The Scientific Method

- **Hypotheses Must be Reproducible.**
- **Hypotheses Must be Verified by Observation or Experiment.**
- **Hypotheses remain conditional truths, always subject to further confirmation in the future.**

- **Comment by Albert Einstein: "No amount of experimentation can prove me right; a single experiment can prove me wrong."**
- **Comment by Richard Feynman: "It doesn't matter how beautiful your theory is, it doesn't matter how smart you are, if it doesn't agree with experiment, it is wrong."**

The Scientific Method has been the Gold Standard for distinguishing between a belief and a fact for 400 years. It has served us well.

The information that I have presented so far is by scientists, using standard procedures of the Scientific Method to collect, analyze, and disseminate their findings.

Post Normal Science (PNS)

- **PNS is sometimes used in situations where the facts are uncertain, values are in dispute, stakes are high, and decisions are urgent.**

- **PNS relies on a consensus of experts to provide the governing assumptions, equations, and data to be analyzed in each study.**

- **PNS was used successfully in the creation of the atomic bomb in the Manhattan Project in WW II.**

PNS was a failure in the Club of Rome's 'Limits to Growth' Study' in 1971. The study predicted that the Planet's major energy and material resources, including food, would be exhausted by the early 2000s.

These prediction were all found to be wrong by 2010.

The IPCC's Studies are based on PNS procedures.

THE IPCC MINDSET

- **1987, The Brundtland Commission issued its influential report on Sustainable Development, which supported a Precautionary Principle approach to Environmental issues.**

- **1988, Prime Minister Gro Brundtland was a keynote speaker at a Toronto conference to discuss the focus for the IPCC's upcoming climate study. She said:**

- **'it is established beyond doubt that we will experience a global change in climate… Humanity is conducting an unintended, uncontrolled, globally pervasive experiment whose ultimate consequences could be second only to a global nuclear war.'[26]**

The rhetoric by Prime Minister Gro Brundtland was of high alarm, of looming dire consequences, and of the need for swift action to address an imminent crisis. Our Planet was at risk from a global warming apocalypse.

Over the past 36 years, successive UN Secretary Generals, the IPCC Executive Panel, successive COP conferences, and almost all the ENGOs have sought to maintain a high level of alarm and fear over global warming issues.

They have largely succeeded in achieving their goal.

Brundtland's assumptions in 1988 were wrong. They are still wrong today.

Her beliefs, however, were shared by many people and they helped to launch the IPCC studies on a flawed trajectory.

After 1988, a flood of money poured into green energy studies by universities and consultants.

These studies were often blinkered, biased, and were based on a key IPCC assumption that rising CO_2 emissions would produce a strong positive water vapor feedback response.

There was virtually no funding available for more balanced and objective studies on what role CO_2 might actually be playing in the atmosphere and the oceans.

The invocation of the Precautionary Principle into many IPCC modeling studies led to a focus on extreme scenarios and doomsday outcomes that fanned the growing hysteria over the perceived threat of CO_2 causing a global warming apocalypse.

The IPCC approach is a classic example of the distortions that government funded science can cause when seeking to justify desired political goals by looking at only one side of an issue.

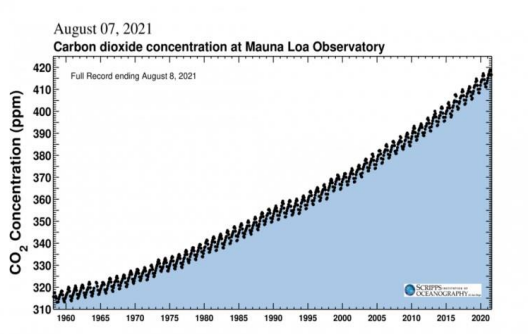


Fig. 10 Rising Carbon Dioxide Concentration at Mauna Loa Observatory

Fig. 10 shows the Keeling curve for observed CO_2 concentrations at Mauna Loa.

Most observers agree that CO_2 emissions from fossil fuels are the main contributor to this exponential rise in CO_2.

Greenhouse gases in descending order of importance are water vapor), carbon dioxide, methane, Nitrous oxide and Ozone.

The IPCC's hypothesis is that anthropogenic emission of CO_2 and the other minor greenhouse gases produces a strong positive feedback response from water vapor which then becomes the main driver of global warming.

Thus, CO_2 is acting as a global thermostat, controlling the rate of global warming by controlling the amount of water vapor in the atmosphere.

This assumption, if true, coupled with the exponential rise in the CO_2 curve, means that CO_2 today should be a significant cause of climate change today.

This means that we should be able to see a significant correlation between CO_2's behavior and various climate parameters.

In the past 36 years of IPCC studies, however, this hypothesis has never been supported by reliable scientific observations or experiments.

