

A Ready-To-Go Presentation

April 1, 2021

Thorpe Watson, PhD

This is ready for any group by Zoom or In Person.

Last Revised August 11, 2021

Defending CO₂ and Our Way of Life

As a former Rotarian and a practitioner of the four-way test, I wish to defend CO₂ and our way of life. Climate change defies science, and CO₂ must be defended. I or my son, Warren, would be happy to bring your group up to speed on the issue because it affects everybody especially the middle class through energy and taxation.

You should be familiar with the four-way test which is important even if not a member of Rotary.

Is it the truth?

Is it fair to all concerned?

Will it build goodwill and better friendships?

Will it be beneficial to all concerned?

Dr. Thorpe Watson (1939 –) is a metallurgical engineer and materials scientist with degrees from Queen's University in Kingston, Ontario, and the University of Birmingham in the UK. Thorpe Watson's thirty-five-year career with Cominco Ltd. has allowed the evaluation of technologies covering a broad range of scientific disciplines.

Consequently, it was not surprising that he found most intriguing that a trace gas, carbon dioxide or CO₂, could provide us with a temperature control knob. This is something that a farmer could only imagine in his wildest dreams.

When Thorpe Watson started researching the topic fifteen years ago, the controversy was known as man-made global warming. It became, out of necessity, climate change when warming stopped in 1998.

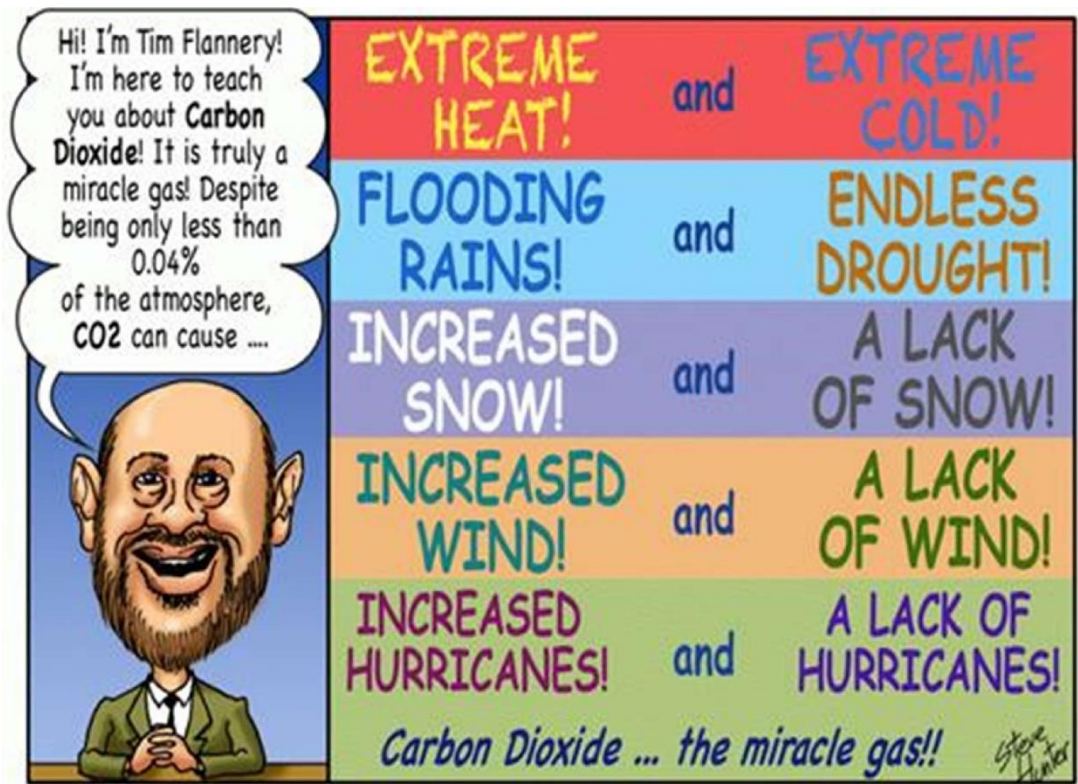
It soon became apparent in his investigation that the climate-change hypothesis lacked any scientific merit. It is a figment of the human imagination and exists solely in the mythical computer world of fatally flawed climate models.

Mr. Warren Watson (1964 –) is currently an artist and a bridge professional. His original training consists of an honours BASC in Engineering Physics and a MASC in aeronautical engineering. He worked in the aircraft industry in Canada and Indonesia with model design and computational fluid dynamics.

The weather system is a very complicated version of the aircraft. It is a system of two fluids, water and air, and water exists in two phases. The boundary conditions are like a Mandelbrot set, and the initial conditions are ridiculously complex. The aircraft can be numerically approximated, and yet the engineers still need wind tunnel and flight test data. The task to solve the climate is staggeringly more complex and immense.

Science is all about questioning hypotheses. This talk presents the findings which will allow you to judge for yourself whether the climate-change hysteria is justified.

TIM FLANNERY



Tim

Flannery, not to be confused with the bridge player Bill Flannery, is a climate alarmist from Australia. He believes the Australian wildfires are directly a result of the so-called climate crisis¹.

I am not Tim Flannery, but I am going to give you some facts in defense of this much maligned miracle molecule - carbon dioxide.

What is a “carbon emission”? - CO₂

What is CO₂'s role in supporting life?

Where is CO₂ stored?

Can we generate too much CO₂?

What is the natural variability of climate and CO₂?

These facts will enable you to judge for yourself the validity of the alarmist message!

THE ALARMIST MESSAGE

Climate alarmists claim that our carbon emissions (CO₂) are causing a climate emergency.

Some even say that the world will end in 10 years unless we stop using fossil fuels.

WHAT IS A CARBON EMISSION? (aka Carbon Dioxide or CO₂)

Carbon dioxide (CO₂) is a colourless, odourless trace gas that is essential for life.

This miracle molecule must not be confused with its homicidal cousin, carbon monoxide. It also is not soot which has artistic purposes in lampblack or carbon black paint.

WHERE DOES IT COME FROM?

CO₂ is formed when we burn wood, coal, oil, gasoline, and natural gas.

The air we breathe contains 0.04% CO₂.

We exhale air containing 4 to 5% CO₂.

Opening a pop can releases CO₂.

