

A Layman's musings on Climate Change

Leonard Gaston

"Greenland and Antarctic ice sheets may melt, raising sea levels by 40 feet." That headline caught my attention. It was December of 2007, and the government of Indonesia had just hosted, in Bali, a gathering of UN officials, government personnel, representatives of the news media, and others. Its purpose was to announce the publication of the fourth report of the UN's Intergovernmental Panel on Climate Change (IPCC). The meeting's official title was "The 13th session of the Conference of the Parties to the UNFCCC and the 3rd session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol". Some ten thousand people attended.

Curious about sea levels rising by 40 feet, I found the IPCC "Summary for Policy Makers" on the internet. There was a difference between the official forecasts and that news story. Page 13 of the Summary forecast possible sea level increases of only .18 meters to a worst case maximum of .59 meters by the end of the 21st century. An unnamed UN official had told a reporter this, and apparently without bothering to read the Summary, that person had sent it to his or her editor, and it appeared in print.

Even according to IPCC-developed computer models—which (I found out later) critics maintained overstated any likely temperature changes—page 17 of the summary stated that, *"Current global model studies project that the Antarctic Ice Sheet will remain too cold for widespread surface melting and is expected to gain in mass due to increased snowfall."*

Intrigued, I wanted to read more and learn more. The first thing I learned was that journalistic hyperbole on the subject of climate was nothing new. The New York Times, between 1895 and 2008, had warned of four separate climate changes. The magazines Science, Time, and Newsweek in 1971, 1974, and 1975 respectively, had predicted ice ages and world-wide food shortages.

As of 2020, the IPCC has now gone through five cycles and delivered five Assessment Reports. Reports are published every 6 to 7 years; the latest, the Fifth Assessment Report, was completed in 2014, and was used as input to what was called "The Paris Agreement". In February 2015, the IPCC decided to produce a Sixth Assessment, including another "Synthesis Report". It is forecast for 2022. The basic thesis of past reports has been that "Global Warming" is a man-made problem with potentially dire consequences. An interim report was issued in 2018. It will be referred to later.

The term "Climate Change" has become common. Wikipedia defines the term.:

The rising average temperature of Earth's climate system, called global warming, is driving changes in rainfall patterns, extreme weather, arrival of seasons, and more. Collectively, global warming and its effects are known as climate change.

Most of us have climbed into an automobile that had been parked in the sun on a summer day, windows rolled up, and found the interior warmer than the temperature outside. Radiant energy from the sun has readily penetrated the glass windows of the vehicle, warming the interior. But lower frequency heat waves given off by the interior do not so easily flow back out the windows. If the car is equipped with air conditioning, we hasten to start the engine and turn it on. On a cold but sunny winter day, a car similarly parked could have a comfortable interior temperature.

The same phenomenon is said to operate globally, with the earth's atmosphere acting much as the auto's window glass.

The atmosphere is composed primarily of nitrogen—78 percent, with 21 percent oxygen, argon—just under one percent, carbon dioxide—.04 percent, and trace amounts of neon, helium, methane, krypton and hydrogen, as well as water vapor.

Although there is no distinct boundary, scientists say the atmosphere meets outer space at the “Karman Line” about 62 miles above the surface. The troposphere, the layer closest to Earth's surface, is 4 to 12 miles thick and contains half of Earth's atmosphere. Most water vapor, dust, and other particles—ingredients of cloud formation—are in this layer.

Concerns over global warming are based on the assertion that countries such as the U.S., Japan, China, and those in Europe use “fossil fuels” (coal, petroleum, and natural gas) for production, transportation, and heating, and that combustion of these products produces carbon dioxide which enters the atmosphere. IPCC computer models have been used to forecast rising global temperatures due to increased levels of carbon dioxide.

Carbon dioxide (CO₂) has been labeled a “greenhouse gas”, and federal and United Nations control of ‘greenhouse gasses’ has been proposed to avert planetary disaster.

At this point, I felt the subject called for more research.