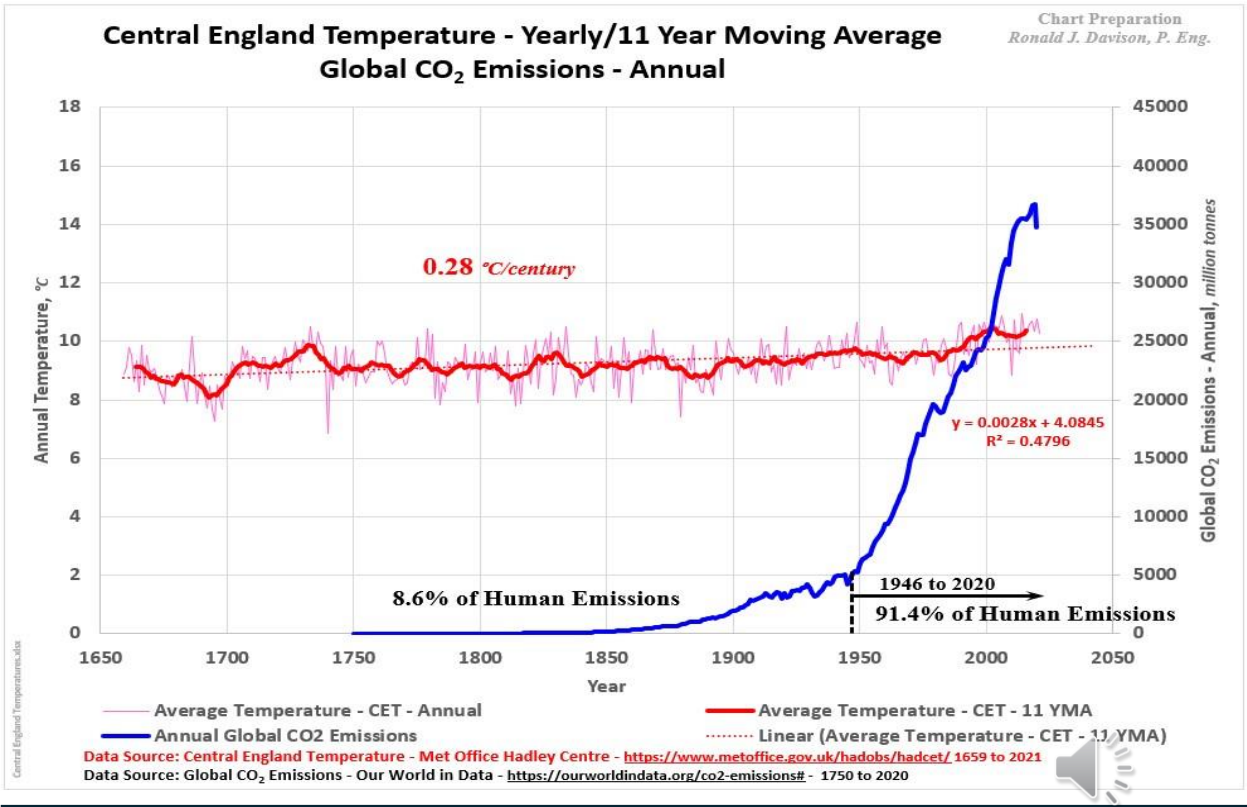


Fig. 11 Central England Temperature Record 1659 to 2024 Global CO_2 Emissions 1750 to 2020 [27]

Fig. 11 shows the 362 year long Central England Temperature record in red. It is the longest instrument temperature record in the world.

The Central England Temperature record is predominantly a linear trend, rising at an average rate of 0.28^{O} C/century.

The blue line is the estimated human generated CO_2 emissions into the atmosphere since the start of the Industrial Revolution about 1750.

91.4% of the estimated CO_2 emissions occurred after 1946.

The lack of any obvious correlation between the rising CO_2 emissions and the temperature record invalidates the IPCC's modeling hypotheses that CO_2 is the major driver of recent temperature change.

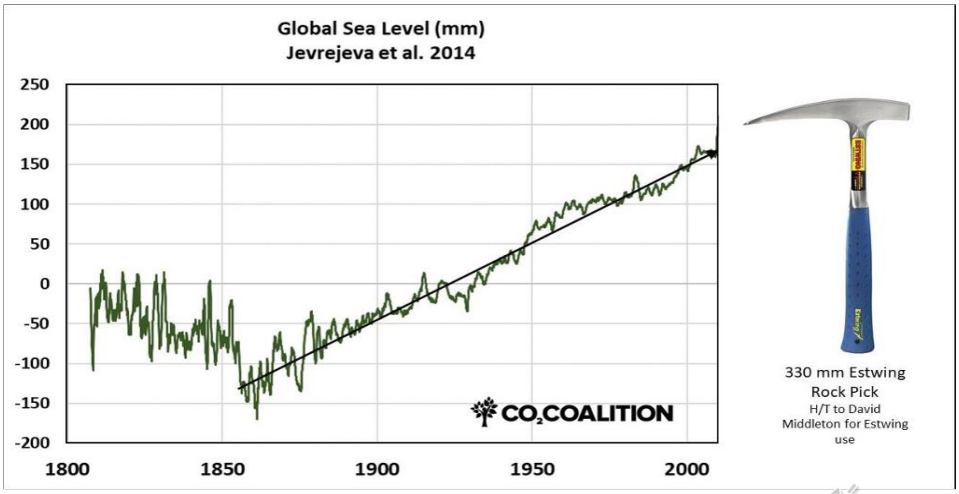


Fig. 12 Rising Sea Level (CO_2 Coalition) [28]

Fig. 12 shows that the global sea level has been rising about 20 mm per decade since about 1860. This is a strong confirmation that we are currently in a warming trend that is causing glaciers to melt.

The IPCC's modeling, however, predicts that we should be experiencing unprecedented global warming from rising CO_2 levels, leading to an unprecedented melting of glaciers, and to an unprecedented rate of rise in the global sea level.

The observed data, however, shows a relatively orderly linear rise in sea level from about 1860 through to 2014. There was no significant change in the rate of rise after 1946.

This finding further invalidates the IPCC's modeling hypothesis that rapidly rising CO_2 emissions are causing an unprecedented recent rise in sea level.

The 330 mm height (about 13 inches) of the geologist's rock pick on the right shows the amount of sea level rise over 154 years. This is not an alarming rate of rise. It can be readily dealt with by raising dykes and by zoning regulations.