CARBON-BASED LIFEFORMS

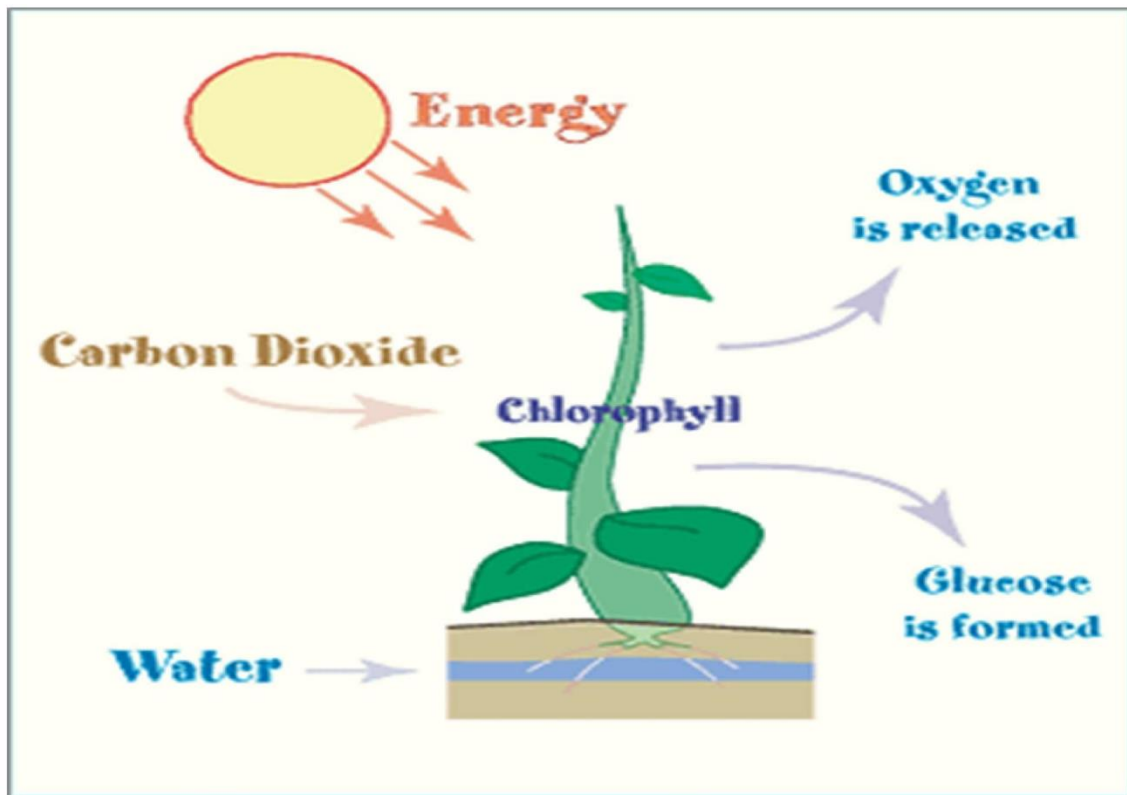
Plants and animals are carbon lifeforms.

Without carbon, we don't exist.

We obtain this carbon by eating fruits and vegetables or by eating meat.

Plants obtain carbon by a process known as photosynthesis using the CO_2 in the air and oceans.

PHOTOSYNTHESIS

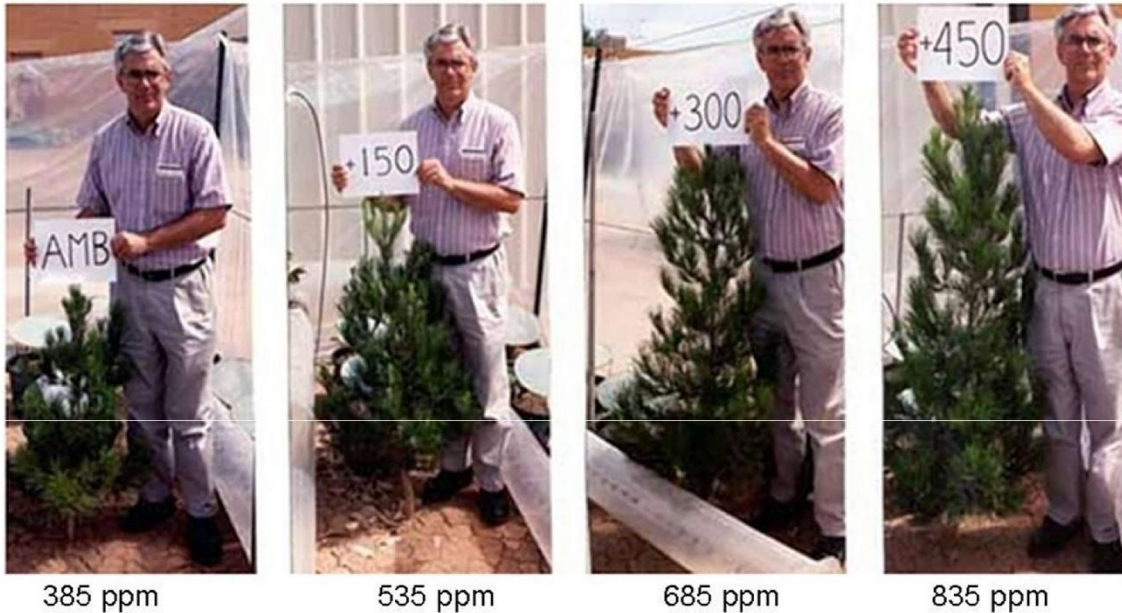


Oxygen is produced. A higher CO_2 level increases drought resistance because the stomata need to be open less, and less water evaporates.

PROFESSOR IDSO

Is CO₂ Plant Food?

Here is what happens with more CO₂.

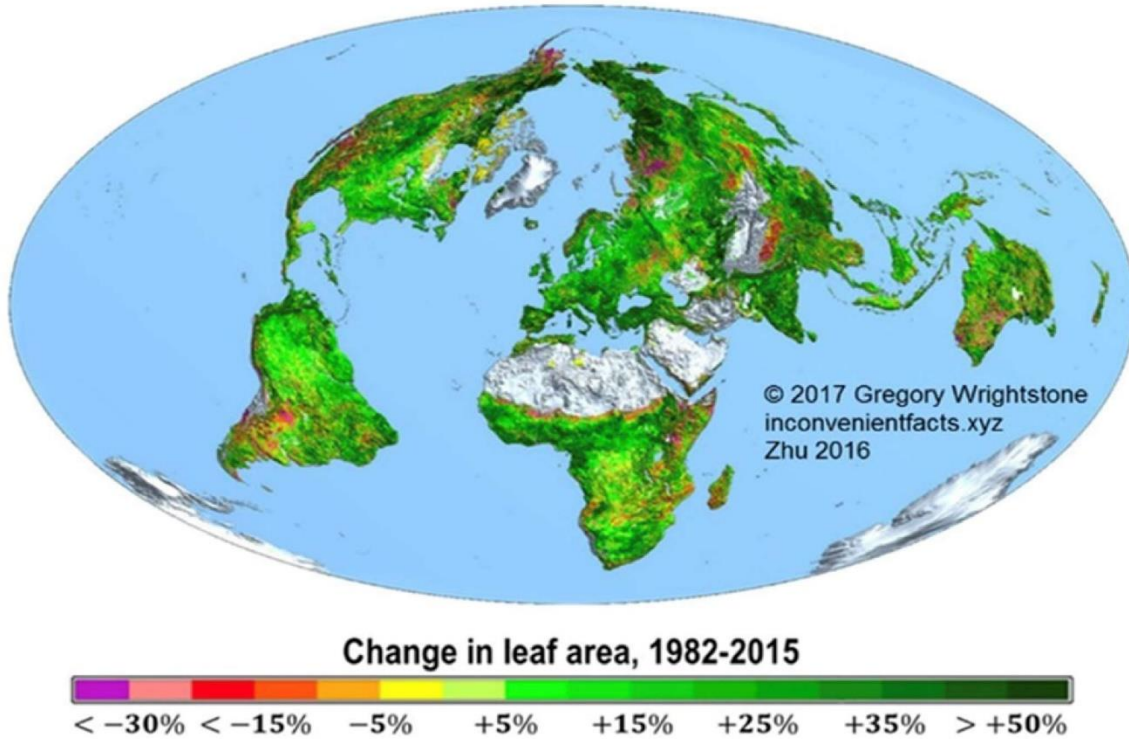


This is Dr. Sherwood B. Idso² (1942 –)³. CO₂ was 385 ppm in 2008⁴. He has a PhD in soil science and was a professor at Arizona State University. Wikipedia calls him a climate skeptic, but he really is an exposé of charlatans or mountebanks.

