

# **Climate Change: Breaking the "Political Consensus"**

The Science of Climate Change: What does it Really Tell Us?

By <u>Andrew Gavin Marshall</u> Global Research, August 07, 2008 7 August 2008 Theme: <u>Environment</u> In-depth Report: <u>Climate Change</u>

The purpose of this report is to examine the science behind climate change so as to better understand the issue at hand, and thus, to be able to make an informed decision on how to handle the issue. The primary aim here is to examine climate change from a perspective not often heard in media or government channels; that of climate change being a natural phenomenon, not the result of man-made carbon emissions.

#### The "Science" of Consensus

When addressing the issue of climate change, it is important to understand that climatic change is an important field of study in science. However, it is not an exact science, like all sciences. Our understanding of the climatic sciences is always changing, just as our understanding of all sciences changes. If our understanding of science does not change, we would still think that the Earth was flat and the Sun revolved around our little planet. When these great achievements in science were first discovered, the scientists who discovered them were attacked, denounced, or even imprisoned.

There is an enormous political, social and economic interest in a scientific consensus, because it determines our understanding of our environment and all that is in it, including humanity, itself. A challenge to a perceived consensus is a challenge to all the powers in human society, as it can take a person's understanding of the world we live in, and flip it upside down. This encourages people to think "outside the box," fosters creativity and to be critical thinkers. This can ultimately threaten any power structure, as people may come to understand the forces that seek to control our lives. A consensus is an amazing tool in the hands of elites to control and manipulate people. And challenging a consensus is an amazing tool for people to remain free and independent thinkers.

This does not mean that any perceived consensus is inaccurate or completely manipulated. But it is important to understand how such a consensus can be used. It is also vital to understand that without questioning and challenging a scientific consensus, science would never advance. The key to scientific discovery is being able to change your perspective as the science changes. This is why debate on climate change must not be simply reduced to a one-sided debate; those who "know there is a problem," and those who are "deniers." All sides must be heard, so that we can come to a better understanding of the issue.

We hear consistently the one side of the debate, that climate change is caused by increased Carbon dioxide (CO2) in the atmosphere, and that humans are the greatest contributor of this toxic greenhouse gas, and thus, the greatest contributor to climate change, and that there will be catastrophic consequences as a result. I hope to give voice to the other side of the debate.

## A Brief Climate History

First of all, it is important to note that climate change is not new. There has always been climate change, and there will always be climate change. After all, there was a period known as the Ice Age, which was a long-term period of reduction in global temperatures. This expanded the continental ice sheets and glaciers. The Greenland and Antarctic ice sheets were created in this period. The ice age left its imprint upon our environment, forming valleys, fjords, rock formations, and the like as glaciers advanced across the continents. As they receded when the ice age passed, it left the landscape altered and free for plant growth and life to flourish. The Great Lakes between Canada and the United States were carved out by ice. Following the Ice Age, the Halocene period began roughly 12,000 B.C. All human civilization has occurred within the Halocene period.

During the Halocene period, there was both global warming and cooling periods, which have lasted until today. During the period of 10,000 to 8500 BC, there was a slight cooling period known as the Younger-Dryas. However, that passed, and between 5000 and 3000 B.C., temperatures increased to a level higher than today. This period is referred to as the Climatic Optimum. It was during this warming period in history that Earth's first great human civilizations began to flourish, such as ancient African civilizations around the Nile.[1]

Between 3000 and 2000 B.C., a cooling period occurred, resulting in a drop in sea levels, from which islands such as the Bahamas emerged. There was a subsequent warming period between 2000 and 1500 B.C., again followed by a cool period, which led to glacial growth. The Roman Empire (150 B.C. – 300 A.D.) occurred during a cooling period, which went until roughly 900 A.D. During the period of 900 A.D. until 1200 A.D., a warming period occurred known as the Medieval Warming Period, or Little Climatic Optimum, which was warmer than today, allowing settlements to flourish in Greenland and Iceland.

Then a cooling period followed and between 1550 and 1850, temperatures were colder than at any other time since the end of the previous Ice Age, leading to what has been called the Little Ice Age. Since 1850, there has been a general warming period.[2]

## CO2 and Temperature

This latest warming period has also coincided with the Industrial Revolution, which saw the greatest output of human induced CO2, leading many, like Al Gore, to compare the rise in CO2 levels with the rise in temperatures, drawing a conclusion that the rise in CO2 in the earth's atmosphere was the determining factor in the rise in temperatures. However, if one studies statistics and how to read and interpret stats and graphs, one of the primary lessons is that correlation does not imply causation. Simply put, two factors lining up on a graph, does not necessarily imply that there is a cause and effect relationship. One could take a graph of increases in temperatures and increases in the consumption of peanuts, and they may line up. However, common sense will tell us that eating peanuts does not increase global temperatures. Simply because there appears to be a correlation between the two, that does not imply that there is a cause and effect relationship.

