



THE GROWTH OF THE CLIMATE FRAUD

Roy Clark PhD

Ventura Photonics Climate Post 13, VPCP 013.1

Ventura Photonics
Thousand Oaks, CA
November 2022

Table of Contents

Summary	1
Introduction.....	3
The Corruption of Climate Science and the First Climate Models.....	4
The Charney Report: Evidence Ignored	7
The Radiative Forcing Ritual.....	8
The Growth of the Climate Fraud.....	9
The Political Exploitation of the Climate Modeling Fraud	11
The USGCRP and the 'Deep State' Imperial Cult.....	13
References.....	14

Summary

The multi-trillion dollar climate fraud that we have today started in nineteenth century with speculation that changes in the atmospheric concentration of CO₂ could cycle the earth through an Ice Age. The complexities of the climate system were oversimplified and reduced to an 'equilibrium air column'. When the CO₂ concentration was increased, this approach had to produce an increase in surface temperature as a mathematical artifact of the calculation. The idea that CO₂ could cause global warming gradually became scientific dogma. The first generally accepted 'radiative convective equilibrium' computer climate model was published by Manabe and Wetherald (M&W) in 1967. It was simply an 'improved' version of the nineteenth century 'equilibrium air column'. By making the equilibrium climate assumption M&W abandoned physical reality and entered the realm of computational climate fiction. Their model contained four fundamental scientific errors which they chose to ignore. They spent the next 8 years incorporating their 1967 air column model into a 'highly simplified' general circulation model (GCM). The mathematical warming artifacts from M&W (1967) were now incorporated into every unit cell of the GCM. Later climate modeling work failed to address the errors in the underlying M&W assumptions. Instead 'improvements' were introduced by Hansen et al in 1981 that added three more fundamental scientific errors. Little has changed since 1981 except that computer technology has improved significantly and the models have become a lot more complex. However, the underlying assumptions remain the same. The fundamental error is still the equilibrium assumption. This was conveniently summarized by Knutti and Hegerl in 2008.

“When the radiation balance of the Earth is perturbed, the global surface temperature will warm and adjust to a new equilibrium state”.

Such an equilibrium state does not exist.

Melodramatic prophecies of the global warming apocalypse became such a good source of research funding that the scientific process of hypothesis and discovery collapsed. Scientific dogma has now degenerated into the 'Imperial Cult of the Global Warming Apocalypse'. Irrational belief in the global warming created by the climate models has become a prerequisite for funding in climate science. The underlying climate equilibrium assumption was never challenged. An elaborate modeling ritual based on pseudoscientific radiative forcings, feedbacks and the climate sensitivity to a 'CO₂ doubling' gradually evolved. The Charney report in 1979, included the initial results from two climate modeling groups using five primitive GCMs. By 1995, 18 coupled climate models were available from seven different countries. The modeling effort for the IPCC is now coordinated through the Coupled Model Intercomparison Project (CMIP). In 2019 there were 49 modeling groups with approximately 100 different models involved in CMIP6. One of the benchmarks used to compare these models is the climate sensitivity or 'global temperature rise' produced by a 'CO₂ doubling'. This is claimed to be in the range from 1.8 to 4.7 C.

In reality, the ‘radiative forcing’ from a ‘CO₂ doubling’ is a wavelength specific decrease of 3.7 W m⁻² in LWIR flux emitted at the top of the atmosphere. The decrease in LWIR flux is produced by absorption at lower levels in that atmosphere. This changes the rate of cooling of the local air parcel. The maximum change in rate of cooling in the troposphere is +0.08 K per day. At a lapse rate (cooling rate) of -6.5 K km⁻¹, an increase in temperature of 0.08 K is produced by a decrease in altitude of about 12 meters. This is equivalent to riding an elevator down 4 floors. There is also a similar increase in downward LWIR flux emitted by the lower troposphere to the surface. Here the temperature changes produced by this increase in flux are too small to measure in the normal variation of the daily and seasonal surface temperatures. The observed ‘climate sensitivity’ is dominated by the Atlantic Multi-decadal Oscillation coupled to the weather station record. There is also additional heating produced by urban heat islands, changes in the urban/rural mix of weather stations used to calculate the global average and various ‘homogenization adjustments’ used to infill data and correct for bias. A ‘CO₂ doubling’ cannot produce a measureable increase in surface temperature. Nor can it have any influence on ‘extreme weather events’.

Two external factors contributed to the growth of the climate fraud. As funding was reduced for NASA space exploration and for DOE nuclear programs, climate modeling became an alternative source of revenue. There was also a deliberate decision by various outside interests, including environmentalists and politicians to exploit the fictional climate apocalypse to further their own causes. The World Meteorological Organization (WMO) and the United Nations Environmental Program (UNEP) were used to promote the global warming scare. The UN Intergovernmental Panel on Climate Change (UN IPCC) was established in 1988 and the US Global Change Research Program (USGCRP) was established by Presidential initiative in 1989 and mandated by Congress in 1990. It must be emphasized that the Intergovernmental Panel on Climate Change (IPCC) is a political body, not a scientific one. Its mission is to assess “the scientific, technical and socioeconomic information relevant for the understanding of the risk of human-induced climate change.” This is based on the *a-priori* assumption that human activities are causing CO₂ induced global warming. The IPCC has published six major assessment reports: the first, second and third - FAR (1990), SAR (1995), TAR (2001) and AR4 (2007), AR5 (2013) and AR6 (2021). While the reports may contain a useful compendium of scientific references, material that does not conform to the global warming dogma has usually been omitted. The primary focus of these reports has been on the use of modeling ‘scenarios’ to make melodramatic predictions of future global warming using fraudulent computer models. The climate modeling data used for AR5 and AR6 are derived mainly from the CMIP5 and CMIP6 ‘model ensembles’.

In the UK, the Hadley Center for Climate Prediction was established at the Met. Office in 1989. In conjunction with the Climate Research Center at the University of E. Anglia, the Hadley Center provided major support to the IPCC. The first IPCC assessment report was published in 1990. Close ties developed between political leaders and various leading climate researchers. In the UK this included John Houghton (UK Met Office), the Climate Research Unit (CRU) at UEA and Margaret Thatcher (UK Prime Minister). The primary function of the climate centers is to provide climate propaganda to justify government policy and continued funding.

In the US, the Imperial Cult of the Global Warming Apocalypse is firmly entrenched in the ‘deep state’ of the US government through the USGCRP. Thirteen government agencies are involved. Since it was first established in 1989, the USGCRP has used the results of fraudulent ‘equilibrium’ climate models to perpetuate a massive Ponzi or pyramid scheme based on exaggerated claims of anthropogenic global warming. It takes the climate model output generated by agencies such as NASA and DOE and without question cycles the fake climate warming through the 13 US Agencies to establish a US climate policy that mitigates a nonexistent problem. The same group of climate modelers also provides fraudulent climate warming data used by the IPCC in their assessment reports. The pigs have been filling their own trough at taxpayer expense for over 30 years. There has been no significant oversight. The climate modelers are no longer scientists, they have become prophets of the Imperial Cult of the Global Warming Apocalypse. Irrational belief in ‘equilibrium’ climate model results has replaced scientific logic and reason. The climate modelers have been playing computer games in an equilibrium climate fantasy land for over 30 years.