With publication of that fourth report, the one that first caught my interest, former UN chief Kofi Annan demanded that world leaders give climate change the same priority they did to wars and curbing the spread of weapons of mass destruction. He lacerated politicians and scientists who denied there was any threat as “... *out of step, out of arguments and out of time.*” Adam Steiner, UN Environmental Program executive director, was quoted as saying, “*While the science will continue to evolve and be refined, we now have the compelling blueprint for action.*” Michel Jarraud, Secretary-General of the World Meteorological Organization, was no less emphatic, “*The science of climate change has been finally and forever heard in 2007.*”

There was a curious thing about how the fourth report was issued. There were to be three scientific reports, on which conclusions for a Synthesis report and a Summary

of Policy Makers would be based. However, in what struck me as a ‘cart before the horse’ process, the latter were published first, and the scientific reports months later.

The fourth assessment report stated that Himalayan glaciers were rapidly melting, and would possibly be gone by the year 2035. In my reading much later, I discovered that the Himalayan claim was not based on peer-reviewed scientific data, but on speculation in a phone interview with a single scientist. The claim was false, but the IPCC cited it as proof of man-made global warming.

The Sunday Times of London later reported that, based in large part on the fraudulent glacier story, *“(IPCC Chairmam) Rajendra Pachauri’s Energy and Resources Institute, based in New Delhi, was awarded up to 310,000 pounds by the Carnegie Corp... and the lion’s share of a 2.5 million pound EU grant funded by European taxpayers.”*

What seemed to this layman a puzzling deficiency in the IPCC reports was this: the authors placed great faith in their models to predict, with precision, global temperatures decades in the future if UN prescriptions for prevention were not followed. But no attempt was made to input those policy prescriptions into the models and predict their impact. In fact, page 18 of the Summary for Policy Makers stated, *“... no scenarios are included that explicitly assume implementation of the United Nations Framework Convention on Climate Change or the emissions targets of the Kyoto protocol.”*

It was as if was as the report was saying. *“Our models predict it will be really bad if you don’t do what we say, but we refuse to use the models to predict how much better, if any, the situation would be if you did do what we say.”*

Had checks been made on the reliability of these IPCC computer models?

One study house, The National Center for Policy Analysis, analyzed the IPCC report and had this to say: the UN report is *“... an unreliable tool for determining future public policy”*, because the projections are not the result of scientific analysis. Rather, they are opinions *“... derived from a political process.”*

According to the Center, there are 140 principles that have been established by experts in the forecasting field, and they are found in the internationally accepted Principles of Forecasting Handbook. Some 127 were judged to be relevant to the procedures used by the IPCC. The IPCC clearly violated sixty—almost half—and appeared to violate another dozen. The report did not contain enough information to determine if another 38 were used. Only 17 of 127 applicable, internationally accepted principles could be shown to have been followed by the IPCC. One of the NCPA analysts then asked *“How many jobs are there where you can do only 13 percent of what is required and still remain employed?”*

It seemed to me there was reason to question the temperature forecasts produced by the IPCC models.

A developing feeling of unease was strengthened when I read a letter sent to then-Secretary general of the United Nations Ban Ki-Moon by 130 scientists. In that letter they advised the Secretary that climate change is a natural phenomenon that has affected humans through the ages.

These scientists then signed their names to seven critical points:

- “... *the IPCC’s conclusions are quite inadequate as justification for implementing policies that will markedly diminish future prosperity.*”
- The current UN focus on “fighting climate change” is distracting governments from adapting to the threat of inevitable natural climate changes, whatever form they may take.
- “... *Attempts to prevent global climate change from occurring are ultimately futile, and constitute a tragic misallocation of resources that would be better spent on humanity’s real and pressing problems.*”
- “*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 surface and 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 environment of the earth.*”
- “*One highly credible estimate indicates that if fully ten percent of the world’s energy sources of all types were replaced with one thousand non-CO2 emitting nuclear power plants by 2020, this would be equivalent to cutting U.S. emissions in half. ... Based on IPCC-type projections, this would slow the warming of the planet by only two tenths of a degree Fahrenheit.*”

Prior to the fourth report, articles about global temperatures described something called the “hockey-stick” graph. According to the hockey stick graph, the earth’s temperature had a long, flat history like the shaft of a hockey stick which suddenly turned upward with the arrival of industrialization, much like the lower end of a hockey stick. But analysis showed that curve form depended on data manipulation and it essentially disappeared.