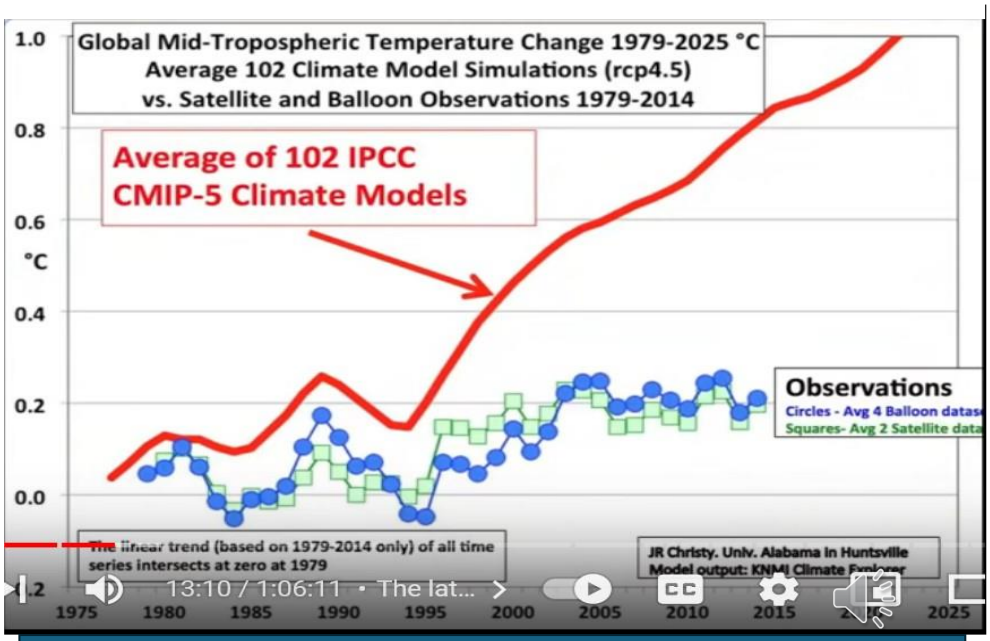


Fig. 13 Observed Temperatures in the Tropical Troposphere Compared to IPCC Modeling Results for CMIP5 Climate Models (rcp 4.5) (Dr. John Christy)[29]

The IPCC computer models claim that the strongest evidence of rising CO_2 levels causing global warming will be found in the Tropical Troposphere, 18 kilometers up in the atmosphere.

The red curve in Fig.13 shows the temperature rise that should be occurring in the Tropical Troposphere according to the IPCC computer models through to 2025.

The observed green satellite data and the blue weather balloon data at the bottom of the graph show the actual temperatures that were being measured in the Tropical Troposphere through to 2014.

The IPCC's models are running too hot. The IPCC's assumption that CO_2 produces a strong positive feedback from water vapour response is not supported by the satellite and balloon data

The IPCC computer models are not providing reliable data for Governments to use in determining long term climate policies.

When the IPCC released its AR5 Summary Report for Policymakers in 2014, it stated:

'Human influence on the climate system is clear. It is extremely likely (95–100% probability) that human influence was the dominant cause of global warming between 1951 and 2010.' [30]

This was an extraordinary statement for the IPCC Executive Panel to make, given the clear discrepancy between the IPCC's modeling results and the observed data.

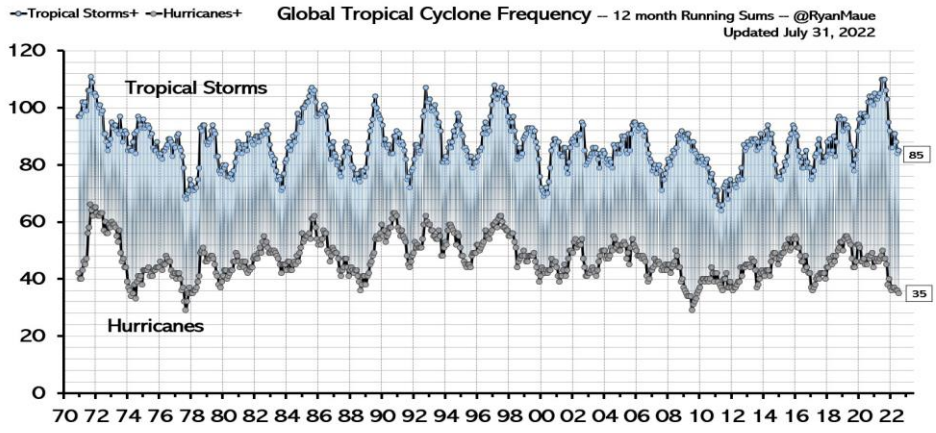


Fig. 14 Global Tropical Storms and Hurricane Frequency (Dr. Ryan Maue) [31]

The IPCC Executive Panel and its supporters claim that the planet is experiencing unprecedented recent changes in extreme weather.

The observed records of Tropical Storms and Hurricanes in Fig. 14 do not show any noticeable recent change in trend of the global frequency of either Tropical Storms or Hurricanes over 50 years of record.

This refutes the claim that we are experiencing unprecedented recent changes in extreme weather, at least with regard to tropical storms and hurricanes.

The cost of hurricanes has increased over time but that is due to more people and infrastructure being located in vulnerable areas.

This is a land use issue, not a rising CO_2 issue.

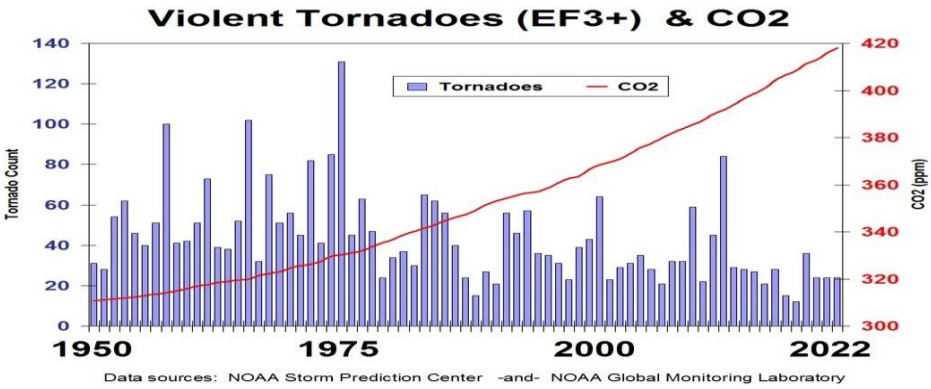


Fig. 15 Frequency of Major US Tornadoes (John Shewchuk) [32]

Fig. 15 shows that the frequency of major US Tornadoes has decreased over the past 72 years.

This is showing a negative correlation with the rising red CO_2 concentration curve at this time.

This refutes the claim that we are experiencing unprecedented changes in extreme weather, at least with regard to tornados.

The damage and cost of Tornadoes has increased but that is due to more people and infrastructure being in vulnerable areas.

This again is a land use issue and a building standards issue, not a CO_2 issue.