CO₂ is a good plant fertilizer, so there is a major agricultural benefit to an increase in CO₂ concentration - enhanced agricultural production. There is no climate emergency. There is no need for utility scale solar or wind energy. There is no need for the large scale deployment of electric vehicles. It is time to dismantle the entire climate fraud, including the USGCRP and rebuild the energy infrastructure of the US based on inexpensive, reliable fossil fueled and nuclear electrical power.

Introduction

The multi-trillion dollar climate fraud that we have today started in nineteenth century with speculation by Tyndall that changes in the atmospheric concentration of CO₂ could cycle the earth through an Ice Age [Tyndall, 1861; 1863]. The first person to try and calculate the change in surface temperature that might be produced by changes in the CO₂ concentration was Arrhenius in 1896. Unfortunately, he oversimplified the energy transfer processes involved by using the equilibrium climate assumption. The time dependence was removed and replaced by average values. The ‘climate’ was reduced to a static column of air and a 15 °C blackbody surface that were illuminated by an average solar flux. Moist convection and subsurface transport were ignored. So was ocean energy transfer and the ocean to land surface temperature coupling. When the CO₂ concentration was changed, this approach had to create climate warming, by definition, as a mathematical artifact of the assumptions used in the calculation [Arrhenius, 1896].

Gradually, the idea that an increase in the atmospheric concentration of CO₂ could produce a warming of the earth’s climate became scientific dogma. Instead of an Ice Age cycle, humans were now causing climate change through fossil fuel combustion. Melodramatic prophecies of the global warming apocalypse became such a good source of research funding that the scientific process of hypothesis and discovery collapsed. Two external factors then contributed to the growth of the climate fraud. First, there was institutional fraud related to ‘mission creep’ within various government agencies. NASA was established to put a man on the moon. There was no provision

to shut it down after that mission was accomplished. Similarly, the Atomic Energy Commission, (later part of the Department of Energy, DOE) was established to develop nuclear energy for military and commercial applications. As resources diminished, government scientists looked for other jobs. Some created them using the climate apocalypse. Second, there was a deliberate decision by various outside interests, including environmentalists and politicians to exploit the climate apocalypse to further their own causes. Some environmentalists wanted to disrupt the energy supply to reduce human population. Various left wing political groups wanted to disrupt the energy supply to promote their revolutionary beliefs. More mainstream politicians then realized they could use the climate apocalypse to increase taxes and buy votes. Gradually a vast secondary industry of policy analysts, economists, geologists, geographers, ecologists, psychologists, sociologists, attorneys and other assorted ‘experts’ was created and funded to study every aspect of this nonexistent global warming apocalypse problem. All of this is a massive pyramid or Ponzi scheme built on the invalid hypothesis of CO₂ induced warming in an equilibrium average climate. The climate fraud has now degenerated past scientific dogma into the Imperial Cult of the Global Warming Apocalypse.

There is no single person or single event that can be identified as the source of the climate fraud. There is no ‘smoking gun’. The climate fraud may be described as a confluence of special interest ‘bandwagons’ that have coalesced into a quasi-religious cult. The climate modelers have abandoned physical reality in favor of mathematical simplicity. They are playing computer games in an equilibrium climate fantasy land. Instead of using X boxes they are using supercomputers. Irrational belief in the Sacred Spaghetti Plots of climate warming that are generated by these large scale climate models has replaced scientific logic and reason. Many of the climate modelers are government employees that are shielded from outside scrutiny. They can keep their jobs provided that they give their political masters the correct prophecies on ‘climate change’. They have become trapped in a web of lies of their own making. The politicians in turn satisfy the needs of the special interests that keep them in power. The taxpayers are the victims of this massive Ponzi or pyramid scam. Eisenhower’s warning about the corruption of science by government funding has come true.

In order to understand how the Imperial Cult of the Global Warming Apocalypse became established, it is necessary to start with the development of the climate models and the underlying pseudoscience of radiative forcings, feedbacks and climate sensitivities that are used to build the foundation of the climate fraud. Here there has been a complete failure by multiple government agencies to provide any form of oversight over the climate modelers. Then it is necessary to look at the outside influences that have taken advantage of the climate model results and exploited them to promote their own interests.

The Corruption of Climate Science and the First Climate Models

The normal process of scientific discovery is an iterative one in which a hypothesis is proposed that explains the observed evidence. This hypothesis is then modified or even abandoned and replaced as new evidence is discovered. Climate science started out with the hypothesis that

changes in the atmospheric concentration of CO₂ could cycle the earth through an Ice Age. The simple equilibrium air column model used by Arrhenius [1896] had to create climate warming when the CO₂ concentration was increased. Clear evidence that the earth's climate is not in equilibrium is provided by the observation of time delays or phase shifts between the peak solar flux and the temperature response. Seasonal phase shifts in the subsurface ground temperature response were described by Fourier in 1824 [Fourier, 1824]. Similar seasonal and diurnal phase shifts are found in the weather station temperature data [Clark and Rorsch, 2022]. The evidence that invalidates the equilibrium assumption used by Arrhenius and later by the climate modelers has been available since the 1820s. It has been ignored for 200 years.

The first person to claim a measurable effect on surface temperature from an increase in CO₂ concentration was Callendar [1938]. He found a slight increase in both CO₂ concentration and meteorological temperatures, particularly in the N. hemisphere. He was probably the first person to find the Atlantic Multi-decadal Oscillation (AMO) signal in the weather station data, since his period of record included the warming phase of the AMO from about 1910 to 1935. However, he attributed the observed increase in temperature to an increase in CO₂ concentration from fossil fuel combustion. The AMO was not identified until almost 50 years later.

Interest in the effects of CO₂ from fossil fuel combustion on climate was revived in the late 1950s with the work of Burt Bolin and Roger Revelle on the distribution of CO₂ between the atmosphere and the oceans [Bolin and Eriksson, 1959, Bolin, 1960, Revelle and Seuss, 1957]. They had a new technique that they could use. This was the measurement of the carbon isotope ratios ¹⁴C/¹²C and ¹³C/¹²C. However, this only provided information on the amount of CO₂ in the atmosphere that could be attributed to combustion. There was no new information on the relationship between CO₂ and surface temperature. They also used exaggerated claims of climate warming to obtain research funds. The mass spectrometers needed for isotope studies were expensive. They made no attempt to validate their claims using any thermal engineering calculations of the surface temperature. The corruption of climate science had started.

The climate modeling fraud began in the 1960s when it was decided that a weather forecasting model could be modified for climate predictions by adding suitable radiative transfer algorithms and applying the equilibrium climate constraint. The development of weather forecasting models was an expensive undertaking. Climate models that used similar algorithms and computer resources to the weather forecasting models provided a second stream of income that supported both efforts. In 1963, Lorenz demonstrated that the weather forecasting models had a fundamental weakness. They required the solution of large numbers of coupled non-linear equations. The solution for even a simple model with three nonlinear equations was sensitive to small changes in the starting conditions. Weather forecasts were limited to about 12 days ahead before they became unreliable [Lorenz, 1963, 1975]. There was no reason to expect that the climate models had any predictive capabilities over the time scales required for climate 'prediction'. This was ignored by the climate modelers. Funding was more important. Climate modeling had been corrupted before the first line of computer code was even written.