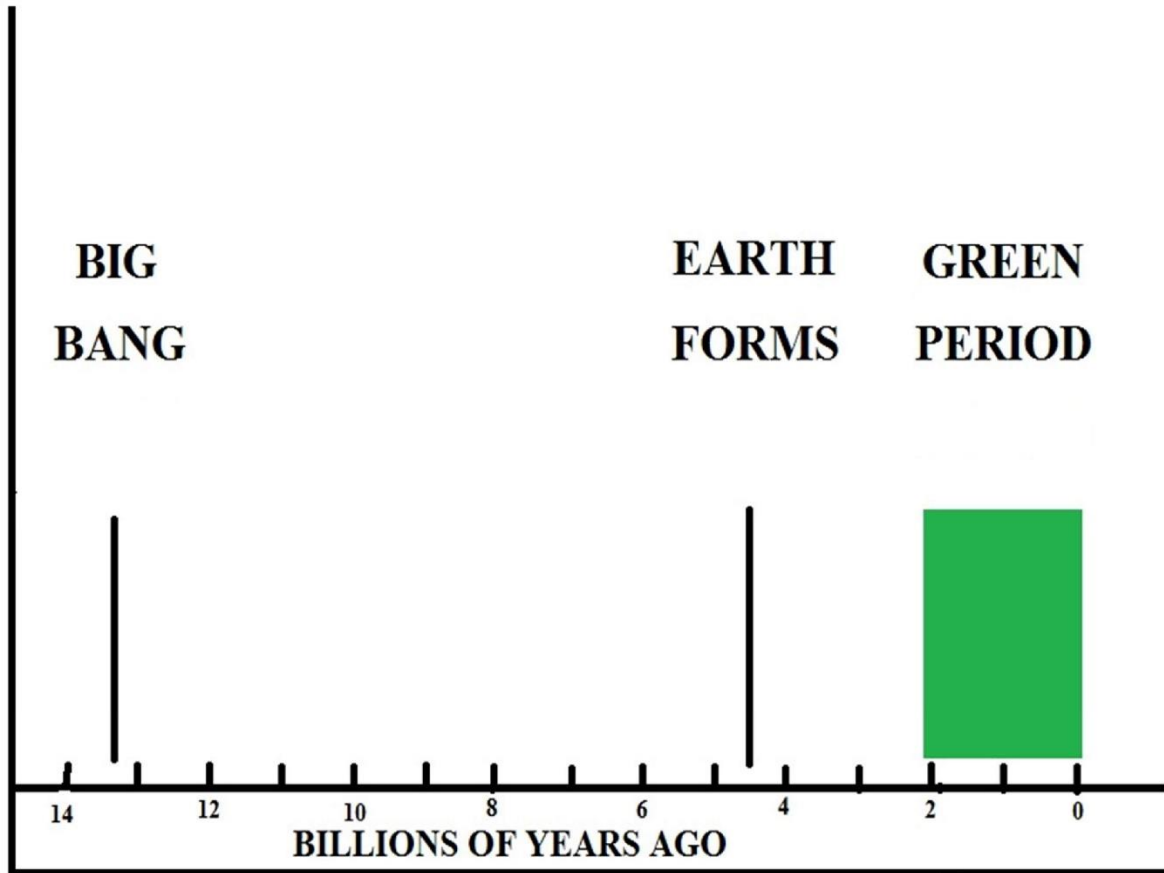
It should come as no surprise that increased levels of CO₂ greens the planet and greenhouse operators often use CO₂ generators to get CO₂ levels greater than 1,000 ppm. Not only that greenhouses need a glass ceiling, not the infinite heat sink of outer space.