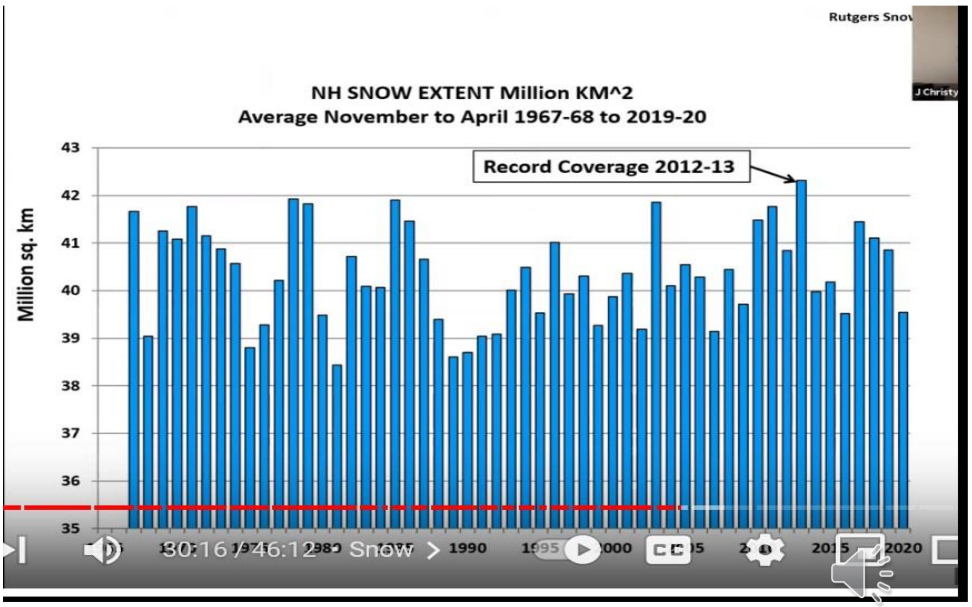


Fig.16 Snow Cover in the Northern Hemisphere (Dr. J. Christy)[83]

A few years ago, IPCC computer modeling studies predicted that snow cover would soon be a thing of the past in the Northern Hemisphere.

Fig. 16 shows that snow cover can vary quite a bit from year to year, but there is no evidence from 52 years of record of any significant recent change in trend underway in snow cover.

This refutes the claim that we are experiencing unprecedented changes in extreme weather, at least with regard to snow cover.

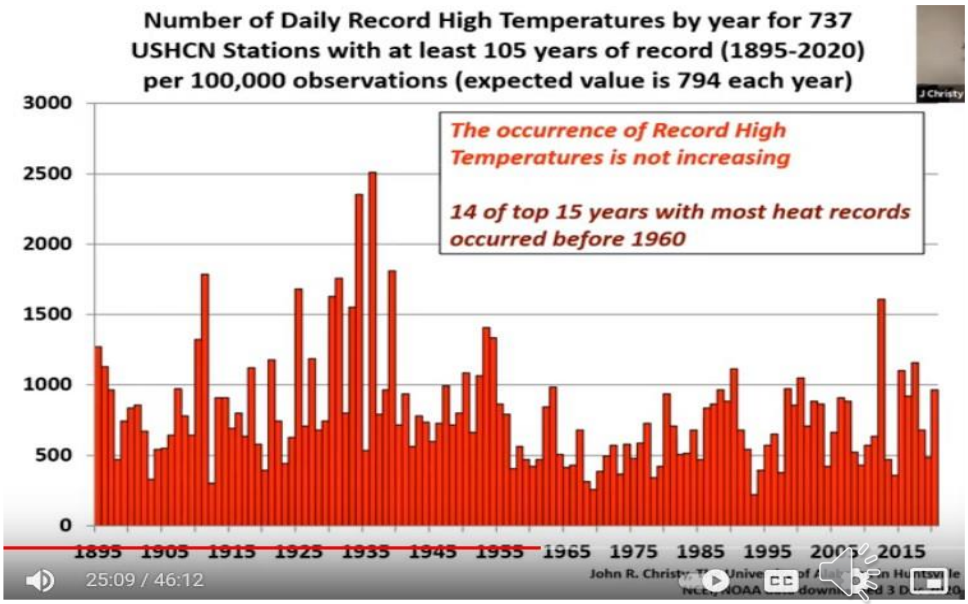


Fig. 17 Number of Record High Days Each Year in the USA (Dr. Christy) [34]

Fig. 17 shows that the 1930s was clearly the time of the most intense hot days in the US in the past 105 years.

Today's observed intense heat records are similar to what they were 100 years ago, at least through to 2020.

Fig. 17 contradicts claims by the IPCC and its supporters that we are currently experiencing unprecedented intense modern warming.

USHCN weather station in a parking lot. University of Arizona, Tucson

Fig. 18 Urban Heat Islands (Anthony Watts)[35]

In the earlier graphs, we were looking for changes in regional or planetary climate data.

If we look at local weather records, however, we see that the creation and growth of cities can cause a significant rise of several degrees between local temperatures within cities and temperatures in the surrounding countryside.

Many citizens claim that they are experiencing warmer temperatures than in the past. If they are living in growing cities, they are right. The addition of more buildings, blacktop, air conditioners, commercial and industrial activities, ground transportation and airports, results in the absorption of more solar heat and the generation of more anthropogenic heat in local areas that become Urban Heat Islands.

Fig. 18 shows how the transition to a city environment can create microclimates that degrade the quality of the data that is collected by weather stations. This makes it difficult to determine what part of any

change in a long-term temperature record in a city is due to climate change, and what part is due to land use changes.

The National Weather Service (NWS) criteria for weather stations collecting temperature data states, in part:

'When possible, the shelter should be no closer than **four times the height of any obstruction** (tree, fence, building, etc.). The sensor should be at least **100 feet from any paved or concrete surface.'**

In Fig. 18, this weather station in the fenced-in enclosure is sitting on a paved road with concrete pavements on either side of the road.

/It is ironic that the building in the background is the University of Arizona Atmospheric Sciences Department.

This weather station was part of the US Historic Climatology Network (USHCN), which means this weather station was likely established in what would have been a rural area about a hundred years ago.