The first generally accepted ‘radiative convective equilibrium’ climate model was published by Manabe and Wetherald (M&W) [1967]. It was an ‘improved’ version of the Arrhenius ‘equilibrium air column’. Such a model provided a mathematical platform for the development and evaluation of radiative transfer and related algorithms. The simplifying assumptions used by M&W had to create climate warming even before the model code was written.

The M&W model contained four fundamental scientific errors:

- 1) There is no equilibrium climate on any time or spatial scale.
- 2) There is no such entity as a partially reflective blackbody surface with zero heat capacity.
- 3) The concept of an ‘equilibrium atmosphere’ with a fixed relative humidity distribution is incorrect.
- 4) The upward and downward LWIR fluxes through the atmosphere are not equivalent. Instead, they are decoupled by molecular linewidth effects. This leads to the formation of two independent tropospheric thermal reservoirs.

The first three errors follow directly from the assumptions listed on the second page of the M&W paper. The fourth error requires a more detailed analysis of the atmospheric radiative transfer [Clark, 2013; Clark and Rörsch, 2022]. This is discussed in more detail in the companion post ‘*Climate Pseudoscience*’ VPCP 012.

With their 1967 model, M&W abandoned physical reality and entered the realm of computational climate fiction. They spent the next 8 years incorporating their 1967 model into a ‘highly simplified’ general circulation model (GCM) [M&W, 1975]. The simplifications included a limited computational domain, an idealized topography, no heat transport by ocean currents (‘swamp ocean’) and a fixed cloudiness. The 1967 mathematical artifacts were built into each unit cell of the GCM. In spite of the simplifications used, the model was still run using a doubled CO₂ concentration to show the increase in surface temperature. In addition, the model produced a ‘hot spot’ in the upper troposphere at low and middle latitudes. This is also an artifact of the model assumptions. There was no independent review of the 1967 M&W model. Nor was there any oversight of the subsequent GCM development. Other groups began to develop similar equilibrium models and model comparison based on the temperature rise produced by a ‘doubling’ of the CO₂ concentration was described by Schneider in 1975. Differences between models were considered but the physical reality of a non-equilibrium climate was not allowed to intervene [Schneider, 1975].

Later climate modeling work failed to address the errors in the underlying M&W assumptions. Instead ‘improvements’ were introduced that added three more fundamental scientific errors. These may be found in the 1981 paper by Hansen et al [Hansen et al, 1981].

- 5) A ‘slab’ ocean model was used instead of the M&W blackbody surface. However, there was no consideration of surface energy transfer effects. In particular, wind driven evaporation was ignored

and the LWIR flux was assumed to heat the ocean even though the penetration depth was only 100 micron.

6) The concept of ‘radiative forcing’ was described and the warming artifacts produced by CH₄, N₂O, CCl₂F₂ and CCl₃F were added. The modeling ritual of a ‘CO₂ doubling’ in a fictional equilibrium climate was introduced. No thermal engineering calculation of the change in surface temperature was performed to validate the model.

7) There was a ‘bait and switch’ change from ‘equilibrium’ surface and air temperatures to the weather station temperature record. The various time dependent flux terms interact with the surface, not the weather station thermometer located in a ventilated enclosure at eye level above the ground. There was no change to the model, the output was just renamed.

The weather station record that was presented by Hansen et al also included the well-defined Atlantic Multi-decadal Oscillation (AMO) peak near 1940. This is coupled to the land based weather stations by the weather systems that form over the Atlantic Ocean and move over land. They chose to ignore this and called it ‘noise’. Since 1981, the only change to the basic equilibrium climate model was the addition of ‘efficacies’ to the radiative forcings by Hansen et al [2005]. As computer technology has improved, the climate models have become larger and more complex, but they are still based on the pseudoscientific foundation created by M&W and Hansen et al.

The Charney Report: Evidence Ignored

The M&W approach was officially ‘sanctified’ by the Charney report [1979]. This was a review of CO₂ induced warming effects derived from equilibrium climate models, including feedback effects. At the time of the review, the results from only five GCMs were available, 3 from Manabe’s group and 2 from Hansen’s group. The reviewers concluded that a warming of 3±1.5 C from a ‘doubling’ of the atmospheric CO₂ concentration was likely. The mathematics used in the climate ‘models’ appeared reasonable based on the acceptance of the invalid equilibrium assumption, so no further investigation was needed. Lorenz’s work and the limitations of the weather forecasting models were ignored.

The reviewers involved in the Charney report also chose to ignore the history of CO₂ induced climate change and its origin as the explanation of the cause of an Ice Age cycle. The real cause of an Ice Age was planetary perturbations of the earth’s orbit known as Milankovitch cycles. This had been established in 1976 from an analysis of deep drilled ocean sediment cores [Hays et al, 1976]. A more detailed description was given in the book ‘Ice Ages’ by Imbrie and Imbrie [1979]. Since changes in CO₂ concentration did not cause an Ice Age, there was no reason to expect that such changes from fossil fuel combustion would cause climate change. Tyndall’s speculations from the 1860’s had been disproved. The reviewers also ignored a large body of evidence from other sources that showed that changes in atmospheric CO₂ concentration could not cause climate change. Detailed data showing the non-equilibrium response of land surface temperatures were available a decade before M&W with the publication of ‘*Exploring the Atmosphere’s First Mile*’ by Lettau and Davidson [1957]. Hubert Lamb’s work ‘*Climate, Past Present and Future*’ was published in 1972. Here he discussed the role of wind driven evaporation in causing long term

weather anomalies [Lamb, 1972]. These involved much larger changes in ocean latent heat flux than any change in LWIR flux from CO₂. Revised spectroscopic constants for water from 200 nm to 200 μm were published by Hale and Querry in 1973. These showed that the penetration depth of the LWIR radiation from CO₂ into water was less than 100 μm [Hale and Querry, 1973]. By the early 1970's, high quality satellite IR radiometer data were available from the Nimbus program that showed the variability in the LWIR emission to space [Hanel et al, 1971].

The Radiative Forcing Ritual

In addition to the development of the fraudulent equilibrium climate models, the 1967 M&W model also started the 'radiative forcing' bandwagon. The radiative transfer algorithms used by M&W could be improved with better spectroscopic constants and more greenhouse gases. If an increase in the CO₂ concentration could create a warming artifact in the M&W model, so could other 'greenhouse gases'. The history of radiative forcing has been reviewed by Ramaswamy et al [2019]. They traced the concept back to the work of Ramanathan in 1975. Here he claimed an appreciable increase in the global surface temperature if the atmospheric concentration of CF₂Cl₂ and CFCI₃ reach values of the order of 2 parts per billion. This was based on energy balance arguments and on 'radiative convective equilibrium' modeling. There were no thermal engineering calculations of the change in surface temperature [Ramanathan, 1975]. By 1978, 11 'minor' species had been added to the M&W modeling approach including CH₄, NH₃, N₂O, HNO₃, SO₂ and six halogenated hydrocarbons [Ramanathan and Coakley 1978]. By 1985 the concept of radiative forcing was firmly established. Changes in flux at the top of the atmosphere (TOA), or at the tropopause, change the energy balance of the earth. For a positive 'forcing' there is a decrease in the LWIR flux emitted to space that is produced by an increase in atmospheric greenhouse gas concentration. To compensate for this, the surface temperature is supposed to increase until the flux balance is restored at TOA. The temperature response is also supposed to be linear. For a negative 'forcing' there is an increase in the flux emitted to space, for example produced by aerosol scattering of the solar flux. There are also various 'feedback' mechanisms that modify the temperature response to the 'forcing'. In addition there is a 'climate sensitivity' to a doubling of the CO₂ concentration.