PEOPLE USE LESS WOOD FOR FUEL

“Greening” of the Earth

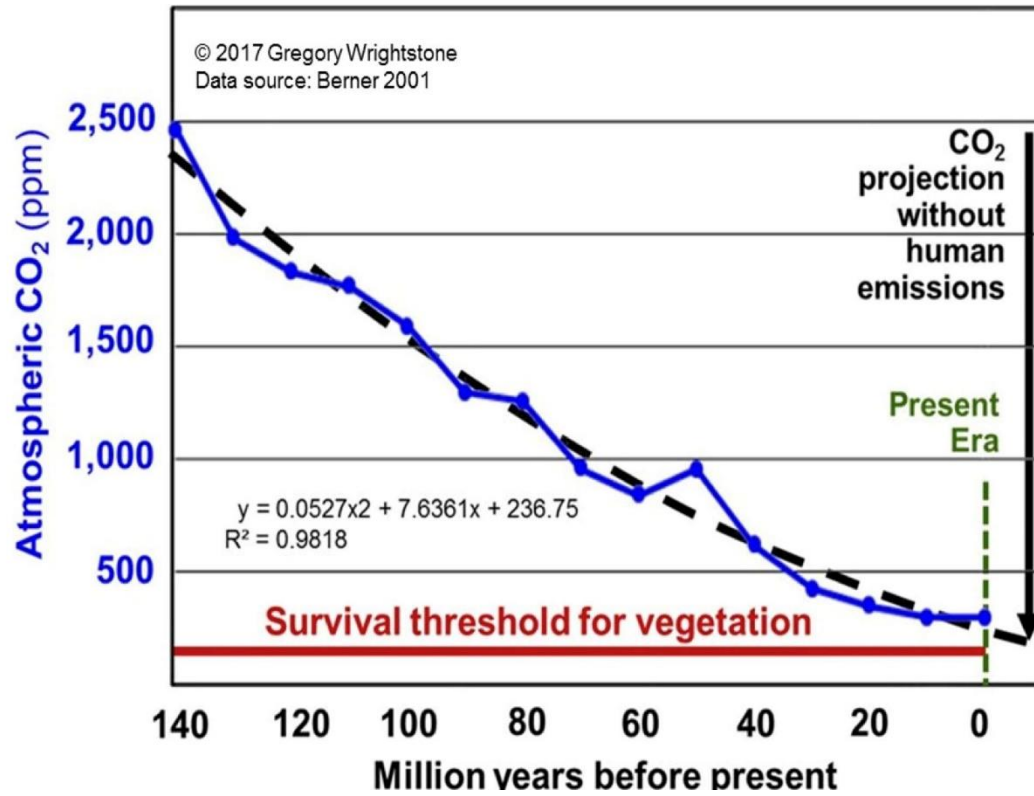


WE ARE IN THE GREEN PERIOD

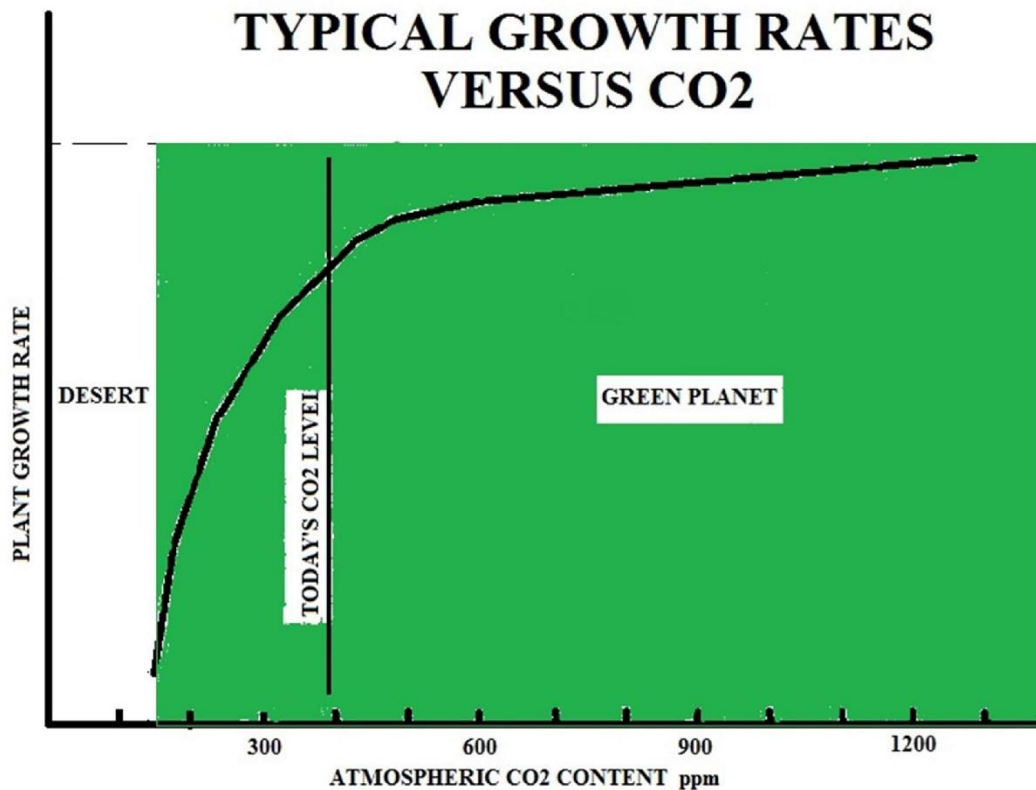


The green period is 2.1 billion years, and we are currently in it. It ends when CO₂ is 150 ppm or less.

THE EARTH WAS DYING



TYPICAL GROWTH RATES VERSUS CO₂

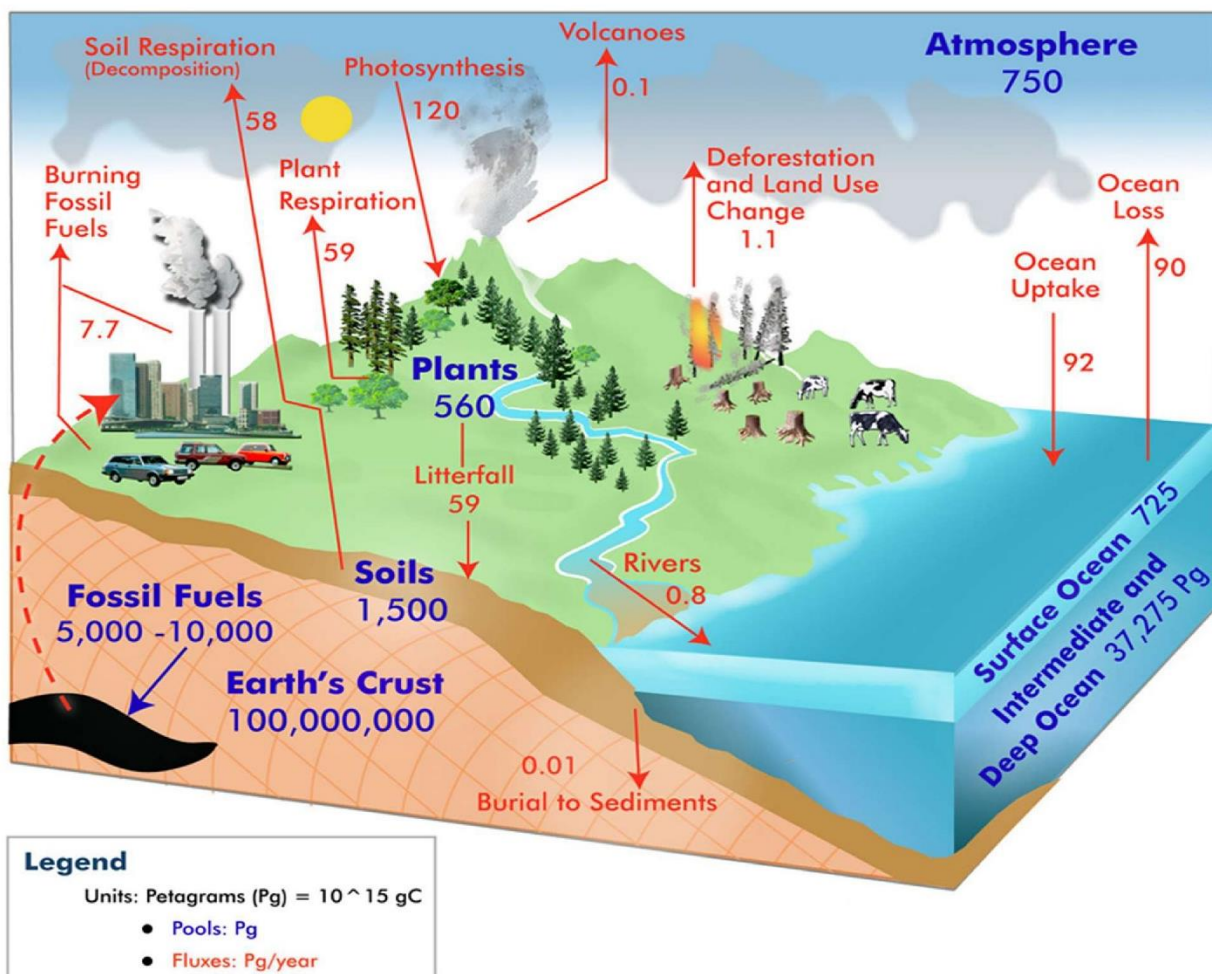


WHERE IS CO₂ STORED?

OCEANS – 98%

ATMOSPHERE - 2%

Global Carbon Cycle



Copyright 2010 GLOBE Carbon Cycle Project, a collaborative project between the University of New Hampshire, Charles University and the GLOBE Program Office.
Data Sources: Adapted from Houghton, R.A. Balancing the Global Carbon Budget. Annu. Rev. Earth Planet. Sci. 007.35:313-347, updated emissions values are from the Global Carbon Project: Carbon Budget 20

CAN WE REPLENISH THE CO₂ STORE?

CURRENT STORE = 40,000 GTC

MAX. FOSSIL FUELS = 10,000 GTC

THEREFORE, with a 25% increase, the atmosphere will remain CO₂ STARVED.

THE WARMING FANTASY

Assuming that CO₂ can warm the planet, how much warming are the alarmists claiming?

1.5C to 4.5C for a doubling of CO₂

For +25% CO₂, temperature increase will be a maximum of 1.125C over a 1,000 years.

THE TRUTH ABOUT CO₂

CARBON DIOXIDE IS NOT A POLLUTANT.

It is as important as water, oxygen, and sunlight in sustaining life on Earth.

WE MUST CHERISH THIS MIRACLE MOLECULE.

Our carbon emissions must be allowed to replenish the CO₂-starved atmosphere.

CO₂ IS NOT OVERHEATING THE PLANET.

CO₂-induced climate change exists solely in the mythical computer world of fatally-flawed climate models.