It was decommissioned shortly after Anthony Watts, a prominent Meteorologist, included it in a survey he did of USHCN weather stations in 2007. He concluded that about 89% of the weather stations did not meet NWS criteria for acquiring good quality weather data,

Watts updated his study in 2022. This time he concluded that 96% of the weather stations failed to meet NWS quality criteria.

Weather agencies claim to be able to adjust for this flawed data, but this is a dubious and contested claim. It seems, in fact, that the more the weather agencies adjust weather data, without giving clear explanations of why and how the adjustments are being made, the

more confusion and uncertainty they create about the reliability of the data that they do publish.

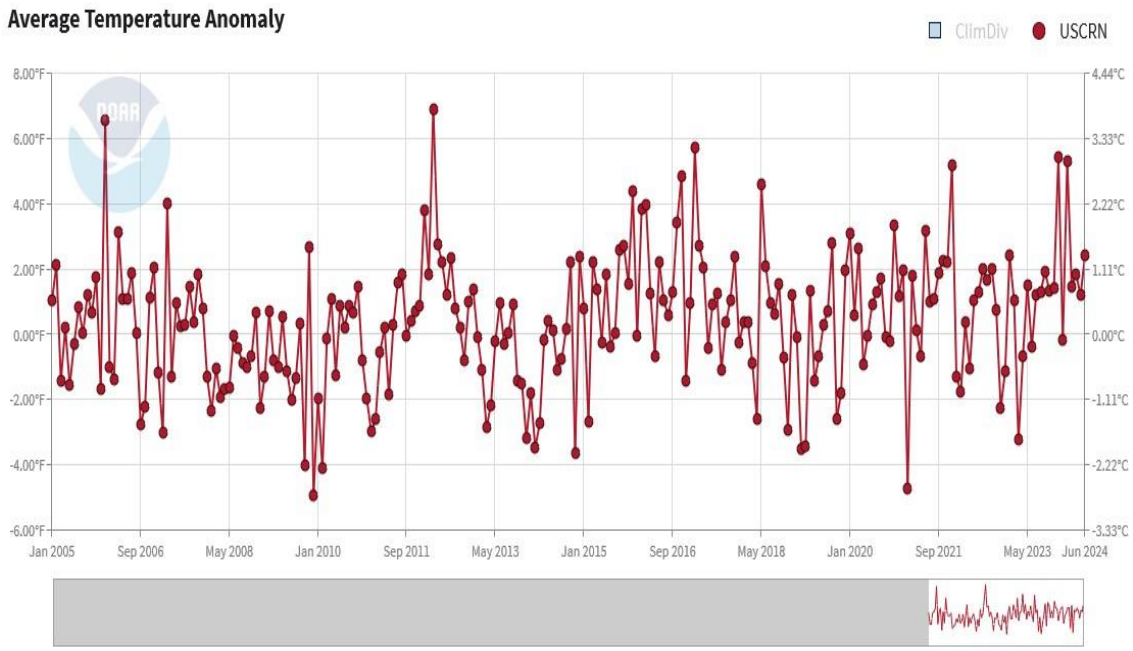


Fig. 19 Shows USCRN the Average Monthly Temperature Anomaly since January 2005

The National Climate Data Center (NCDC) has created a new U.S Climate Reference Network (USCRN) to deal with this issue.

They have created a small number of new high quality weather stations across the country in locations that are not likely to change in character in the next 50 years.

The new USCRN network has been in operation since 2005. This is still only a short period of time, but it has already produced at least one noteworthy result.

Despite all the claims of unprecedented climate warming over the past 20 years, Figure 19 of the Average Monthly Temperature Anomalies in the USCRN network itself is not showing any pronounced upward trend in the temperature data from areas that have been selected to be free of any local city-induced warming effects.

This may surprise many people since their daily lives are dominated by the urban environments that they are living in. What they may not appreciate is how small the urbanized areas are compared to the total surface area of the earth.

Water covers about 71% of the earth's surface, land about 29% of the earth's surface, and urbanized areas about 1-3% of the land area, which is less than 1.2% of the earth's total surface area.[36]

This appears to be too small of an area to be having a significant effect on climate statistics for regional areas or for the planet as a whole. This is why we are not seeing any significant recent uptrends developing in the graphs for temperatures, sea level rise, hurricanes, tornados, snow cover, or intense periods of heating.

Urban Heat Islands do affect the lives of millions of people who live within them, but they largely adapt by relying on more air conditioning to remain comfortable in their daily lives during the hot spells.