The technical part of the climate modeling fraud has degenerated into a cult ritual. First, a 'global mean temperature change' is created using 'homogenized' weather station data. Second, this is explained in terms of 'radiative forcings' that perturb the earth's 'radiation balance'. Third, equilibrium climate models use future projections of these radiative forcings, mainly the increase in atmospheric CO₂ concentration to create additional warming. The climate models are evaluated using the 'climate sensitivities' that they create. This is the increase in 'global temperature' created by the model for a 'doubling' of the atmospheric CO₂ concentration usually from a 'preindustrial' value of 280 ppm to 560 ppm.

In reality, the decrease in LWIR flux at TOA for a given greenhouse gas is produced by wavelength specific changes in absorption and emission of the LWIR flux at many different levels in the atmosphere. In order to understand the atmospheric heating effects, the change in net LWIR flux

at each level in the atmosphere has to be converted into a change in the cooling rate. The net upward LWIR flux for each level has to be divided by the local heat capacity. For a ‘doubling’ of the CO₂ concentration, the maximum change in the tropospheric cooling rate is +0.08 K per day [Iacono et al, 2008]. Any tropospheric temperature change is too small to measure. The heat produced is dissipated by a combination of wideband LWIR emission, mainly from the water bands and by small changes in gravitational potential as the air parcel changes altitude with atmospheric turbulence and convection. This means that an LWIR radiative forcing produced by an increase in ‘greenhouse gas concentration’ does not change the energy balance of the earth. In addition, if the LWIR radiative forcings are invalid, where is the cooling that should be produced by the aerosols that are used to ‘tune’ the radiation balance?

The determination of the rate of atmospheric LWIR cooling is not a new concept. It was discussed for CO₂ by Plass over 60 years ago [1956]. It was also considered by Lacis and Oinas, [1991] by Feldman et al [2008] and recently by [Wijngaarden and Happer; 2022]. Turbulent mixing in the 2 km boundary layer has been characterized by Gibert et al [2007] using heterodyne LIDAR. They measured vertical velocities up to $\pm 2 \text{ m s}^{-1}$. This is not part of the Cult of the Global Warming Apocalypse, so it has been ignored.

The Growth of the Climate Fraud

The dominant term in the ‘global mean temperature’ is the AMO. From approximately 1940 to 1970 the AMO was in its negative or cooling phase. This led to melodramatic claims of global cooling and the coming of the next Ice Age [McFarlane, 2018, Peterson et al, 2008, Douglas, 1975, Bryson and Dittberner, 1976]. By 1985, the next AMO warming phase was beginning to emerge in the ‘global mean temperature’ and this was used to ramp up the global warming scam. Starting in about 1982, a major CO₂ research program was initiated by the US Department of Energy (DOE). The justification for this program was concern over the climate warming artifacts created by the climate models. A major report of the DOE work was published in 1985. The researchers started from the a-priori assumption that the observed increase in atmospheric CO₂ concentration was causing a warming in the temperature record. The climate model results were accepted without question. The issue was how to detect the CO₂ signal in the surface temperature record. One of the climate modeling papers was co-authored by Brian Flannery from Exxon [Hoffert and Flannery, 1985]. The main conclusion of course was that further study and continued funding was needed. In their analysis of the temperature record Wigley et al [1985] at the Climatic Research Unit (CRU), University of East Anglia (UEA) concluded that “*unequivocal, statistically rigorous detection of the effects of changing CO₂ levels on atmospheric temperatures is not yet possible*”. No quantitative thermal engineering analysis of the changes in surface temperature was presented. In the following year, using the same data set, the CRU started to ramp up the warming claims “*the data show a long timescale warming trend, with the three warmest years being 1980, 1981 and 1983 and five of the nine warmest years in the entire 134 year record occurring after 1978*” [Jones et al. 1986].

In 1979 there were only two modeling groups that provided GCM data for the Charney report. By 1995, 18 coupled climate models were available from seven different countries [Meehl et al, 1997]. The modeling effort for the IPCC is now coordinated through the Coupled Model Intercomparison Project (CMIP). In 2019 there were 49 modeling groups with approximately 100 different models involved in CMIP6 generating the fraudulent data to be incorporated into the next IPCC climate assessment (AR6) [Hausfather, 2019]. All of these models used the same basic approach established by M&W and Hansen et al. The climate sensitivities created by these models is clear evidence of the climate modeling fraud. All 49 groups of climate modelers have abandoned physical reality and entered the realm of computational climate fiction. They have joined the Imperial Cult of the Global Warming Apocalypse.

In 1993 Hansen et al stated [Hansen et al, 1993]

A climate forcing is a change imposed on the planetary energy balance that alters global temperature.

The introduction to Chapter 7 of the Working Group 1 Report in the latest UN Intergovernmental Panel on Climate Change (IPCC) Climate Assessment, AR6, WG1 *'The Earth's energy budget, climate feedbacks, and climate sensitivity'* [IPCC, 2021] starts:

This chapter assesses the present state of knowledge of Earth's energy budget, that is, the main flows of energy into and out of the Earth system, and how these energy flows govern the climate response to a radiative forcing. Changes in atmospheric composition and land use, like those caused by anthropogenic greenhouse gas emissions and emissions of aerosols and their precursors, affect climate through perturbations to Earth's top-of-atmosphere energy budget. The effective radiative forcings (ERFs) quantify these perturbations, including any consequent adjustment to the climate system (but excluding surface temperature response). How the climate system responds to a given forcing is determined by climate feedbacks associated with physical, biogeophysical and biogeochemical processes. These feedback processes are assessed, as are useful measures of global climate response, namely equilibrium climate sensitivity (ECS) and the transient climate response (TCR).

A more concise summary was provided by Knutti and Hegerl [2008]:

When the radiation balance of the Earth is perturbed, the global surface temperature will warm and adjust to a new equilibrium state.

Nothing has changed in 30 years.

The climate models have been 'tuned' to match the 'global mean temperature record' using a contrived set of radiative forcings. The 'anthropogenic' component of these forcings can be 'turned off' to create a 'natural' baseline. A doubling of the CO₂ concentration is then used to create a pseudoscientific 'climate sensitivity' for each model. In reality, the dominant term in the global mean temperature record' is the AMO. Additional warming has been produced by 'bias' effects such as urban heat islands and changes to the urban/rural mix of weather stations used to generate

the global average. The raw weather station data has also been ‘homogenized’ or adjusted to remove potential instrument and site location biases and ‘infill’ missing data. This has been used to create more warming in the global record.

The Political Exploitation of the Climate Modeling Fraud

The political exploitation of the climate modeling fraud started in the 1970s over exaggerated concerns related to population growth. Paul Ehrlich published his book *‘The Population Bomb’* in 1968 and Meadows et al published *‘Limits to Growth’* in 1972 [Meadows et al, 1972]. An important event was the 1975 conference *‘The Atmosphere Endangered and Endangering’* organized by anthropologist Margaret Mead [Hecht, 2007, Mead and Kellogg, 1976]. Her objective was to exploit atmospheric pollution - real or imagined - for population control. Attendees included Stephen Schneider and John Holdren. Both were strongly influenced by Ehrlich. Schneider became a leading advocate of the CO₂ climate scare at Stanford University. Holdren later became science and technology advisor to President Obama.