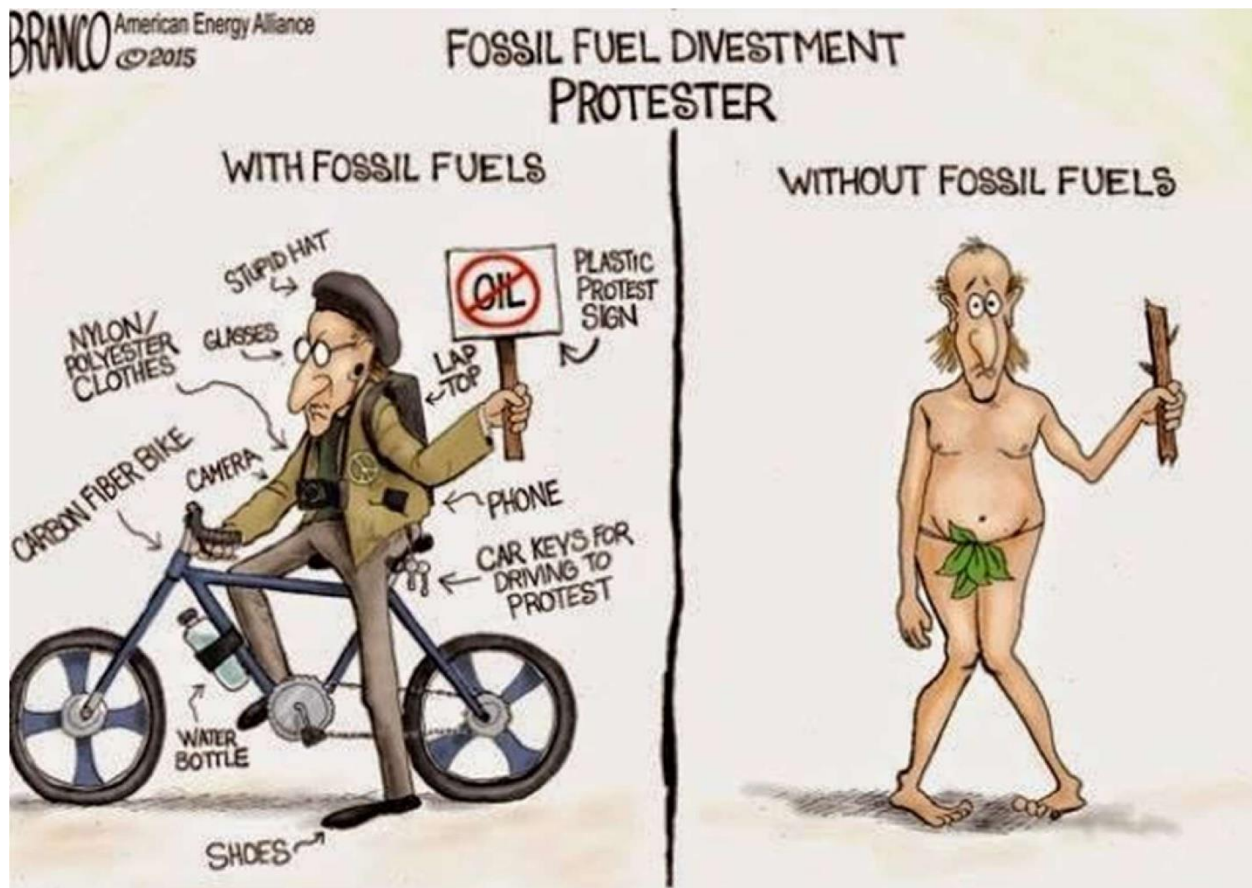
DO WE WANT TO REDUCE CO₂?

Absolutely Not!

No CO₂ means No Life

A carbon sequestration machine is called a weapon of mass destruction.

No fossil fuels means no modern lifestyle as depicted by the cartoon of the fossil fuel protester below.



NATURAL CLIMATE CYCLES

CO₂ AND CLIMATE CHANGE

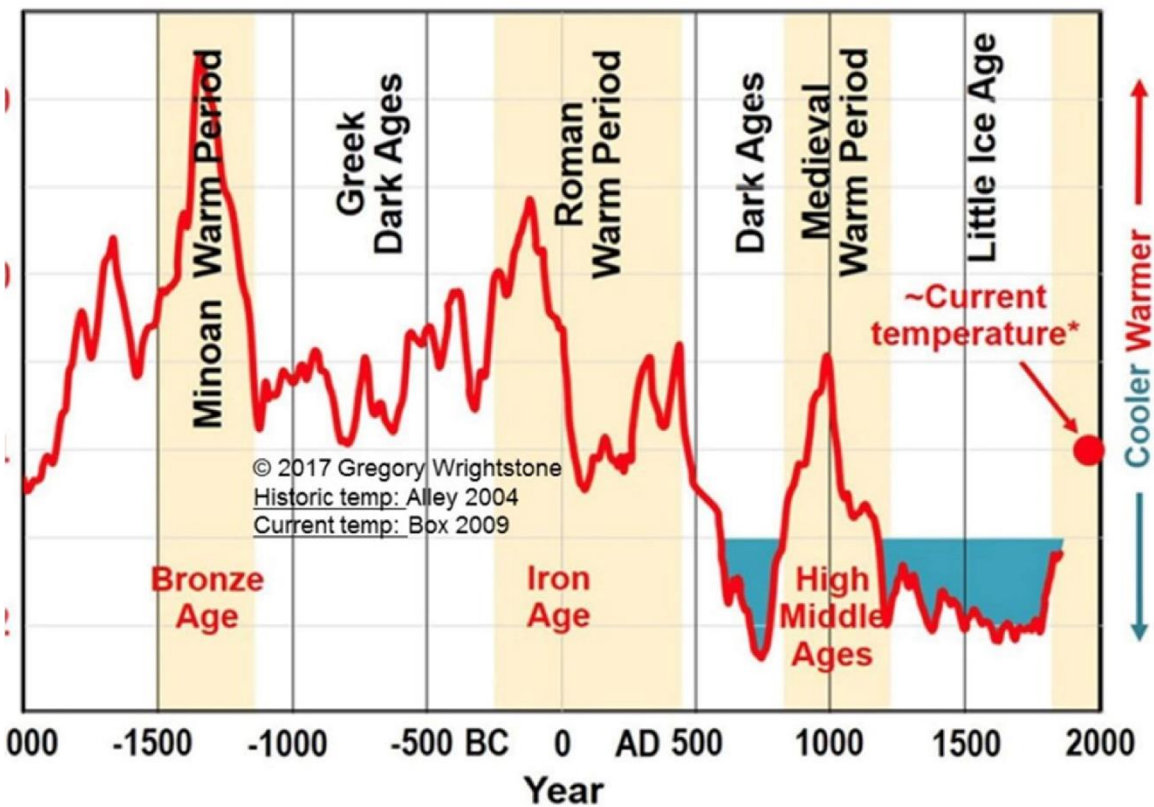
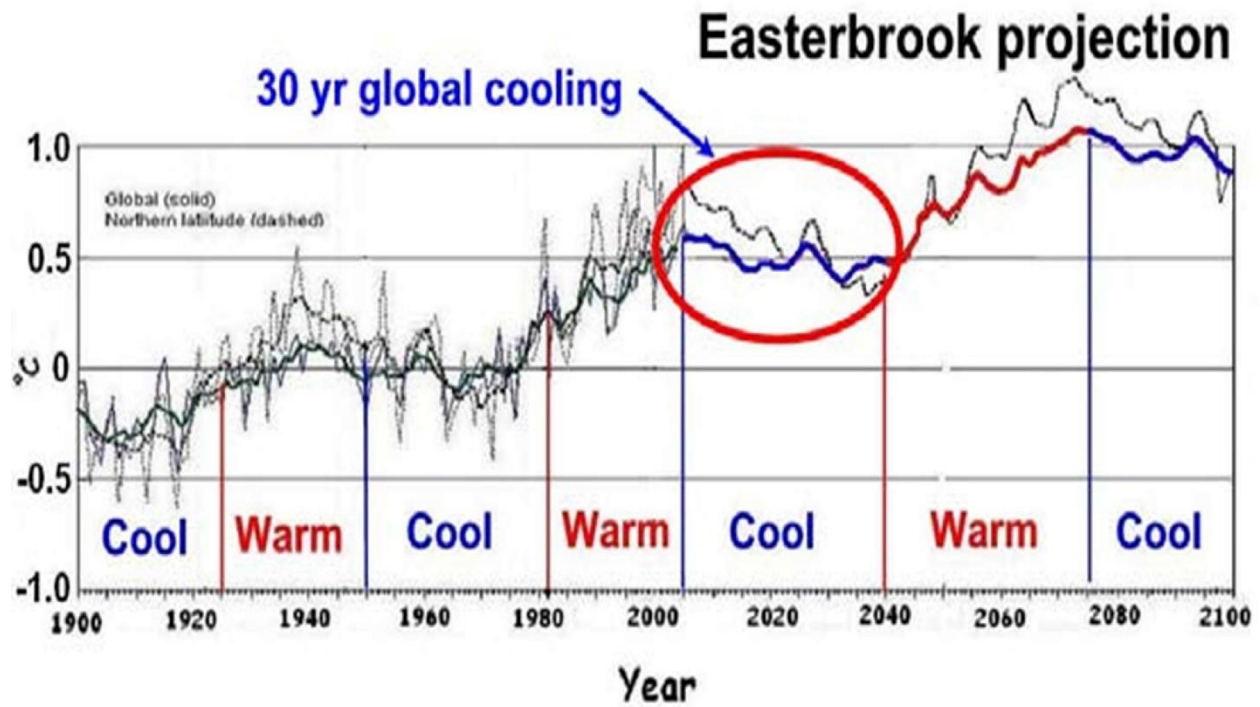
To assess CO₂'s contribution to climate change, a knowledge of its natural variability is essential.