When it comes to CO2, however, there is a much more important factor to analyze than simply statistical interpretation. Al Gore popularized the CO2/temperature connection in his movie, *An Inconvenient Truth*, in which he showed the *correlation* between the two on a graph. However, he interpreted the graph as evidence of a cause and effect relationship. His information came from an ice core sample related to CO2 emissions in the atmosphere.

However, paleoclimatologist and earth sciences professor at USC, Lowell Stott, released findings of a study in September of 2007, which concluded that, "Deep-sea temperatures warmed about 1,300 years before the tropical surface ocean and well before the rise in atmospheric CO2" at the ending of the last ice age, which "suggests the rise in greenhouse gas was likely a *result* of warming," not the cause of warming.[3] [Emphasis added]

As well as this, an ice core sample of air bubbles in 2003, "revealed a precise record of atmospheric greenhouse gas concentrations" and concluded that, "the CO increase lagged Antarctic deglacial warming by 800 +/- 200 years and preceded the Northern Hemisphere deglaciation." Simply put, the analysis of the ice core samples, published in *Science Magazine*, reported that CO2 increases lagged *behind* temperature increases by roughly 800 years.[4]

In statistics, this is what is called a "lurking variable," meaning a hidden variable that can have an outcome on the results of a statistic without having been taken into consideration in the statistic's interpretation. For example, Al Gore's graph showed a correlation between CO2 increases and temperature increases. The interpretation he gave was that the correlation implied causation; that because they lined up, there was an established relationship, and that relationship was defined as CO2 increases driving temperature. However, the lurking variable was that he did not take into consideration whether CO2 followed temperature increases, as the ice core samples have shown, but he rather chose to conclude that because they line up on a graph, CO2 is therefore the driver. This is bad science and statistical analysis at best, or intentional political deception at worst.

## A Lesson in Weather and Carbon

I want to briefly cover what factors affect our weather on Earth and what greenhouse gases are so that we can better understand the science of climate change. Weather takes place in the atmosphere, which is the layer of air directly surrounding the Earth. Air is simply a mix of gases, the most plentiful of which is nitrogen, making up 78% of the air we breathe. Oxygen is 21% of the air we breathe, and the other 1% is a variety of different gases.

Weather tends to occur in the lowest level of the atmosphere, the troposphere. Air temperature, air pressure and humidity are the three factors that determine weather in the troposphere. The most important factors in determining temperature in the atmosphere are radiation arriving from the Sun and flowing from the Earth.

The Sun sends energy into space in a variety of ways. There is visible light, infrared heat rays and ultraviolet rays. Roughly 30% of solar radiation coming into the Earth's atmosphere is reflected back out to space by clouds, while the remaining 70% is absorbed into the atmosphere, increasing the temperature. This is what is known as the greenhouse effect. Air temperature changes from day to night and season to season, as the amount of radiation from the Sun changes, largely determined by our planet's tilt towards the Sun. The equator is the exception to the changing temperature with seasons, because it generally receives equal radiation from the Sun year-round.

Air pressure, the second determining factor in weather, is "the weight per unit of area of a column of air that reaches to the top of the atmosphere," with pressure decreasing the higher you get, because there is less air above you. Humidity, the third main factor in determining weather, is a measure of the amount of water vapor in the air. The amount of water vapor that air can hold increases with temperature increases and decreases as

temperatures decrease. When relative humidity is at 100%, water vapor condenses and forms droplets, changing from a gas to a liquid.[5]

We often hear of "greenhouse gases" as being bad things. Yet, water vapor is the largest greenhouse gas of all. Carbon dioxide follows, with methane, nitrous oxide, ozone and many smaller gases. Water vapor is by far the largest greenhouse gas in the atmosphere, making up a much greater percentage than the gases that follow it.

CO2, or Carbon Dioxide, is produced by all plants, animals, fungi and microorganisms, and it is then absorbed by plants. As people breathe in oxygen, we then breathe out carbon dioxide, plants take it in through photosynthesis, and thusly emit oxygen for us to breathe in.