An important change occurred in the UK in 1979 when Tom Wigley took over from Hubert Lamb as director of the CRU at UEA. Lamb emphasized a historical approach to climate analysis. Wigley promoted climate modeling and chose to believe that the warming artifacts created by the climate models were real. He was an early prophet of the Cult of the Global Warming Apocalypse. He also obtained extensive funding from the US DOE ‘CO₂ Program’ that promoted climate modeling and the detection of a human ‘CO₂ signal’.

Efforts also started to exploit global warming within the World Meteorological Organization (WMO) and the United Nations Environmental Program (UNEP). Bert Bolin conducted climate research for both agencies. Maurice Strong was the first head of UNEP in 1972 and from the start it was involved in blatant environmental advocacy [McClellan, 2009]. In 1980, a conference in Villach, Austria, was hosted by the WMO, UNEP and the International Council of Scientific Unions (ICSU), with the aim of providing a "carefully prepared scientific assessment of the CO₂ question to provide them with guidance in their future activities and advice to nations". This conference concluded that the scientific uncertainties were so significant that no CO₂ management plan could be proposed. The same three organizations tried again in Villach in 1985, using essentially the same data, but this time the 100 attendees participated as individuals rather than representatives of their countries, and they were selected by the three sponsoring agencies because of their support for global warming. This conference included the presentation of several papers, which were both commissioned and peer-reviewed by the conference organizers [Boehmer-Christiansen and Kellow, 2002]. Bert Bolin wrote the report for this conference and created a consensus on the need to take action on global warming. Bolin was also instrumental in preparing the SCOPE 29 report on *‘The greenhouse effect, climate change and ecosystems’* [Bolin et al, 1986]. This created the necessary political pressure for the WMO to establish the IPCC in 1988. Hansen also presented his fraudulent climate warming data to a US Congressional hearing in June 1988 [Hamlin, 2021]. The US Global Change Research Program (USGCRP) was established by Presidential initiative in 1989 and mandated by Congress in 1990.

When the IPCC was created in 1988, Bolin was the first chairman and another global warming believer, John Houghton, Director General of the UK Met Office led Working Group 1 for the technical assessment of global warming. The UK Hadley Center for Climate Prediction was established at the Met. Office in 1989. In conjunction with the Climate Research Center at the University of E. Anglia, the Hadley Center provided major support to the IPCC. The first IPCC assessment report was published in 1990. It was based largely on the SCOPE 29 report. Close ties developed between political leaders and various leading climate researchers. In the UK this included John Houghton (UK Met Office), the Climate Research Unit (CRU) at UEA and Margaret Thatcher (UK Prime Minister) [Courtney, 2012; Folland et al, 2004]. In the US, one of leading political advocates of climate change was Al Gore. He first heard of global warming as a student when he took a course from Roger Revelle. Gore was elected to Congress in 1976 and was US Vice president from 1992 to 2000. He was later responsible for ‘An Inconvenient Truth’. This was a largely fraudulent book on global warming that was also made into a film of the same name.

It must be emphasized that the Intergovernmental Panel on Climate Change (IPCC) is a political body, not a scientific one [McLean, 2010, 2009, Bolin, 2007]. Its mission is to assess “the scientific, technical and socioeconomic information relevant for the understanding of the risk of human-induced climate change.” This is based on the *a-priori* assumption that human activities are causing CO₂ induced global warming. There never was an attempt to objectively evaluate the scientific evidence of the cause of climate change. The IPCC was established to exploit global warming as a way of inducing economic disruption based on the population control and sustainability concerns raised by the Club of Rome [Darwall, 2017, Zubrin, 2013, Klaus, 2007, Dewar 1995]. The IPCC has published six major assessment reports: the first, second and third - FAR (1990), SAR (1995), TAR (2001) and AR4 (2007), AR5 (2013) and AR6 (2021). While the reports may contain a useful compendium of scientific references, material that does not conform to the global warming dogma has usually been omitted. Authors and editors were selected based on their willingness to find CO₂ induced global warming whether it existed or not. The primary focus of these reports has been on the use of modeling ‘scenarios’ to predict future global warming using invalid computer models. These reports should not be cited as scientific references. Any scientific caution about the attribution of temperature increases to global warming was abandoned with the second IPCC Assessment Report in 1995. This was altered at the last minute at the request of the US State Department [FM, 2012]. The science had to agree with the ‘Summary for Policymakers’ written for the politicians. Similarly, the notorious ‘Hockey Stick’ temperature series based on fraudulent tree ring data was featured prominently in the 2001 Assessment Report [Mann et al, 1998, 1999, Montford, 2010, Steyn, 2015, Wedgman et al, 2010]. This was an attempt to eliminate the Medieval Warm Period and the Maunder Minimum from the climate record. The fraud here was the deliberate manipulation of the measured data to create the desired outcome.

In November of 2009, and again in November 2011, a large archive of e-mails and other files from the Climate Research Unit of the University of East Anglia was released on the Internet. A third round was released in March 2013. This archive has revealed to many people outside of the close knit climate community that there had been an ongoing fraud for many years to promote the global

warming agenda and prevent the publication of material that did not support the prevailing global warming dogma. The peer review process in climate science had collapsed and been replaced by blatant cronyism. Climate science had become detached from its foundation in physical science and degenerated into a quasi-religious cult. Belief in global warming was a prerequisite for funding in climate science. The release of this climate archive became known as ‘Climategate’. The information provided has been analyzed in detail by several authors [Monckton, 2009, Montford 2010, Mosher & Fuller, 2010].

The USGCRP and the ‘Deep State’ Imperial Cult

‘Climategate’ did not stop the climate modeling fraud. In the US, the Imperial Cult of the Global Warming Apocalypse is firmly entrenched in the ‘deep state’ of the US government through the USGCRP. Thirteen government agencies are involved, the Department of Agriculture (USDA), the Department of Commerce (DOC), (NOAA and NIST), the Department of Defense (DOD), the Department of Energy (DOE), including the National Laboratories, Department of Health and Human Services (HHS), Department of the Interior (DOI) (USGS), Department of State (DOS), Department of Transportation (DOT), Environmental Protection Agency (EPA), National Aeronautics and Space Administration (NASA), National Science Foundation (NSF), The Smithsonian Institution (SI) and the US Agency for International Development (USAID).

Since it was first established in 1989, the USGCRP has used the results of fraudulent ‘equilibrium’ climate models to perpetuate a massive Ponzi or pyramid scheme based on exaggerated claims of anthropogenic global warming. It takes the climate model output generated by agencies such as NASA and DOE and without question cycles the fake climate warming through the 13 US Agencies to establish a US climate policy that mitigates a nonexistent problem. The pigs have been filling their own trough at taxpayer expense for over 30 years. There has been no significant oversight. None of the agencies using the climate model results has performed any independent validation (‘due diligence’) of the data provided. There is also a fundamental problem with conflict of interest. Who is going to risk unemployment or even jail time by exposing the climate modeling fraud? The climate modelers are no longer scientists, they have become prophets of the Imperial Cult of the Global Warming Apocalypse. Irrational belief in ‘equilibrium’ climate model results has replaced scientific logic and reason. The same group of climate modelers also provides fraudulent climate warming data used by the IPCC in their assessment reports.