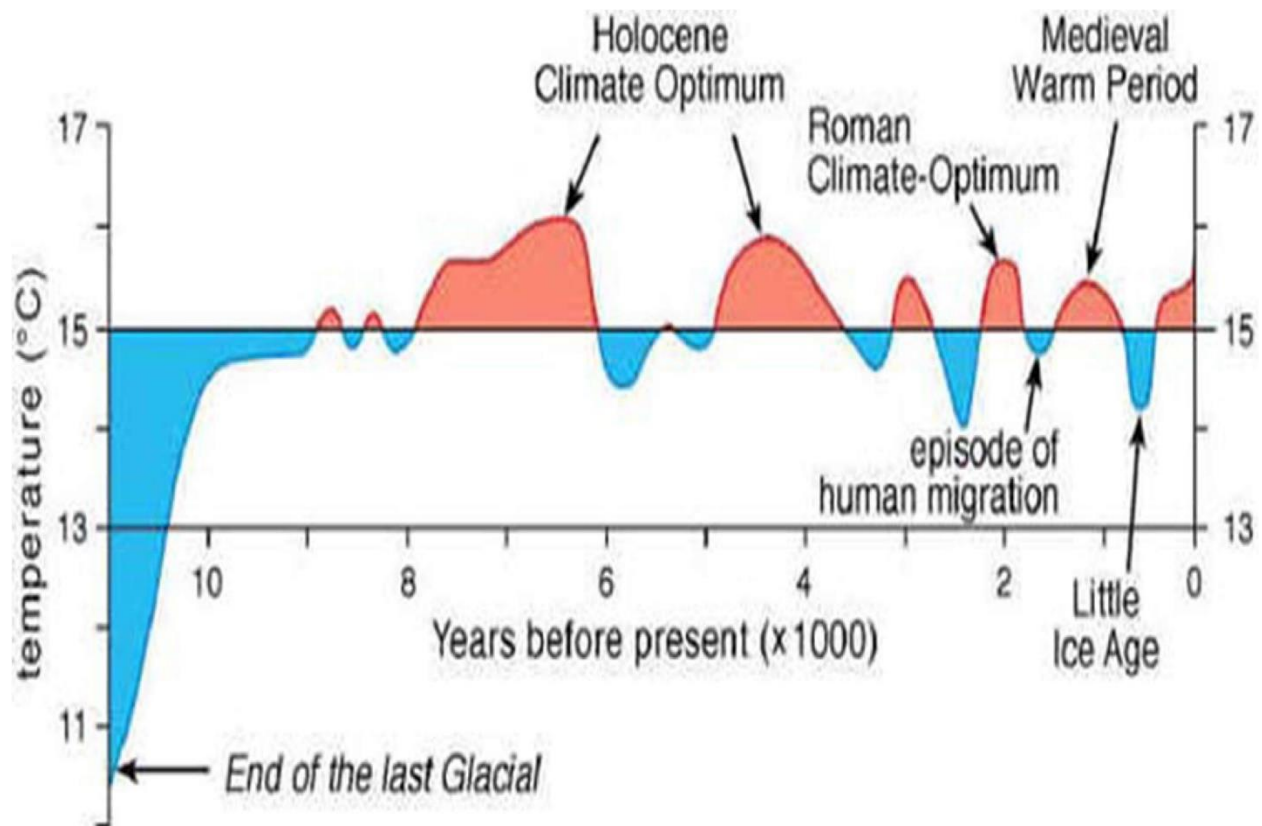
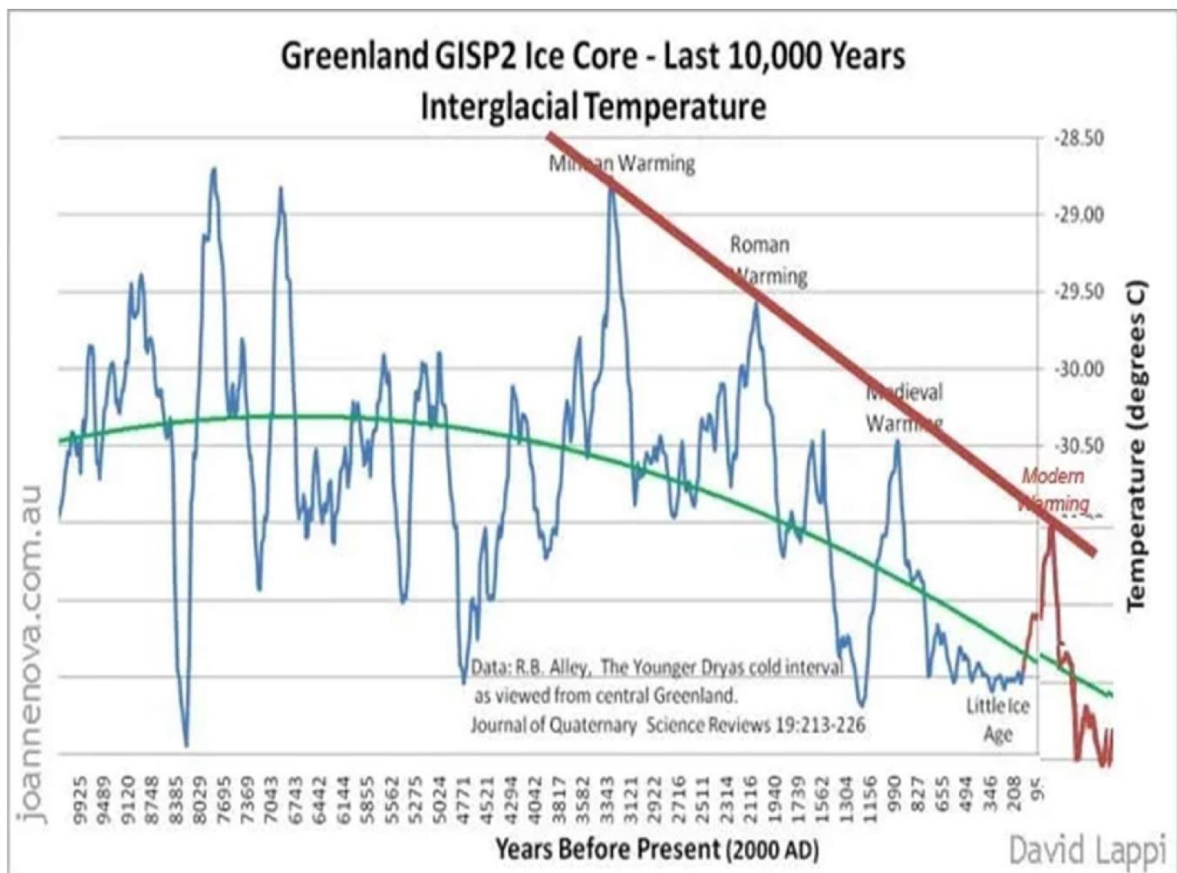
CLIMATE IS ALWAYS CHANGING WITH 4 MAJOR CLIMATE CYCLES. Climate is always changing with four major climate cycles of warm and cold periods.