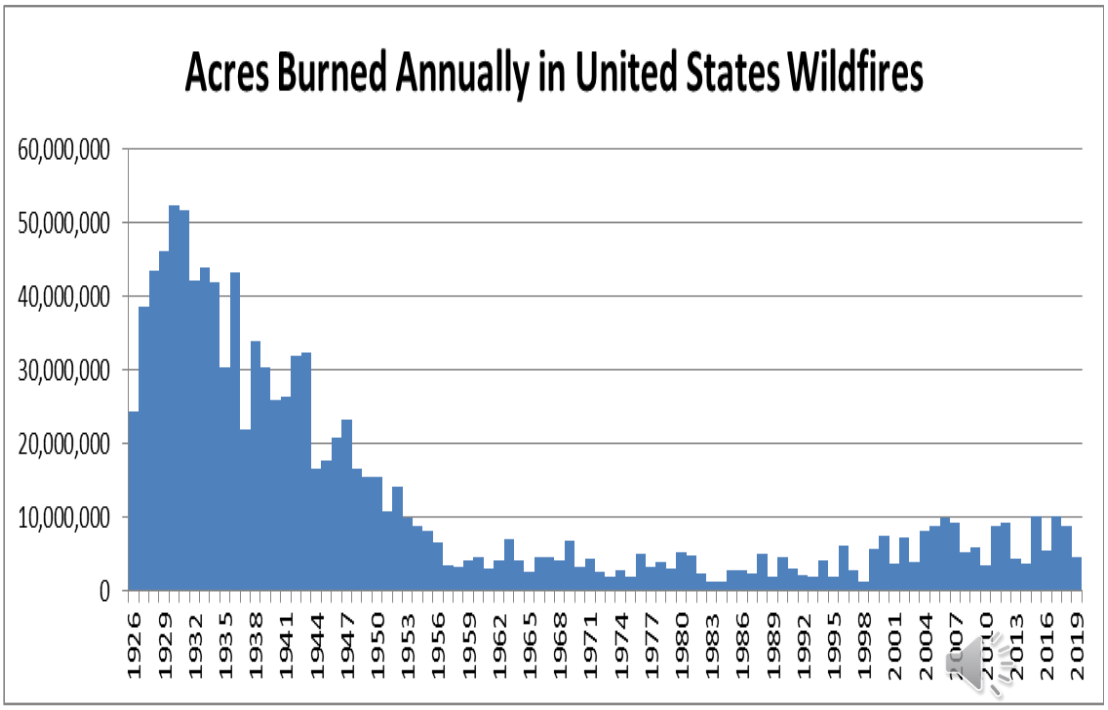


Fig. 20 Total Wildland Acres Burned Annually (1926-2019) in USA[37]

Figure 20 shows the wildfire acres burned annually in the US. Forest management practices brought wildfires largely under control after 1930 with fire suppression measures, logging, and controlled burns of forest litter.

During the 1980s and 1990s, thinking changed and opposition grew to logging and to having controlled burns of forest litter on a regular basis.

In the 1980s and 1990s period, in semi-arid areas like California, South Australia, and the Okanagan Valley here in BC, more subdivisions were allowed to be developed in forested areas.

Forest litter accumulates in these areas, adjacent to homes. When fires do occur in these areas, property damage and loss of life can be high.

Poor maintenance of power line rights-of-way in California and Hawaii have also contributed to serious destructive fires in recent years, as has human carelessness.

These are primarily political, land management, and people issues, not CO_2 issues.

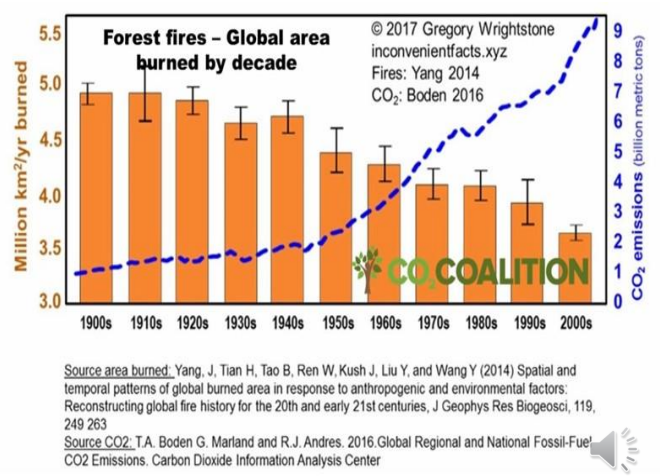


Fig. 21 Forest Fire Global Area Burned by Decade

Fig. 21 shows the global decline of the acreage burned by forest fires per decade in orange, and rising CO2 emissions over the past 100 years in the blue curve.

The correlation between to two curves is negative.

In any given year, some areas of the world with forests, which have a lot of forest litter present, can be hit hard with a combination of high temperatures and dry conditions, which can cause an extremely bad year for forest fires, as Canada experienced in 2023. This, however, represents a short-term local anomaly in a long-term global decline in the forest fire acreage that is being destroyed annually.

2023 was expected to be a hot year because of El Nino but this naturally occurring phenomenon appears to have been further

boosted by the large Hunga-Tonga volcanic eruption in the South Pacific in 2022.

That eruption injected large amounts of water and water vapor, which is the strongest greenhouse gas, into the upper atmosphere, adding to global warming.

It may take several years for the heat-creating Hunga-Tonga effect to fully dissipate.

This chart is an example of the widespread successful adaptation measures being taken by most nations in the world to reduce the damage from forest fires.

Increased population, increased infrastructure, and emergency fire suppression costs when fires do break out are the primary reason for the cost of forest fires increasing, not rising CO_2.

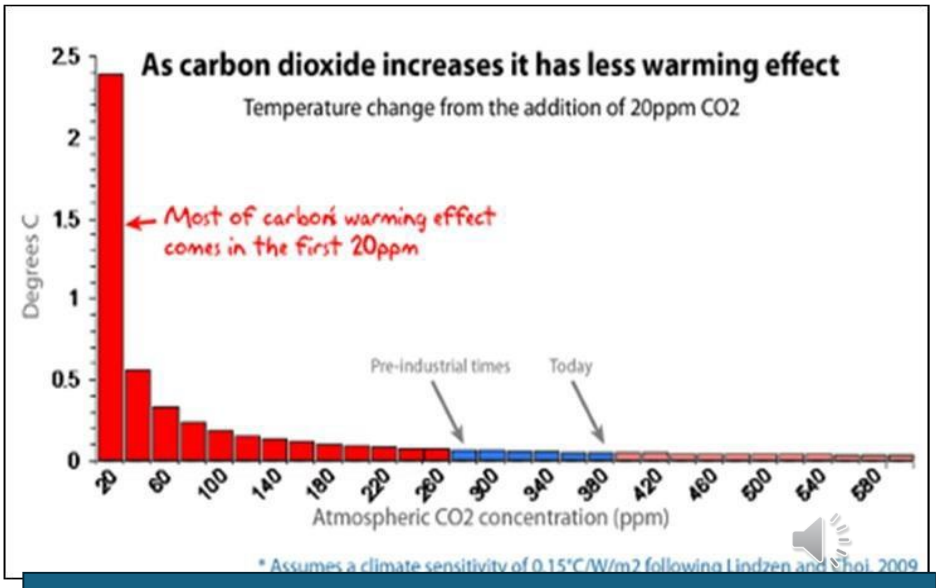


Fig.22 Saturation Effect Showing Exponential Decay of CO_2's Ability to Absorb More [38]

Fig. 22 shows that CO_2's ability to absorb outgoing radiation from the Earth into space decays exponentially.