Was there any reason to question the purity of motivation of participants?

News stories that appeared in the U.K. Daily Mail in late 2009 and 2010 put the finishing touch on my growing lack of faith in the UN climate models. We might understand why political figures with something to gain would enthusiastically support the idea of dangerous global warming—but why would scientists? Emails mistakenly put on a public server at the University of East Anglia’s Climate Research

Unit told the world why. These Emails revealed that global warming alarmists had worked in tandem to block Freedom of Information requests, blackballed dissenting scientists, manipulated the peer-review process, and changed and destroyed “inconvenient” temperature data.

On November 28, 2009, the U.K. Telegraph carried this headline: “*Climate change: this is the worst scientific scandal of our generation.*”

The newspaper went on to say,

What we are looking at here is the small group of scientists who have for years been more influential in driving the worldwide alarm over global warming than any others, not least through the role they play at the heart of the UN's Intergovernmental Panel on Climate Change (IPCC).

Why would they do this?

On December 1, 2009 The Wall Street Journal answered that question in “Climategate: Follow the Money”:

Phil Jones, the director of the Climate Research Unit has been the recipient or co-recipient of some \$19 million in research grants just since 2000. ... The money poured in because the climate alarm kept ringing so loudly. The louder the alarm, the greater the sums. And who better to ring it than people like Mr. Jones, one of its likeliest beneficiaries?

But why support from the larger scientific community outside the IPCC? The Wall Street Journal went on to say,

Universities, research institutes, advocacy groups, and their various spin-offs and dependents have emerged from the woodwork to receive them. Today these groups form a kind of ecosystem of their own.

As the WSJ explained,

None of these outfits are corrupt ... but they depend on an inherently corrupting premise ... that the hypothesis on which their livelihood depends has in fact been proved. Absent that proof, everything they represent—including the thousands of jobs they provide—vanishes. That is what's known as a vested interest, and vested interests are an enemy of sound science.

The fifth IPCC report

The fifth iteration, published in 2014, was similar to the fourth. It predicted temperature increases of 3o to 6o Celsius for much of the world and warned that the “window for action” was closing.

Although it seemed to imply great precision of analysis, it did not inspire—for this writer—any greater confidence in its temperature predictions than the fourth report.

For example, an illustration showed temperatures increases after 1900 and captioned it with the statement, *“Each of the past three decades has been warmer than the preceding decades since 1850.”* A short term temperature trend line was based on two points: temperatures 1850–1900 and temperatures 2003–2013. However, since the 1850s were abnormally cold, this statement could be seen as deliberately misleading in that it used an average of temperatures when the globe was climbing out of an extremely cold period and compared that to an average of temperatures following recovery. Further, as will be seen later, the early and mid-1900s were a period of unusual solar activity and rising temperatures, possibly independent of any human activity.

In effect the IPCC used a short term temperature trend line based on two points—average temperature 1850–1900 and average temperature 2003–2013—to assert that temperatures far into the future would continue to increase. Extrapolation of a regression line mathematically fitted to a number of data points can be risky. Extension of a trend line into the future, when it is based on just two points—and apparently carefully selected points at that—seemed particularly unconvincing.

What do we know about global temperatures in the past?

Are there facts that an increasingly skeptical layman could access to shed light on possible future of global temperatures? It turns out there are and they do not support the widespread alarmism we see today.

The best way to estimate the future climate may be to look at the past. Scientists can determine temperatures that have existed in the past and correlate them with factors having relevant cause-and-effect potential.