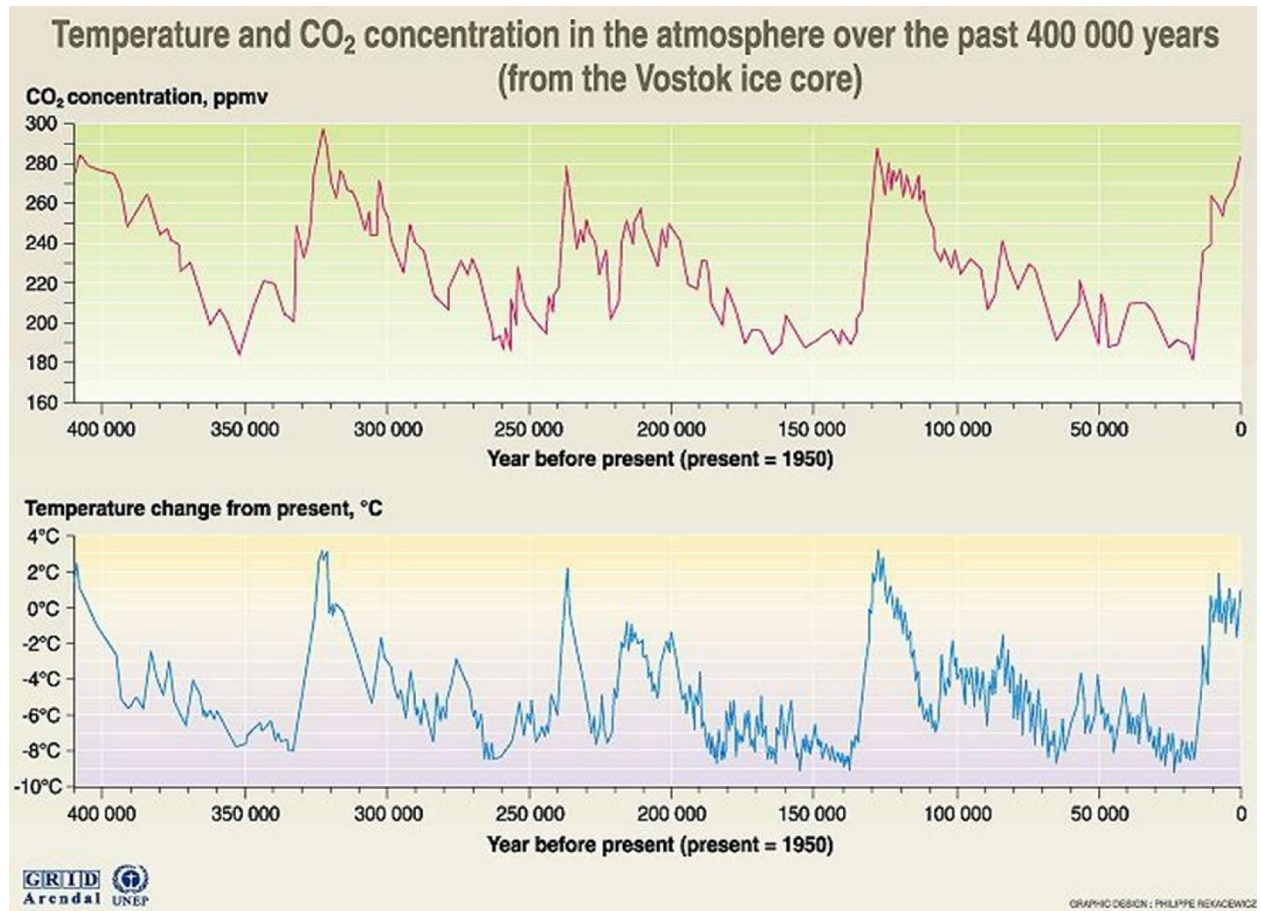
THERE ARE 4 MAJOR CLIMATE CYCLES OF WARM AND COLD PERIODS:

1. **DECADAL** – 20 to 40-year cycles.
2. **MILLENNIAL** – Modern, Little Ice Age, Medieval, etc. Roughly, 1,000-year cycles.
3. **GLACIAL-INTERGLACIAL** – 100,000-year cycles.
4. **ICE AGE** – 150 million-year cycles.

The following six figures show these cycles.