By the time CO_2's concentration in the atmosphere rose from 0 ppm to 60 ppm, most of CO_2's potential capacity to warm the Earth had already occurred.

The Fig. 22 graph was prepared in 2009. You can see that at our present-day concentration of 420 ppm, adding more CO2 to the atmosphere has little effect on global warming.

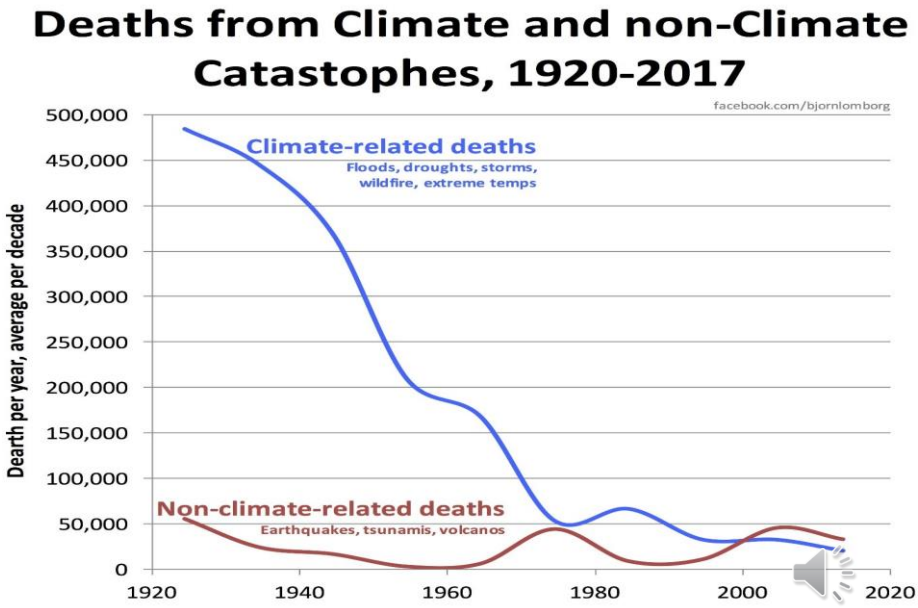


Fig. 23 Loss of Lives from Climate and Non-Climate Disasters (B. Lomborg)[39]

The red graph in Fig. 23 shows the deaths from non-climate related events (Earthquakes, tsunamis, volcanos) over the past 100 years. The average death rate per decade is holding below 50,000 deaths per year.

The blue curve shows the remarkable reduction by over 90% in the past 100 years in the number of lives being lost to climate-related events per decade from floods, droughts, storms, wildfires and extreme temperatures.

This reduction is due in large part to the growing wealth and knowledge of societies and governments, which have:

-1 established monitoring systems to detect and track extreme weather events,

-2 devised warning procedures to alert local authorities and citizens of developing threats,

-3 organized temporary evacuation measures in floods and hurricanes,

-4 organized hydration and temporary cooling measures in heat waves in countries where citizens cannot afford air conditioners,

-5 issued zoning regulations to limit development in hazardous areas,

- and 6, funded various structural measures such as flood protection works to greatly improve the safety and welfare of their citizens.

This remarkable improvement has happened as the world's population has risen from 2 billion people to 8 billion people in the past 100 years.

It is an extraordinary testament to our species' ability to adapt to changing circumstances.

Pursuing these type of meaningful local measures will be a much more effective way of dealing with future climate change problems as they arise, and where they arise, rather than trying to pursue a worldwide ban on CO_2 emissions, which will produce only great social and financial pain for negligible gain.

Fig. 24. The positive externalities of CO2 [40]

CO_2 is an essential requirement for all life on the planet. It produces faster, stronger, more drought resistant growth in plants.

Fig. 24 shows the growth of a pine sapling in the left cubicle kept at 385 ppm CO_2 over a 10-year study period.

Each cubicle to the right shows similar pine saplings grown in cubicles with successively higher increments of 150 ppm of CO_2 over the 10-year study period.

It is clear that today's low concentration of CO_2 is starving trees and plants of the food they need to achieve their full growth potential via photosynthesis.