The USGCRP was established to coordinate federal research and investments in understanding the forces shaping the global environment, both human and natural, and their impacts on society. It is required to produce a National Climate Assessment every four years. It has failed to look beyond the pseudoscientific nonsense of radiative forcings, feedbacks and climate sensitivities used to create the illusion of warming in the ‘equilibrium’ climate models. A good example is the US Geological Survey Report, *‘Using information from global climate models to inform policymaking-The role of the U.S. Geological Survey’* [Terando et al, 2020]. The first figure is taken from the Fourth National Climate Assessment Report which in turn is copied from IPCC Fifth Climate Assessment Report Figure 10.7, Chapter 10, AR5 WG1 [IPCC, 2013] using original

work published Jones et al [2013] from the UK Met Office. None of the authors along this chain has taken the trouble to investigate the obvious 1940 AMO peak in the HadCRUT4 data nor have they questioned the radiative forcings used in the climate models. For further discussion see the companion post ‘*Climate Pseudoscience*’ VPCP 012.

The basic climate issue that the USGCRP is required by Congress to address is quite straightforward:

Since the start of the Industrial Revolution about 200 years ago, the atmospheric concentration of CO₂ has increased by approximately 140 parts per million (ppm), from 280 to 420 ppm. This has produced a decrease near 2 W m⁻² in the longwave IR (LWIR) flux emitted to space at the top of the atmosphere (TOA) within the spectral range of the CO₂ emission bands. There has also been a similar increase in the downward LWIR flux from the lower troposphere to the surface. At present, the annual average increase in CO₂ concentration is about 2.4 ppm. This produces an annual increase in the downward LWIR flux to the surface of approximately 0.034 W m⁻².

The USGCRP must explain to Congress, using quantitative time dependent thermal engineering analysis, how these changes in flux have altered the earth’s climate. Specifically:

- 1) How has the absorption of 2 W m⁻² by the CO₂ bands changed the temperature of the troposphere?
- 2) How has the 2 W m⁻² increase in downward LWIR flux to the surface changed the ocean surface temperatures?
- 3) How has the 2 W m⁻² increase in downward LWIR flux to the surface changed the land surface temperatures?
- 4) How does an annual increase of 0.034 W m⁻² in downward LWIR flux to the surface increase the ‘frequency and intensity’ of ‘extreme weather events’?

The short answer is that any temperature increases produced by these changes in LWIR flux are ‘too small to measure’. Nor has the observed increase in CO₂ concentration produced an increase in ‘extreme weather events’. In addition, CO₂ is a good plant fertilizer, so there is a major agricultural benefit to an increase in CO₂ concentration - enhanced agricultural production. There is no climate emergency. There is no need for utility scale solar or wind energy. There is no need for the large scale deployment of electric vehicles. It is time to dismantle the entire climate fraud, including the USGCRP and rebuild the energy infrastructure of the US based on inexpensive, reliable fossil fueled and nuclear electrical power.

References

- Arrhenius, S. (1896), “On the influence of carbonic acid in the air upon the temperature of the ground” *Philos. Trans.* **41** pp. 237-276. [<https://doi.org/10.1080/14786449608620846>]
- Boehmer-Christiansen, S. and A.J. Kellow (2002), ‘*International environmental policy: interests and the failure of the Kyoto process*’ Northampton, MA, Edward Elgar Pub.

Bolin, B. (2007), *A History of the Science and Politics of Climate Change. The Role of the Intergovernmental Panel on Climate Change*, Cambridge, Cambridge University Press.

Bolin, B. (1960), “On the Exchange of Carbon Dioxide between the Atmosphere and the Sea” *Tellus* **12** pp. 274-281. <https://doi.org/10.3402/tellusa.v12i3.9402>

Bolin, B.; B. Döös, J. Jäger and R.A Warwick (1986), *The greenhouse effect, climate change and ecosystems*, SCOPE 29, John Wiley and Sons.

Bolin, B., and Eriksson, E. (1959). “Changes in the carbon dioxide content of the atmosphere and sea due to fossil fuel combustion”, in B. Bolin, (Ed.), *The atmosphere and the sea in motion* pp. 130-142. New York: The Rockefeller Institute and Oxford University Press.

[http://climatepositions.com/wp-content/uploads/2014/03/n8_Bolin_Eriksson_1958corrected.pdf]

Bryson, R. A. and G. J. Dittberner (1976), “A non-equilibrium model of hemispheric mean surface temperature” *J. Atmos. Sci.* **33**(11) pp. 2094-2106.

[https://journals.ametsoc.org/view/journals/atsc/33/11/1520-0469_1976_033_2094_anemoh_2_0_co_2.xml]

Callendar, G. S. (1938), “The artificial production of carbon dioxide and its influence on temperature” *J. Roy. Met. Soc.* **64** 223-240 [<https://doi.org/10.1002/qj.49706427503>] available at: [http://www.met.reading.ac.uk/~ed/callendar_1938.pdf]

Charney, J. G.; A. Arakawa, D. J. Baker, B. Bolin, R. E. Dickinson, R. M. Goody, C. E. Leith, H. M. Stommel and C. I. Wunsch (1979), ‘*Carbon Dioxide and Climate: A Scientific Assessment*’, Report of an ad hoc study group on carbon dioxide and climate, Woods Hole, MA July 23-27, [https://www.bnl.gov/envsci/schwartz/charney_report1979.pdf]

Clark, R. (2013), “A dynamic, coupled thermal reservoir approach to atmospheric energy transfer Part I: Concepts” *Energy and Environment* **24**(3, 4) pp. 319-340.

[<https://doi.org/10.1260/0958-305X.24.3-4.319>]

“A dynamic, coupled thermal reservoir approach to atmospheric energy transfer Part II: Applications” *Energy and Environment* **24**(3, 4) pp. 341-359. [<https://doi.org/10.1260/0958-305X.24.3-4.341>]

Clark, R. and A. Rorsch (2022), *Finding simplicity in a complex world*, Amazon (In press).

Courtney, R. (2012), ‘The History of the Global Warming Scare’

<https://tallbloke.wordpress.com/2012/09/12/richard-courtney-the-history-of-the-global-warming-scare/>

Darwall, R. (2017), ‘*Green Tyranny*’ Encounter Books, NY, NY.

Dewar, E. (1995), *Cloak of Green: The Links between Key Environmental Groups, Government and Big Business*, Lorimer Press.

Douglas, J. H. (March 1, 1975) “Climate change: chilling possibilities” *Science News* **107** pp. 138-140. [<https://www.sciencenews.org/wp-content/uploads/2008/10/8983.pdf>]

Ehrlich, P. R. (1968), *The Population Bomb*, Ballantine Books, New York.

<http://pinguet.free.fr/ehrllich68.pdf>

FM (2012), <http://fabiusmaximus.com/2012/09/11/ipcc-climate-change-science-warming-42859/#more-42859>

Folland, C. K.; D. J. Griggs and J. T. Houghton (2004), “History of the Hadley Centre for Climate Prediction and Research” *Weather* **59**(11) pp. 317-323.