Researchers have measured isotope ratios in the skeletons of marine organisms deposited in the Sargasso Sea. This record reveals temperatures over the past 3,000 years. The resulting temperature graph clearly shows the Medieval Climate Optimum, a warm period about 1,000 years ago when the climate was unusually benign. During the Medieval Climate Optimum, the global mean temperature was nearly two degrees Celsius higher than the current temperature. (It was even higher two thousand years ago.) Only four hundred years ago, the world was in the throes of what scientists call the Little Ice Age.

During the Medieval Climate Optimum the Northern Hemisphere enjoyed a prolonged warm period. Agricultural production was stable and population expanded. The final 150–200 years of the Medieval Warm Period coincide with a peak in solar activity named the Medieval Maximum (1100 – 1250). During this peak in solar activity, the Vikings established farming communities in Greenland, but between 1480 and 1500 the Norse population of Greenland disappeared.

Western Europe experienced a general cooling of the climate and a very cold climate between 1560 and 1850. In America, 1816 was called “the year without a summer.”

In the middle 1600s, glaciers in the Swiss Alps advanced, slowly engulfing farms and crushing entire villages. Canals in Holland froze. The first Thames frost fair was held in 1607. Horses and people traversed the ice-covered river with impunity.

In 1658 a Swedish army marched across Øresund (in English, “the Sound”, a strait which forms the Danish–Swedish border) to Denmark and invaded Copenhagen. In the particularly harsh winter of 1794–1795, an invasion army under Jean-Charles Pichegru, a French general, could march on the frozen rivers of the Netherlands, while the Dutch fleet was fixed in the ice in Den Helder harbour. In the winter of 1780, New York Harbor froze, allowing people to walk from Manhattan to Staten Island.

Due to the cooler climate during this period, snow covered the ground deep into spring. A parasite known as *Fusarium nivale*, which thrives under snow cover, devastated crops. Stocks of hay for animals ran out, so farmers tried to substitute straw and pine branches. Many cows had to be slaughtered. Famine killed millions.

Unfortunately the invention of photography was far in the future, but scenes of the time were painted by Flemish master Pieter Bruegel the Elder. His famous “Winter Landscape with Bird Trap” effectively captures the age.

What might have caused these climate changes?

In 1999, the Quarterly Science Review reported that a team of Dutch and Russian scientists examined the levels of a carbon isotope more commonly created when the sun is quiet. They found that substantial increases in that carbon isotope coincided with global cooling events at about 859 B.C. And 1600 A.D. The second date corresponds well with the Little Ice Age. In that peer reviewed journal, the authors said, *“It is well documented that periods of decreased solar activity ... often coincide with climate change. ... The best-known example is the Maunder Minimum (1645–1715), a solar event that is coinciding with one of the coldest phases of the Little Ice Age.”*

In the Journal of Physical Review Letters in 2003, another team of European researchers, led by Ilya Usoskin of the University of Oulu in Finland, reported on its study of solar activity: *“The most striking feature of the complete SN (sunspot number) profile is the uniqueness of the steep rise of sunspot activity during the first half of the 20th century. Never during the 11 centuries prior to that was the sun nearly as active.”*

The team pointed out that periods of high solar activity corresponded with periods of warmth on earth and periods of low solar activity corresponded with periods of wet, cool weather. Both sunspot number and temperatures showed a slow decreasing trend just prior to 1900, followed by a steep rise.

Supporting evidence came from another source—a Canadian study initiated at the behest of the timber industry on differing rates forest growth in British Columbia.

Researchers drilled into the sediment at the bottom of coastal fjords to determine what years had been warm and what years cold, to see if any pattern could be found that might permit estimation of future timber growth rates.

They found more than just a pattern. They found evidence supporting the studies described above.

Computers were used to conduct time series analyses on coloration and thickness of annual layers. They found a consistent 11-year cycle throughout the whole record in the sediments and diatom remains which correlated closely to the well-known “Schwabe solar cycle”. In these sediment, diatom, and fish-scale records, researchers also found longer cycles—all correlating with solar cycles: The 75-90 “Gleissberg Cycle”, the 200-500 year “Suess Cycle”, and the 1,100-1,500 year “Bond Cycle”. The principal researcher, R. Timothy Patterson, concluded that it was not solar radiation alone but also sunspot activity. They go together.

