists. And in December 2007, a scientific study was released indicating that "hot spots" under Greenland caused some of the apparent melting. Magma is warming the ice where the earth's crust is thinnest. The cause of these "hot spots" is not known.
- *Assertion or Common Impression:* Continuing the question of Greenland's ice sheet, as presented on a 2006 CBS News "60 Minutes" segment, correspondent Scott Pelly claimed that the ice in Greenland was melting so fast that he barely got off an iceberg before it collapsed. *Competing Information:* The impression left is clear and vivid – and incorrect. "60 Minutes" failed to inform its viewers that a 2005 study by a scientist named Ola Johannessen and his colleagues showed that the interior of Greenland is gaining ice mass and that, according to scientists, the Arctic was warmer in the 1930s than today. Again partial truths seem too common in this debate.
- *Assertion or Common Impression:* The Antarctic ice sheet is melting due to global warming. *Competing Information:* Mean Antarctic temperature has actually fallen throughout the past half-century. Total Antarctic sea ice spread to a 30 year record in 2007. In fact, the National Oceanic and Atmospheric Administration reports that Antarctic sea ice is currently at its greatest extent in recorded history, showing that sea ice retreat is local rather than global. For example, Mr. Gore specifically dealt with a reduction of a specific ice shelf which is located on the Antarctic Peninsula. This is the northernmost section of Antarctica and it is wrong and very misleading to imply that this small area should represent the entire continent. Unfortunately, there's no question of the message conveyed.
- *Assertion or Common Impression:* Al Gore refers to carbon dioxide as "global warming pollution". *Competing Information:* It is not. It is food for plants and trees. Even at levels many times greater than today's concentrations (which I am not suggesting would be OK!), even the most delicate plants flourish. CO₂ is essential and, in geological timescale, currently has a very low concentration.
- *Assertion or Common Impression:* Al Gore says that the prediction that atmospheric concentration of carbon dioxide will rise to more than 600 parts per

million by volume as soon as 2050, is “not controversial in any way or in dispute by anybody”. *Competing Information:* Not one of the half-dozen official projections of growth in CO₂ concentration made by the IPCC (Gore’s co-winner of the recent Nobel Peace Prize) shows as much as 600 parts per million by 2050.

While more could be presented, that is enough to illustrate the continuing debate.