[<https://doi.org/10.1256/wea.121.04>] available at:

[https://www.researchgate.net/publication/253556895_History_of_the_Hadley_Centre_for_Climate_Prediction_and_Research]

Fourier, J.-B.-J. (1824), “Remarques générales sur les températures du globe terrestre et des espaces planétaires” *Annales de Chimie et de Physique* **27**, pp. 136–167.

[<https://gallica.bnf.fr/ark:/12148/bpt6k65708960/f142.image#>] English translation:

[<http://fourier1824.geologist-1011.mobi/>]

Gibert, F.; J. Cuesta, J.-I. Yano, N. Arnault and P. H. Flamant (2007), “On the Correlation between Convective Plume Updrafts and Downdrafts, Lidar Reflectivity and Depolarization Ratio” *Boundary Layer Meteorology* **5** pp. 553-573. [<https://doi.org/10.1007/s10546-007-9205-6>]

Hale, G. M. and M. R. Querry (1973), “Optical constants of water in the 200 nm to 200 μm wavelength region” *Applied Optics*, **12**(3) pp. 555-563. [<https://doi.org/10.1364/AO.12.000555>]

Hamlin, L., WUWT Post 4/22/21, ‘History Confirms Democrat’s 1988 Senate Global Warming Hearing Got Everything Wrong from Start to Finish’,

<https://wattsupwiththat.com/2021/04/22/history-confirms-democrats-1988-senate-global-warming-hearing-got-everything-wrong-from-start-to-finish/>

Hanel, R. A.; B. Schlachman, D. Rogers and D. Vanous (1971), “Nimbus 4 Michelson Interferometer” *Applied Optics* **10**(6) 1376-1382 [<https://doi.org/10.1364/AO.10.001376>]

Hansen, J. et al., (45 authors), (2005), “Efficacy of climate forcings” *J. Geophys Research* **110** D18104 pp.1-45. [https://pubs.giss.nasa.gov/docs/2005/2005_Hansen_ha01110v.pdf]

Hansen, J.; D. Johnson, A. Lacis, S. Lebedeff, P. Lee, D. Rind and G. Russell (1981), “Climate impact of increasing carbon dioxide” *Science* **213** pp. 957-956.

[https://pubs.giss.nasa.gov/docs/1981/1981_Hansen_ha04600x.pdf]

Hansen, J.; A. Lacis, R. Ruedy M. Sato and H. Wilson (1993), “How sensitive is the world's climate?” *National Geographic Research and Exploration* **9**(2) pp. 142-158.

[https://pubs.giss.nasa.gov/docs/1993/1993_Hansen_ha02800o.pdf]

Hausfather, Z. (2019), ‘CMIP6: The next generation of climate models explained’ Carbon Brief [<https://www.carbonbrief.org/cmip6-the-next-generation-of-climate-models-explained>]

Hays, J. D., J. Imbrie, N. J. Shackleton (1976), “Variations in the Earth's Orbit: Pacemaker of the Ice Ages” *Science*, **194** Dec. 10, pp 1121-1132.

[<https://www.science.org/doi/10.1126/science.194.4270.1121>]

Hecht, M. M. (2007), “Where the global warming hoax was born” *21st Century Science and Technology*, pp.64-68, Fall Issue.

[<http://www.21stcenturysciencetech.com/Articles%202007/GWHoaxBorn.pdf>]

Hoffert, M. I. and B. P. Flannery (1985) “Model projections of the time dependent response to increasing carbon dioxide” in *Projecting the climatic effects of increasing CO₂*, MacCracken, M. C. & F. M. Luther, Eds, US Department of Energy Report, DOE/ER-0237 pp. 149-190.

[<https://doi.org/10.2172/5885458>]

Iacono, M. J., J. S. Delamere, E. J. Mlawer, M. W. Shephard, S. A. Clough, and W. D. Collins (2008), “Radiative forcing by long-lived greenhouse gases: Calculations with the AER radiative transfer models” *J. Geophys. Res.* **113**, D13103 pp. 1-8. [<https://doi.org/10.1029/2008JD009944>]

IOD (2022), [https://psl.noaa.gov/gcos_wgsp/Timeseries/Data/dmi.had.long.data]

Imbrie, J. and K. P. Imbrie (1979), ‘*Ice Ages: Solving the Mystery*’, Harvard University Press, Cambridge, Mass.

IPCC, *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte, V.; P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. (2021). In Press. [doi:10.1017/9781009157896, <https://www.ipcc.ch/report/ar6/wg1/>]

IPCC, *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, (2014)1535 pp. ISBN 9781107661820. [<https://www.ipcc.ch/report/ar5/wg1/>]

Jones, G. S.; P. A. Stott and N. Christidis (2013), “Attribution of observed historical near surface temperature variations to anthropogenic and natural causes using CMIP5 simulations” *J. Geophys. Res. Atmos.* **118**(10) pp. 4001-4024. [<https://doi.org/10.1002/jgrd.50239>]

Jones, P. D.; T. M. Wigley and P. B Wright (1986), “Global temperature variations between 1861 and 1984” *Nature* **323**(31) pp. 430-434. [<https://www.nature.com/articles/322430a0>]

Klaus, V. (2007), *Blue Planet in Green Shackles. What Is Endangered: Climate or Freedom?* Competitive Enterprise Institute.

Knutti, R. and G. C. Hegerl (2008), “The equilibrium sensitivity of the Earth’s temperature to radiation changes” *Nature Geoscience* **1** pp. 735-743. [<https://www.nature.com/articles/ngeo337>]

Lacis, A. A. and V. Oinas (1991), “A description of the correlated k distributing method for modeling nongray gaseous absorption, thermal emission and multiple scattering in vertically inhomogeneous atmospheres” *J. Geophys. Res.* **96**(D5) pp. 9027-9063.

[<https://doi.org/10.1029/90JD01945>]

Lamb, H. H. (1972), ‘*Climate, Past, Present and Future*’, V1, Routledge, Abingdon, UK.

Lettau, H. H. and B. Davidson (1957), ‘*Exploring the atmosphere’s first mile*’, Oxford: Pergamon Press. [<https://doi.org/10.1002/qj.49708436022>]

Lorenz, E. N. (1973), “On the Existence of Extended Range Predictability” *J. Applied Meteorology and Climatology* **12**(3) pp. 543-546.

[https://journals.ametsoc.org/view/journals/apme/12/3/1520-0450_1973_012_0543_oteoer_2_0_co_2.xml?tab_body=fulltext-display]

Lorenz, E.N. (1963), “Deterministic nonperiodic flow” *Journal of the Atmospheric Sciences* **20**(2) pp. 130-141. [[https://doi.org/10.1175/1520-0469\(1963\)020<0130:DNF>2.0.CO;2](https://doi.org/10.1175/1520-0469(1963)020<0130:DNF>2.0.CO;2)]

Manabe, S. and R. T. Wetherald (1975), “The effects of doubling the CO₂ concentration in the climate of a general circulation model” *J. Atmos. Sci.* **32**(1) pp. 3-15.