Despite this clear and repeated correlation, the measured variations in incoming solar energy were, on their own, not sufficient to cause the climate change. Even though the sun is brighter now than at any time in the past 8,000 years, the increase in direct solar input is not calculated to be sufficient to cause the past century's modest warming on its own.

Sunspots—what are they and how might they be important?

Sunspots are dark spots, some as large as 50,000 miles in diameter that move across the surface of the Sun, contracting and expanding as they go. A strong magnetic field is formed below the Sun's surface and extends out into the sun's corona. Sunspots and their magnetic fields are often associated with solar flares. Depending on the intensity of this activity, the Sun throws off what is called the “solar wind”, a stream of charged particles (protons, electrons, and heavier ionized atoms) coming out of the Sun at almost a million miles per hour. The strength of the solar wind is directly related to sunspot activity. The solar wind is much stronger during “high Sun” periods when there are more sunspots.

A number of studies have found that as the solar wind varies, varying amounts of galactic cosmic rays from deep space are able to enter the Solar system and penetrate the Earth's atmosphere.

Since the mid 1990s, despite ridicule from the UN's IPCC, Henrik Svensmark of the Danish Space Research Institute and his team have been researching the correlation between galactic cosmic rays and climate. His work has been published in peer-reviewed journals. It is controversial, but important scientific work has often been controversial.

Professor Svensmark highlights the fact that insufficient attention is paid to this research area:

Galactic cosmic rays seem to be very important drivers of the Earth's climate. But they are mostly being ignored at the moment because they are seen as distracting from conventional global warming research. Science needs to do better if we want to make progress in understanding the actual impact of natural factors of climate change."

Svensmark says that galactic cosmic rays—energetic particles that bear down upon the Earth from distant parts of the universe—seed cloud formation. When cosmic rays, better viewed as particles, rain into the atmosphere, they create many other particles, and these enhance cloud formation.

During “high Sun” periods, a stronger solar wind blocks many of these cosmic rays from entering the Earth’s atmosphere, decreasing cloud formation. This has a warming effect on the Earth. At “low Sun” periods, the solar wind is weaker, and cloud formation is increased, causing a corresponding increase in the Earth’s albedo, because more cosmic rays penetrate the Earth’s atmosphere. This has a cooling effect on the Earth.

A 2019 report from the Global Warming Policy Foundation provided an update on Dr. Svensmark’s work and emphasized again that the solar influence on climate is much larger than generally recognized.

Dr. Sami Solanki, director of the Max Planck Institute for Solar System Research in Göttingen, Germany reported in 2004 that the Sun has been at its strongest over the past 60 years and may now be affecting global temperatures. The Sun is in a “changed state”—brighter than it was a few hundred years ago, and this brightening started relatively recently—in the last 100 to 150 years.

There is clear evidence that the Earth warmed slightly in the 20th century. For example: the writer has in his possession two photographs given to him by his son, a geography professor. One shows the Elliot Glacier on Mount Hood, taken in 1901. The second is a picture of the same glacier, taken in 1990. In the second picture it is clear that the glacier has shrunk far back up the mountain. Based on the professor’s reading of an unpublished master’s thesis at Oregon State, it appeared that the greatest period of melt was 1900 – 1925. His estimate was a minimum shrinkage of a mile and 300 feet of thickness.

Interestingly enough, photographs of the planet Mars indicate that warming from some source on that planet’s surface has caused that planet’s ice caps to shrink. In May, 2008, NASA reported that Jupiter’s recent outbreak of red spots is likely related to large-scale climate change as the gas giant planet is getting warmer near the equator. Although we would not expect the cloud formation mechanism to be at work in those locations, it would appear that radiation levels during past “high Sun” periods might be a cause.

If the Sun's activity level is important, what does the future hold?