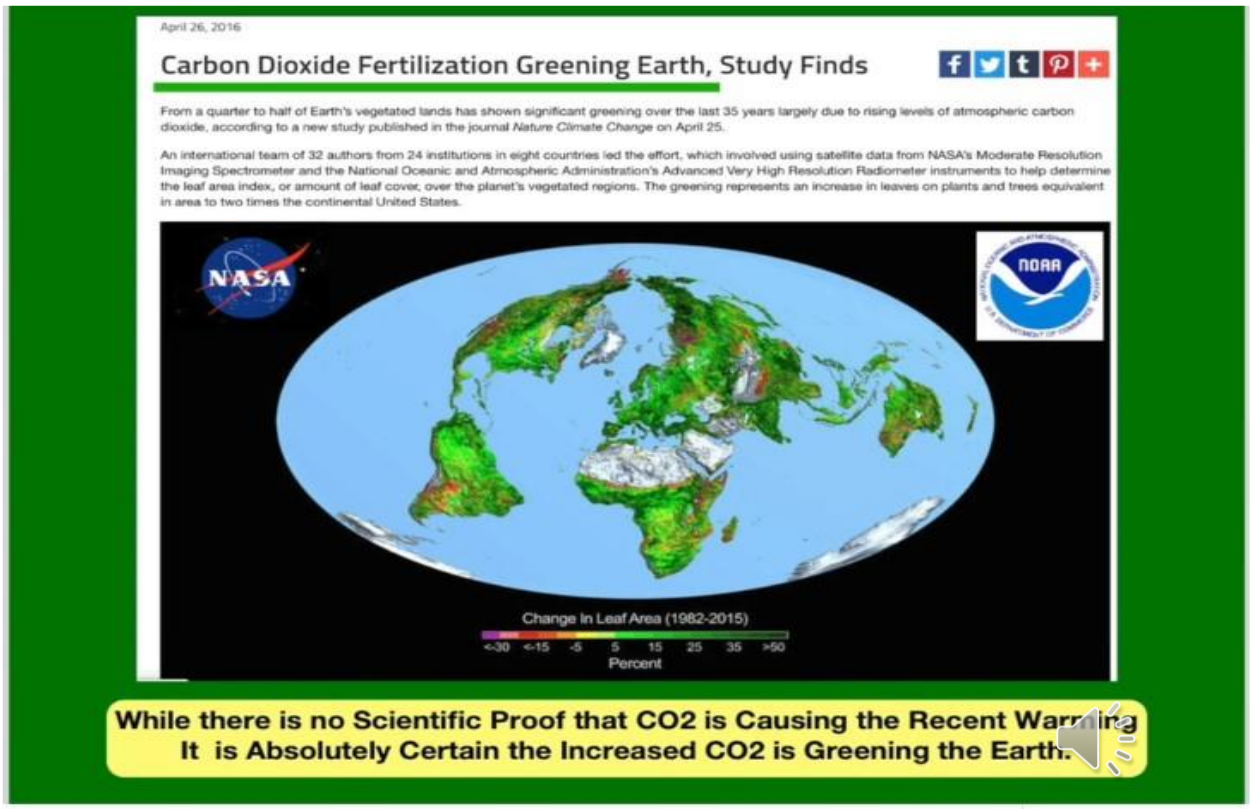


Fig. 25 Carbon Dioxide Fertilization Greening the Earth(Dr. P. Moore) [41]

In 2016, a large international study of 35 years of satellite records determined that the net greening of the Planet by plants and trees had increased by an area equivalent to two times the area of the continental United States.

Rising CO_2 levels are also contributing to the record crop yields that the earth has experienced in recent years.[42]

CO_2 provides a major benefit to all life on our planet.

CO_2 is not a pollutant, despite the claims by the US EPA and by most Western Governments, who are trying to regulate CO_2 out of existence.

CONCLUSION

- **The IPCC's assumption that CO_2 is the thermostat controlling climate change is not supported by data or analysis.**

- **Natural forces play a major role in climate change.**

- **The Planet is in a moderate Modern Warm Period, similar to the earlier Medieval Warm Period and the Roman Warm Period. The warming is being driven primarily by the sun, not by CO_2.**

- **CO2 emissions are helping to green the Planet and improve crop production. CO2 is not a pollutant.**

- **The combined action of the Milankovitch Cycles has turned negative.**

- **Technically, the Planet remains in the grip of an Ice Age that began 2.5 million years ago. We do not know when this will end.**

- **The Planet is not at risk of a catastrophic global warming apocalypse within the foreseeable future.**

POSTSCRIPT

- **Western societies have driven the process to develop the Paris Accords and to achieve the Net Zero CO2 Emission Goal for fossil fuels by 2050.**

- **Hundreds of billions of dollars has been spent on green energy studies to achieve this goal.**

- **Initial estimates are emerging that full implementation of the Net Zero 2050 goal could cost hundreds of trillions of dollars.**

- **Jurisdictions leading the conversion to replace fossil fuels with green energy are rapidly becoming high cost, highly taxed, highly subsidized, and highly indebted Jurisdictions.**

- **These same Jurisdictions are experiencing economic stagnation and deindustrialization, impacting the lives of those with the least income and job security. Tariffs are now being considered to retain some residual manufacturing capacity.**

- **All these costs and disruptions to be expected from current green energy policies are being justified by Western Governments and ENGO's as being necessary to save our Planet from a global warming apocalypse.**

- **As this video has shown, however, there is no looming global warming apocalypse threatening our Planet, and that rising CO_2 emissions are proving to be a benefit to the planet's food production, and a negligible threat to global warming.**

- **In a rational world, this would be welcome news. It would mean that our current major misallocation of our financial and intellectual resources in pursuit of inefficient, unreliable, and damaging green energy measure could be stopped.**

- **A turnaround in current energy and economic policies of this magnitude would free the world from the growing threats of the disorder, strife, and economic ruin that lies down the path that Western countries are pursuing with their net zero 2050 policies.**

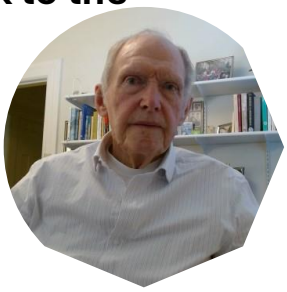
- **This much needed change in policies may not happen, however, since we are no longer living in a rational world.**

- **We are living instead in a self-induced climate hysteria that has gained enough momentum, believers and financial beneficiaries that it may take a general economic collapse of the West with all its accompanying social unrest to eventually bring us to our senses.**

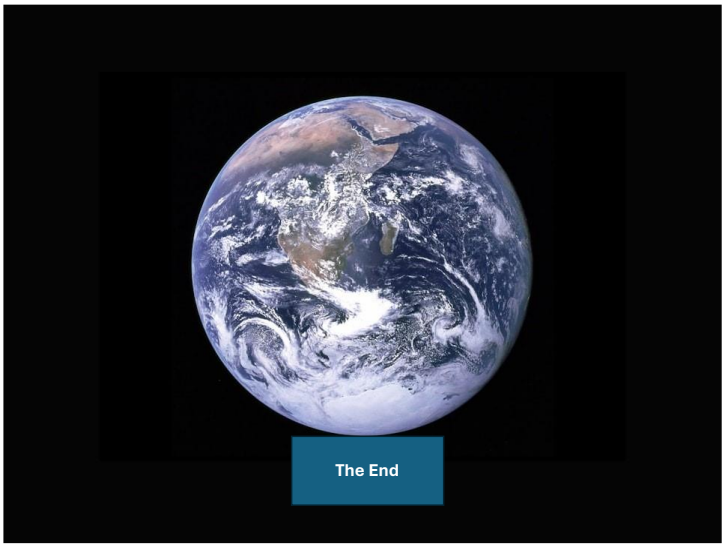
- **Our great need today is for new people in leadership positions who have both wisdom and integrity, and a willingness to challenge existing dogmas.**

- **And on this rather somber note, the video ends.**

- **If you know of others who might be interested in the video, please send them a link to it and a link to the transcript and references as well.**



- **E-mail: kwwilson73@gmail.com**



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