Carbon dioxide cannot be so simply classified as a toxin. In fact, it is a life accelerant. Recent research has shown that "shifts in rainfall patterns, cloud cover, and warming temperatures triggered a 6 percent increase in the amount of carbon stored in trees, grass, shrubs, and flowers," in particular in the Amazon rain forests, which saw the greatest growth rates in the world.[6] The study, conducted from 1982 to 1999, showed that "global climate change has eased climatic constraints on plant life around the globe, allowing vegetation to increase 6 percent."[7] Vegetation was taking in increasing amounts of CO2 in North America between 1982 and 1998, and "increased atmospheric CO2 and climate change are the primary causes of the recent U.S. vegetation increases."[8]

A NASA study revealed in 2001, that, "when the atmosphere gets hazy, like it did after the eruption of Mt. Pinatubo in the Philippines in June 1991, plants photosynthesize more efficiently, thereby absorbing more carbon dioxide from the atmosphere," as volcanoes emit massive amounts of CO2 during an eruption.[9] Another study conducted in 2006 revealed that, "Diversity increases as the planet warms and decreases as it cools," yet, deforestation can reverse this effect, simulating the effects of a global cooling trend.[10]

In 2007, a new study revealed that as icebergs break off from Antarctica, "some as large as a dozen miles across – are having a major impact on the ecology of the ocean around them, serving as 'hotspots' for ocean life, with thriving communities of seabirds above and a web of phytoplankton, krill, and fish below," and that the icebergs "can serve as a route for carbon dioxide drawdown" as it sinks into the sea.[11]

In 2002, it was reported that, "The southern Saharan desert is in retreat, making farming viable again in what were some of the most arid parts of Africa," and that, "dunes are retreating right across the Sahel region on the southern edge of the Sahara desert. Vegetation is ousting sand across a swathe of land stretching from Mauritania on the shores of the Atlantic to Eritrea 6000 kilometres away on the Red Sea coast," which was largely attributed to increases in rainfall.[12] A scientific study conducted in the Netherlands predicted that global warming "could significantly increase rainfall in Saharan Africa within a few decades, potentially ending the severe droughts that have devastated the region," which could in effect cause a "greening of the Sahara."[13]

## What Causes Climate Change?

If CO2 increases lag behind temperature increases, it does not make sense that CO2 can be the cause of temperature increases. It would be the equivalent of saying that growing older is *caused* by the graying of hair; there appears to be a cause and effect relationship, it is just of vital importance to understand which is the cause and which is the effect. So, from here we must examine what some major causes of climatic change can be.

The most important factor in climatic changes is what is called solar variations. This refers to radiation emitted from the Sun and its variations, in particular, the sunspot cycle. Sunspot cycles are the irregular rises and drops in the number of sunspots, which are regions on the Sun's surface, which have lower temperatures than its surrounding area and strong magnetic fields. The cycles tend to last 11 years.

An important thing to note is that Earth is not the only planet that experiences climate change, as in 2002, it was reported that Pluto was "undergoing global warming in its thin atmosphere," likely due to it's orbit, which, "significantly changes the planet's distance from the Sun during its long 'year,' which lasts 248 Earth years."[14] In 2006, it was reported that a new storm on Jupiter could indicate that the planet is "in the midst of a global change that can modify temperatures by as much as 10 degrees Fahrenheit."[15] As far back as 1998, it was reported that Neptune's largest moon, Triton, "has been undergoing a period of global warming," since 1989.[16] This could have much to do with the fact that, as reported in 1997, the "Sun is getting hotter," leading some scientists to say that Earth's global warming "is part of a natural cycle for the planet."[17]

In 2004, the *Telegraph* reported that, "Global warming has finally been explained: the Earth is getting hotter because the Sun is burning more brightly than at any time during the past 1,000 years, according to new research." The study, conducted by Swiss and German scientists, "suggests that increasing radiation from the sun is responsible for recent global climate changes." Interestingly, the Sun "is brighter than it was a few hundred years ago and this brightening started relatively recently – in the last 100 to 150 years," coinciding with the warming trend experienced since the Industrial Revolution.[18] This is what can be referred to as a "lurking variable" in Al Gore's analysis of his graphs of carbon and temperature increases since the Industrial Revolution. It is a lurking variable because though the temperatures and carbon emissions match up on a graph, it doesn't take into account other factors that may influence the statistics, such as increasing radiation from the Sun, which also correlates with increasing temperatures.