[https://journals.ametsoc.org/view/journals/atsc/32/1/1520-0469_1975_032_0003_teodtc_2_0_co_2.xml?tab_body=pdf]

Manabe, S. and R. T. Wetherald (1967), “Thermal equilibrium of the atmosphere with a given distribution of relative humidity” *J. Atmos. Sci.* **24** pp. 241-249.

[http://www.gfdl.noaa.gov/bibliography/related_files/sm6701.pdf]

Mann M. E.; R S. Bradley and M. K. Hughes (1999), “Northern Hemisphere temperatures during the past millennium: Inferences, uncertainties, and limitations” *Geophys Res Lett* **26**:759-762.

[http://www.meteo.psu.edu/holocene/public_html/shared/articles/MBH1999.pdf]

Mann, M. E.; R. E. Bradley and M. K. Hughes (1998), “Global-scale temperature patterns and climate forcing over the past six centuries” *Nature* **392**, pp. 779-787.

[http://www.meteo.psu.edu/holocene/public_html/shared/articles/mbh98.pdf]

McLean, J. (2010), “we have been conned – an independent review of the IPCC” SPPI 2010

[http://scienceandpublicpolicy.org/originals/we_have_been_conned.html]

McLean, J. (2009), “Climate Science Corrupted”, SSPI 2009.

[http://scienceandpublicpolicy.org/images/stories/papers/originals/climate_science_corrupted.pdf]

McFarlane, F. (2018), “The 1970s Global Cooling Consensus was not a Myth” *Watts Up with That*, 11.19.2018 [<https://wattsupwiththat.com/2018/11/19/the-1970s-global-cooling-consensus-was-not-a-myth/>]

Mead, M. and W. W. Kellogg, Eds. (1976), *The Atmosphere: Endangered and Endangering*, Fogarty International Center Proceedings No. 39, (Washington, D.C.: U.S. Government Printing Office, DHEW Publication No. [NIH] 77-1065). (Google Digital Book)

Meadows, D. H.; D. L. Meadows, J. Randers and W. W. Behrens (1972), ‘*Limits to Growth*’, Universe Books, NY.

Meehl, G. A., G. J. Boer, C. Covey, M. Latif and R. J. Stouffer (1997), “Intercomparison Makes for a Better Climate Model” *Eos*, **78**(41) pp. 445-451 October 14,

[<https://doi.org/10.1029/97EO00276>]

Monckton, C. (2009), ‘Climategate: caught green-handed’, SPPI

[<http://scienceandpublicpolicy.org/monckton/climategate.html>]

Mosher, S. and T. W. Fuller (2010), *Climategate: The Crutape Letters*, Create Space.

Montford, A. W. (2010), ‘*The Hockey Stick Illusion*’, Stacey International.

Peterson, T. C.; W. M. Connolley and J. Fleck, (2008) “The myth of the 1970’s global cooling consensus” *Bull. Amer. Meteor. Soc.* **86** pp. 1325-1337.

[<https://doi.org/10.1175/2008BAMS2370.1>]

- Plass, G. N. (1956), “The influence of the 15-micron carbon dioxide band on the atmospheric infrared cooling rate” *Quarterly Journal of the Royal Meteorological Society* **82** pp. 310-324. [<https://doi.org/10.1002/qj.49708235307>] available at [<http://www.rescuethatfrog.com/wp-content/uploads/2017/02/Plass-1956c.pdf>]
- Ramanathan, V. (1975), “Greenhouse effect due to chlorofluorocarbons: Climatic implications” *Science* **190**, pp. 50-52 [<https://www.science.org/doi/abs/10.1126/science.190.4209.50>]
- Ramanathan, V. and J. A. Coakley (1978), “Climate modeling through radiative convective models” *Rev. Geophysics and Space Physics* **16**(4) pp. 465-489. [<https://doi.org/10.1029/RG016i004p00465>], available at: [[http://climate-action.engin.umich.edu/figures/Rood Climate Change AOSS480 Documents/Ramanathan Coakley Radiative Convection RevGeophys %201978.pdf](http://climate-action.engin.umich.edu/figures/Rood%20Climate%20Change%20AOSS480%20Documents/Ramanathan%20Coakley%20Radiative%20Convection%20RevGeophys%201978.pdf)]
- Ramaswamy, V.; W. Collins, J. Haywood, J. Lean, N. Mahowald, G. Myhre, V. Naik, K. P. Shine, B. Soden, G. Stenchikov and T. Storelvmo (2019), “Radiative Forcing of Climate: The Historical Evolution of the Radiative Forcing Concept, the Forcing Agents and their Quantification, and Applications” *Meteorological Monographs* Volume **59** Chapter 14. [<https://doi.org/10.1175/AMSMONOGRAPHS-D-19-0001.1>]
- Revelle, R. and H. E. Suess (1957), “Carbon dioxide exchange between atmosphere and ocean and the question of an increase of atmospheric CO₂ during the past decades” *Tellus* **9** pp. 18-27. [<https://doi.org/10.3402/tellusa.v9i1.9075>]
- Schneider, S. H. (1975), “On the CO₂-climate confusion” *J. Atmos. Sci.* **32**(11) pp. 2060-2066. [[https://doi.org/10.1175/1520-0469\(1975\)032<2060:OTCDC>2.0.CO;2](https://doi.org/10.1175/1520-0469(1975)032<2060:OTCDC>2.0.CO;2)]
- Steyn, M. (2015), *A Disgrace to the Profession*, Amazon. [<https://www.amazon.com/Disgrace-to-the-Profession-34-Mark-Steyn-editor/dp/0986398330>]
- Terando, A. D. Reidmiller, S. W. Hostetler, J. S. Littell, T. D. Beard, Jr., S. R. Weiskopf, J. Belnap, G. S. Plumlee (2020), “Using information from global climate models to inform policymaking—The role of the U.S. Geological Survey” *U.S. Geological Survey Open-File Report 2020–1058*, 25 pp. [<https://doi.org/10.3133/ofr20201058>]
- Tyndall, J. (1861), “On the Absorption and Radiation of Heat by Gases and Vapours, and on the Physical Connexion of Radiation, Absorption, and Conduction” *Philosophical Transactions of the Royal Society of London*, **151** pp. 1-36. [<https://doi.org/10.1098/rstl.1861.0001>]
- Tyndall, J. (Jan 23, 1863), “On radiation through the Earth's atmosphere” *Proc. Roy. Inst.* pp 200-206.
- Wegman, E. J., D. W. Scott & Y. H. Said, (2010), ‘Ad hoc committee report on the 'hockey stick' global climate reconstruction’. [http://scienceandpublicpolicy.org/reprint/ad_hoc_report.html]
- Wigley, T. M. L.; J. K. Angell and P. D. Jones (1985), “Analysis of the temperature record” in *Detecting the climatic effects of increasing carbon dioxide*, M. C. MacCracken and F. M. Luther, Eds. US Department of Energy Report DOE/ER-0235, pp. 55-90. [<https://doi.org/10.2172/6264945>]
- Wijngaarden, W. A. van and W. Happer (2022), “IR Forcing by Greenhouse Gases” CO₂ Coalition publication 6/10/22, [<https://co2coalition.org/wp-content/uploads/2022/03/Infrared-Forcing-by-Greenhouse-Gases-2019-Revised-3-7-2022.pdf>]

Zubrin, R. (2013), '*Merchants of Despair*', Encounter Books, NY, NY.