Nigel Weiss, professor emeritus at the department of applied mathematics and theoretical physics at the University of Cambridge and past president of the Royal Astronomical Society, had this to say,

The science is anything but settled, except for one virtual certainty: the world is about to enter a cooling period.... Climate change is driven by factors other than man. Variable behavior of the sun is an obvious explanation, and there is increasing evidence that earth's climate responds to changing patterns of solar magnetic activity. Sunspots flare up and settle down in cycles.

Recently, the world has experienced the latter stages of a hyperactive period that, according to professor Weiss, "... lasts perhaps 50 to 100 years, then you get a crash. It's a boom bust system, and I would expect a crash soon."

When a crash occurs, as it did for 70 years during the 17th century and for 30 years during the 19th century, the earth cools dramatically.

Habibulio Abdussamatov, head of the St. Petersburg Pulkovo Astronomical Observatory in Russia, has written that *"The long-term increase in solar irradiance is heating both Earth and Mars. The solar irradiance began to drop in the 1990s, and a minimum will be reached by approximately 2040. It will cause a steep cooling of the climate on Earth in 15 to 20 years."*

What is the future of the sun's activity level?

It appears to be a matter of opinion. Obviously the authorities noted above expected a weaker, quieter sun. At the end of Cycle 23 in approximately 2010, predictions for Cycle 24 were that it would be weaker, with lower sunspot numbers. In April 2019 NASA noted that this did indeed turn out to be the case and predicted the end of Cycle 24 in late 2019 or in 2020. The agency's official statement continued,

"Solar Cycle 25 Prediction Panel experts said Solar Cycle 25 may have a slow start, but is anticipated to peak with solar maximum occurring between 2023 and 2026, and a sunspot range of 95 to 130. This is well below the average number of sunspots, which typically ranges from 140 to 220 sunspots per solar cycle."

This might sound somewhat ominous but NASA did not forecast further declines.

The expectation that Cycle 25 will be comparable in size to Cycle 24 means that the steady decline in solar cycle amplitude, seen from cycles 21-24, has come to an end and that there is no indication that we are currently approaching a Maunder-type minimum in solar activity.

It is clearly beyond this layman's understanding of solar activity to question that NASA estimate, but it is interesting to look at the SILSO data image from the Royal Observatory of Belgium for the 20th century and the first two decades of the 21st. The last two decades of the 19th century and the first decade of the 20th appear to have yearly maximum sunspot numbers around 100, then a general rise in number is shown from around 1910 through the 1960s. (Although sunspot numbers in the latter part of the 1800s appear higher, their behavior in the first half or more of the 20th would seem to agree with statements of solar scientists mentioned earlier.) From about 1960 on, a declining trend is evident in yearly maximums, encompassing six eleven-year solar cycles through the present time.

If, contrary to NASA predictions, that decline continues, what could we expect? Global cooling?

Is the science settled?

A limited internet search reveals large numbers of studies have been performed dealing with the subject of anthropogenic (man-made) global warming. A quick survey of study titles and abstracts suggests that most appear to focus on details of atmospheric temperature variation, glacial melt rates, and variations in ocean temperatures and currents. What seems a key fact is that a preponderance appear to assume anthropogenic global warming to be a given.

Yet there are other scientists who appear willing to swim upstream by insisting that the widely publicized man-made CO₂ theory of global warming is not good science.

If we define science as a never-ending quest for more accurate theories to explain the physical universe, we must recognize that what has been viewed as the last word in science sometimes has changed from century to century, decade to decade, and even year to year.

To list only one example, scientists today agree that extensive ice sheets covered much of the North American and Eurasian continents approximately 11,000 years ago. But when Jean Louis Agassiz, a professor in Switzerland in the 1830s, presented—at a meeting of the Swiss Society of Natural Sciences—his theory that a great Ice Age had once sent glaciers over a great part of the Northern Hemisphere, he was met with derision and anger from a scientific community well established in its views.

Now, in 2020, what should an increasingly skeptical layman believe?