National Geographic News quoted a scientist in 2007 that, "Simultaneous warming on Earth and Mars suggests that our planet's recent climate changes have a natural—and not a human-induced—cause." Mars' ice caps had been diminishing for three years in a row, and the scientist, "Habibullo Abdussamatov, head of space research at St. Petersburg's Pulkovo Astronomical Observatory in Russia, says the Mars data is evidence that the current global warming on Earth is being caused by changes in the sun." He further stated that, "changes in the sun's heat output can account for almost all the climate changes we see on both planets."[19] A NASA study in the same year also reported that Mars warmed since the 1970s, "similar to the warming experienced on Earth over approximately the same period," which, they conclude, "suggests rapid changes in planetary climates could be natural phenomena."[20] A study in 2007 on climatic changes on Earth and Neptune suggested that, "some planetary climate changes may be due to variations in the solar system environment."[21]

In 2006, a study was conducted regarding Venus being the "solar system's most inhospitable planet." A planetary scientist at Oxford University stated, "It's very disturbing that we do not understand the climate on a planet that is so much like the Earth," and that, "It is telling us that we really don't understand the Earth. We have ended up with a lot of mysteries." Venus was "unbelievably hot, dense, and had virtually no oxygen." Venus has a very pronounced greenhouse effect, as its "thick atmosphere traps solar radiation and heats the world to boiling point." Scientists say that Venus being closer to the Sun than Earth is a factor, yet, there may be other factors. One brought up was that Venus' atmosphere is almost entirely made up of CO2, which is effective at trapping heat. CO2 is roughly 95% of Venus' atmosphere, compared to Earth's atmosphere, which is 0.038% CO2, so it is extremely understandable that CO2 would have a greater effect upon Venus than Earth. The question as to why Venus has so much CO2 may be because it lost its water, whereas on Earth, "carbon dioxide is absorbed by the oceans, where it forms carbonate minerals and over the millennia is deposited as rock. That process was arrested early on Venus when it lost its oceans."[22] Perhaps we should put more focus into preserving and protecting our oceans.

#### Get Your Parka, Here Comes Global ... "Cooling"?

There is a *little* problem with the whole "global warming" consensus, in that recent scientific research has shown that, "A study of sea temperature changes predicts a lull as traditional climate cycles cancel out the heating effect of greenhouse gases from pollution," and that, "Global warming will be 'put on hold' over the next decade because of natural climate variations."[23] In other words, the natural climate cycles that Earth goes through, and always has gone through, has changed once again, just as a political consensus was reached. This is very significant because if CO2 was the prime cause for recent warming, and CO2 consumption has not gone down, yet, the Earth's climate has engaged on a cooling trend, this appears to pose a problem for the CO2 hypothesis.

This cooling trend is supported by many recent events. In 2008, "Snow cover over North America and much of Siberia, Mongolia and China is greater than at any time since 1966," and China went through its most brutal winter in a century. Also, when we are told that the Artic Sea ice is melting to its "lowest levels on record," it is important to note that the records date back to 1972, and "that there is anthropological and geological evidence of much greater melts in the past." As it turns out, the ice itself has not only recovered from melting, but has grown thicker in many places. With the previous melting of the Arctic, we have been told it was caused by human activity and will result in catastrophe. However, climate modelers, predicting the future climate with computer models based upon information they provide, such as CO2 consumption, are highly inaccurate, as, "Climate models until now have not properly accounted for the wind's effects on ocean circulation, so researchers have compensated by over-emphasizing the role of manmade warming on polar ice melt."[24]

Many places have experienced unusual cold and snowfalls in the last year. Argentina got its first snowfall in Buenos Aires since 1918,[25] Johannesburg, South Africa, experienced snow for the first time in 26 years,[26] Baghdad experienced snow for the "first time in living memory,"[27] and Saudi Arabia went through sub-zero temperatures and snow storms, making it the coldest winter in over 20 years.[28]

Even the *BBC* reported that temperatures will decrease, "as a result of the cold La Nina current in the Pacific,"[29] which is a natural phenomenon, and has a large effect on increasing cyclonic activity in the Atlantic. It's interesting how La Niña and El Niño have disappeared from discussion on climate and hurricanes. Today, whenever there is a hurricane or natural disaster, it is instantly blamed on global warming and having been accelerated by human activity. Even Al Gore's movie poster pictured a smoke stack with a

hurricane coming out the top. An MIT climate scientist, who previously wrote about the link between hurricane energy and warming, produced a study in 2008 where he changed his pervious claims, saying that its not a clearly defined connection, saying there is a "lot of uncertainty," and he was quoted as stating, "It's a really bad thing for a scientist to have an immovable, intractable position."[30]