Perhaps it is more a question of whom to believe.

The IPCC Global Warming Special Report in 2018 billed itself as the most up-to-date and comprehensive explanation of the science of climate change and the future

of Earth. It issued a “final call” for action and warned that the earth is on track for a 3–4° temperature rise and if global temperature rises even by 1.5°, humans will face unprecedented climate-related risks and weather events.

It viewed with alarm a contention that the world has already warmed by 1° since the middle of the 19th century (but we have already noted that the middle 1800s were an abnormally cold period) and predicts that, at that rate, the rise could reach 1.5° before the middle of this century. (We have already discussed the question of extrapolation of a trend line based on only two data points, one of which represented average temperatures in a cold period and the other, average temperatures after almost a century of “high Sun” warming.)

To this increasingly skeptical layman, the claims of this IPCC report, and others, begin to have a hollow ring.

Concerning the accuracy of IPCC models, we find that in 2020, two new peer-reviewed papers from independent teams confirmed that climate models overstate atmospheric warming and the problem has gotten worse over time, not better.

Both teams tested large samples of the latest generation climate models being used for the next IPCC report, comparing model outputs to post-1979 observations. Both papers looked at “hindcasts,” reconstructions of recent historical temperatures in response to observed greenhouse gas emissions and other changes such as aerosols and solar forcing. One team examined 38 models; another looked at 48 models. (One investigator commented: “*The sheer number makes one wonder why so many are needed, if the science is settled.*”) Both groups found that the models overshoot historical warming: from the near-surface through the upper troposphere, in the tropics, and globally.

Neither team knew about the work of the other until their scientific papers were published.

In a discussion of model results, one of the investigators singled out a particular model for comment—comments which this reader found amusing.

A special prize goes to the Canadian model! “We draw attention to the CanESM5 model: it simulates the greatest warming in the troposphere, roughly 7 times larger than the observed trends.” The Canadian government relies on the CanESM models “to provide science-based quantitative information to inform climate change adaptation and mitigation in Canada and internationally.” I would be very surprised if the modelers at UVic ever put warning labels on their briefings to policy makers. The sticker should read: “WARNING! This model predicts atmospheric warming roughly 7 times larger than observed trends. Use of this model for anything other than entertainment purposes is not recommended.”

If we believe the weather channel, talking heads on the eleven o'clock news, entertainment celebrities (how many passed physics classes we wonder?) and most print media, we will accept as fact that global warming is a stark threat. If we attribute the purest of motives to the authors of huge numbers of well-funded studies that assume global warming is proven and to UN and government officials who would parcel out the taxes and fees collected from utilities and households to price fossil fuels out of common use, we might unquestionably accept the widely held alarmist consensus on global warming.

On the other hand, if we take the time and effort to dig into the reports of scientists who provide convincing evidence that climate change is ever with us and inevitable, and caused by other than man's activities, we might not choose to divert money from productive investment, personal consumption, and more urgent humanitarian needs.

Coupled with information described above, previously gleaned from internet research, this layman found extremely troubling a letter he read recently for the first time. It was written by Harold Lewis, Emeritus Professor of Physics at the University of California, Santa Barbara, when he resigned from the American Physical Society. That letter can be found in a number of locations on the internet—usually accompanied by disclaimers written by those who posted it—and sometimes imbedded in articles deriding his climate credentials. He wrote this letter approximately seven months before his passing in May 2011.

He related his experience chairing a group of scientists studying a highly controversial issue, reactor safety, noting that although the subject was contentious there was no pressure on participants.

How different it is now. ... the money flood has become the raison d'être of much physics research, the vital sustenance of much more, and it provides the support for untold numbers of professional jobs. ... It is of course, the global warming scam, with the (literally) trillions of dollars driving it, that has corrupted so many scientists It is the greatest and most successful pseudoscientific fraud I have seen in my long life as a physicist. Anyone who has the faintest doubt that this is so should force himself to read the ClimateGate documents, which lay it bare.

Leonard Gaston passed away on 19th of December 2020.