In March of 2008, *NPR* reported that after a survey of the ocean by 3,000 scientific robots, information was retrieved that showed that, "the oceans have not warmed up at all over the past four or five years. That could mean global warming has taken a breather." The article quotes a NASA scientist as saying that, "the oceans are what really matter when it comes to global warming."[31]

In July of 2008, a major peer-reviewed journal of the American Physical Society, *Physics and Society*, concluded that the UN Intergovernmental Panel on Climate Change (IPCC) report "overstated" the effects of CO2 on temperature in their climate models by between 500 and 2000%. The paper concluded that there is no "climate crisis." The paper further reported that CO2 will add "little more than 1°F (O.6°C) to global mean surface temperature by 2100;" that the IPCC report took their predictive information from four published papers, not 2,500, as was claimed; that "global warming" stopped ten years ago; the IPCC overstated the "effect of ice-melt by 1000%"; that 50 years ago, it was proved that "predicting climate more than two weeks ahead is impossible"; and that an important factor in explaining the previous warming was that, "In the past 70 years the Sun was more active than at almost any other time in the last 11,400 years."[32]

## What About the Consensus?

We are often told, (especially by Al Gore), that on the issue of the effects of human activity on climate change, there is a "scientific consensus" on humans being the primary cause. If the above information does not provide some proof as to a lack of consensus on the subject, perhaps the fact that for the UN-organized 1992 Rio Earth Summit, which concluded that, "global warming and other environmental insults were threatening the planet with catastrophe," was countered with a petition of scientists decrying, "the unsupported assumption that catastrophic global warming follows from the burning of fossil fuels and requires immediate action." The number of signatories to the petition eventually reached 4,000 scientists, including 72 Nobel Prize winners. In 2000, to counter the Kyoto Protocol, a petition was made up of "1,500 clergy, theologians, religious leaders, scientists, academics and policy experts concerned about the harm that Kyoto could inflict on the world's poor."[33]

A current petition makes the statement that, "There is no convincing scientific evidence that human release of carbon dioxide, methane, or other greenhouse gasses is causing or will, in the foreseeable future, cause catastrophic heating of the Earth's atmosphere and disruption of the Earth's climate. Moreover, there is substantial scientific evidence that increases in atmospheric carbon dioxide produce many beneficial effects upon the natural plant and animal environments of the Earth." This petition has been signed by over 31,000 scientists.[34]

The former editor of *New Scientist* magazine, Nigel Calder, wrote that, "When politicians and journalists declare that the science of global warming is settled, they show a regrettable ignorance about how science works." He explained how roughly 20 years ago, "climate research became politicized in favour of one particular hypothesis," and that the media,

"often imagine that anyone who doubts the hypothesis of man-made global warming must be in the pay of the oil companies. As a result, some key discoveries in climate research go almost unreported." He also explained the results of a scientific study conducted in 2001 in Denmark, which found that, "cloudiness varies according to how many atomic particles are coming in from exploded stars. More cosmic rays, more clouds. The sun's magnetic field bats away many of the cosmic rays, and its intensification during the 20th century meant fewer cosmic rays, fewer clouds, and a warmer world. On the other hand the Little Ice Age was chilly because the lazy sun let in more cosmic rays, leaving the world cloudier and gloomier."[35] So not only is the Sun a determining factor, but so are cosmic rays.

## Conclusion

I won't state exactly what is causing climate change on our planet, as the reality is that there are many answers to that question; the Sun, cosmic rays, ocean currents and other natural phenomena, etc. However, it is safe to say that the wealth of science points to a natural change in our climate, and the entire history of the world and of all humanity supports this hypothesis. Throughout history, as in the earliest African civilizations, it was the ability of different peoples to change and adapt to climate change, which determined their survival as a civilization.

Today, we are trying to fight it. This is a dangerous road to walk, and history will not look kindly upon our scientific ignorance and politically fear-driven society. How will we be viewed in the future? How have we viewed the people of the past who thought the Earth was flat, or the Sun revolved around Earth?

Trying to fight and stop a natural phenomenon is possibly one of the most ignorant and dangerous things humanity has ever engaged in. How would history view a civilization that tried to reverse the spinning of the Earth, or the blowing of wind? It is a recipe for the fall of a civilization.

Much of the people in the world have been riled up with predictions of a catastrophic end to mankind and the world unless we don't do something about so-called "man-made" climate change. Ironically enough, our refusal to adapt to a changing world, and instead a determination to fight it with our efforts to "go green" and "carbon neutral" may, in fact, *cause* the catastrophic end of our civilization. And sadly, in this instance, it would undeniably be a man-made disaster.

# Notes

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