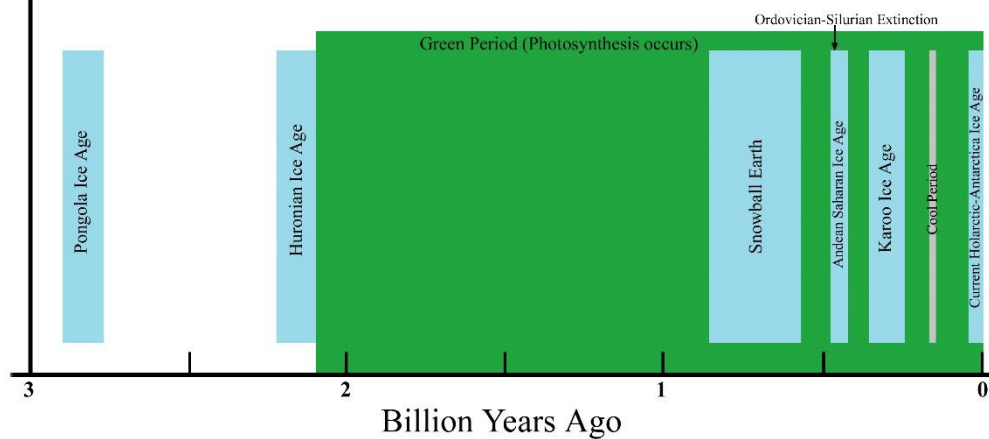






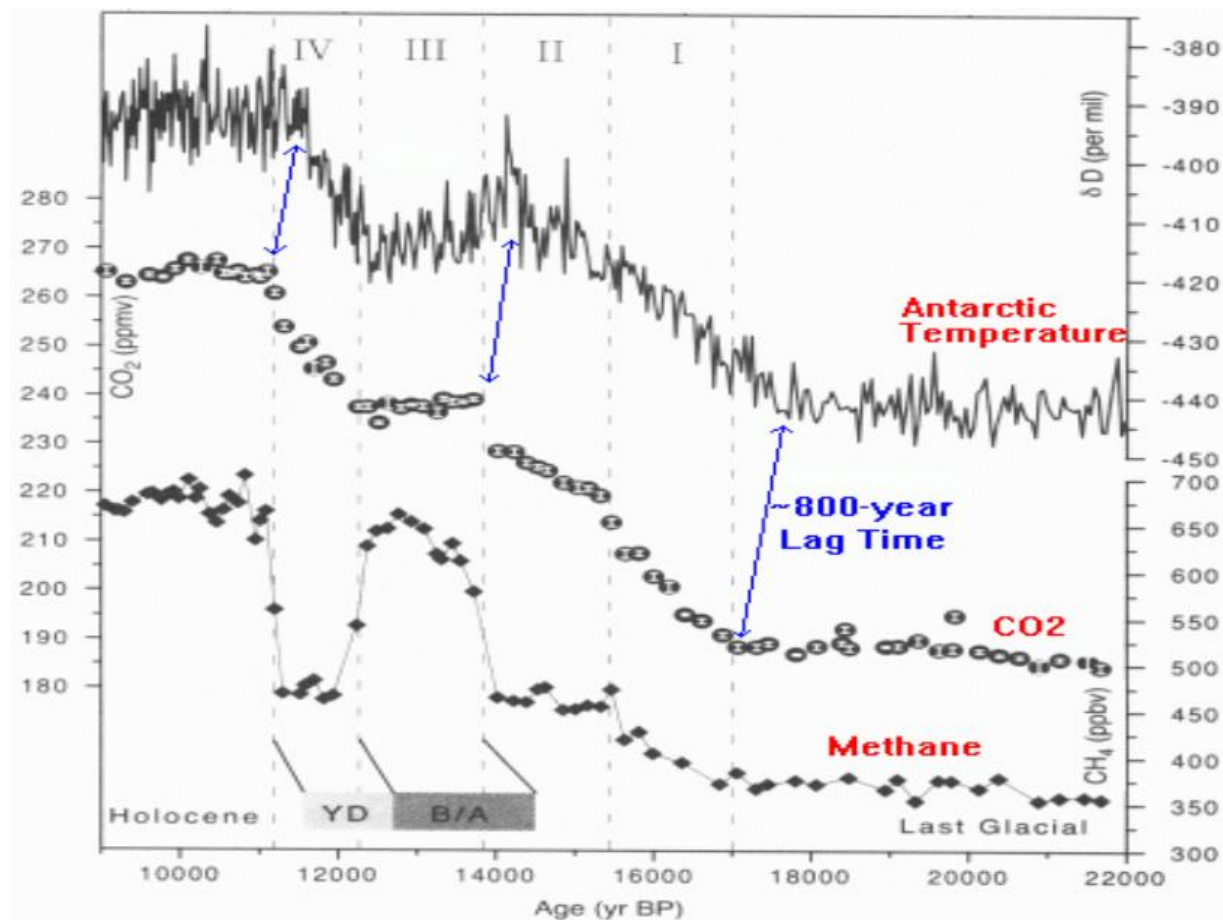
Source: J.R. Petit, J. Jouzel, et al. Climate and atmospheric history of the past 420 000 years from the Vostok ice core in Antarctica, *Nature* 399 (3June), pp 429-436, 1999.

Earth's Ice Ages & Green Period



TEMPERATURE DRIVES CO₂

Historical evidence shows that temperature determines the CO₂ levels.



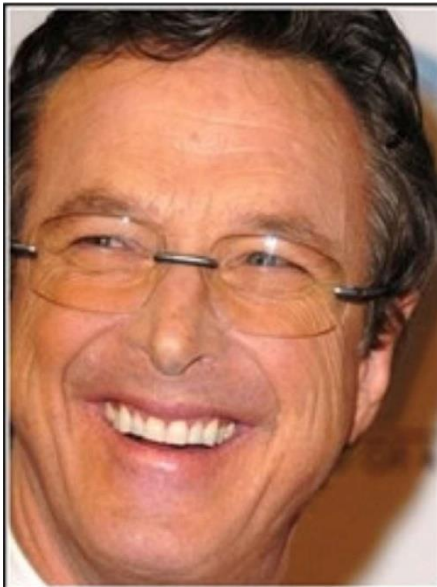
CONSENSUS

0.3% consensus, not 97.1%

“The scientific consensus that human activity is very likely causing most of the current GW (global warming)” – Cook et al (2013)

11,944 abstracts (1991-2011) reviewed	100%
7,930 were arbitrarily excluded for expressing <u>no opinion</u>	66.4%
3,896 were marked as agreeing we cause <u>some</u> warming	32.6%
64 were marked as stating we caused most of the warming	0.5%
41 actually stated we caused most warming since 1950	0.3%
0 were marked as endorsing man-made catastrophe	0.0%

Legates et al 2015 (after Monckton)



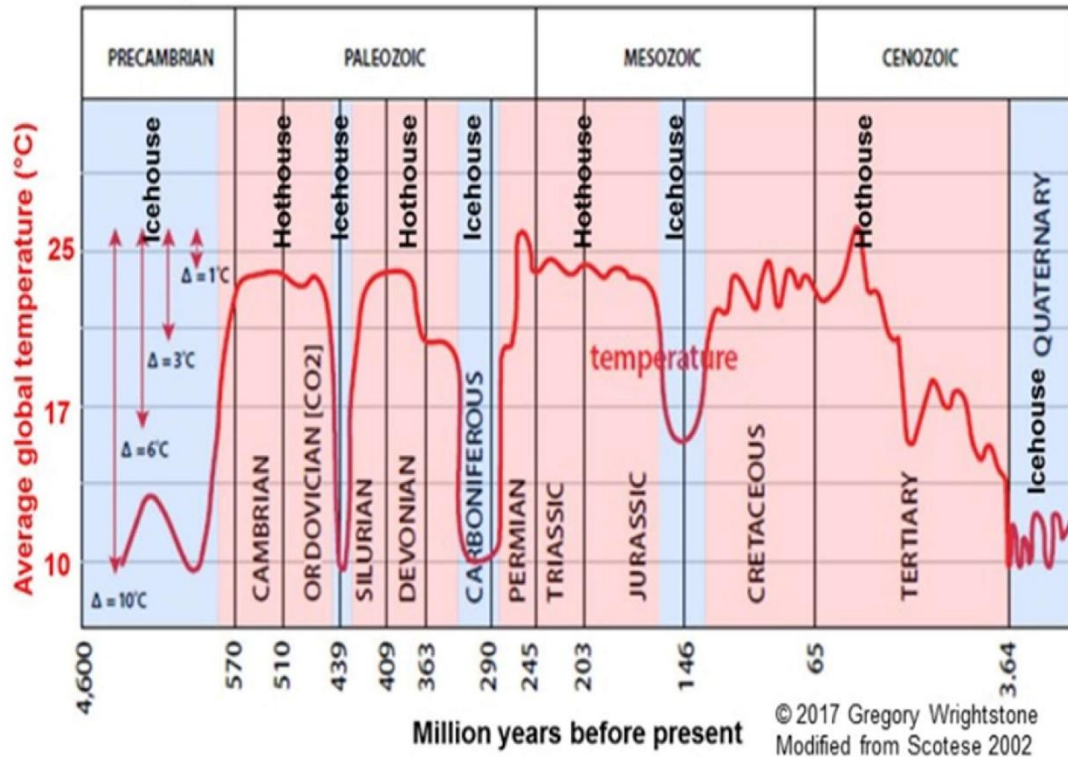
The greatest scientists in history are great precisely because they broke with the consensus. There is no such thing as consensus science. If it's consensus, it isn't science. If it's science, it isn't consensus. Period.

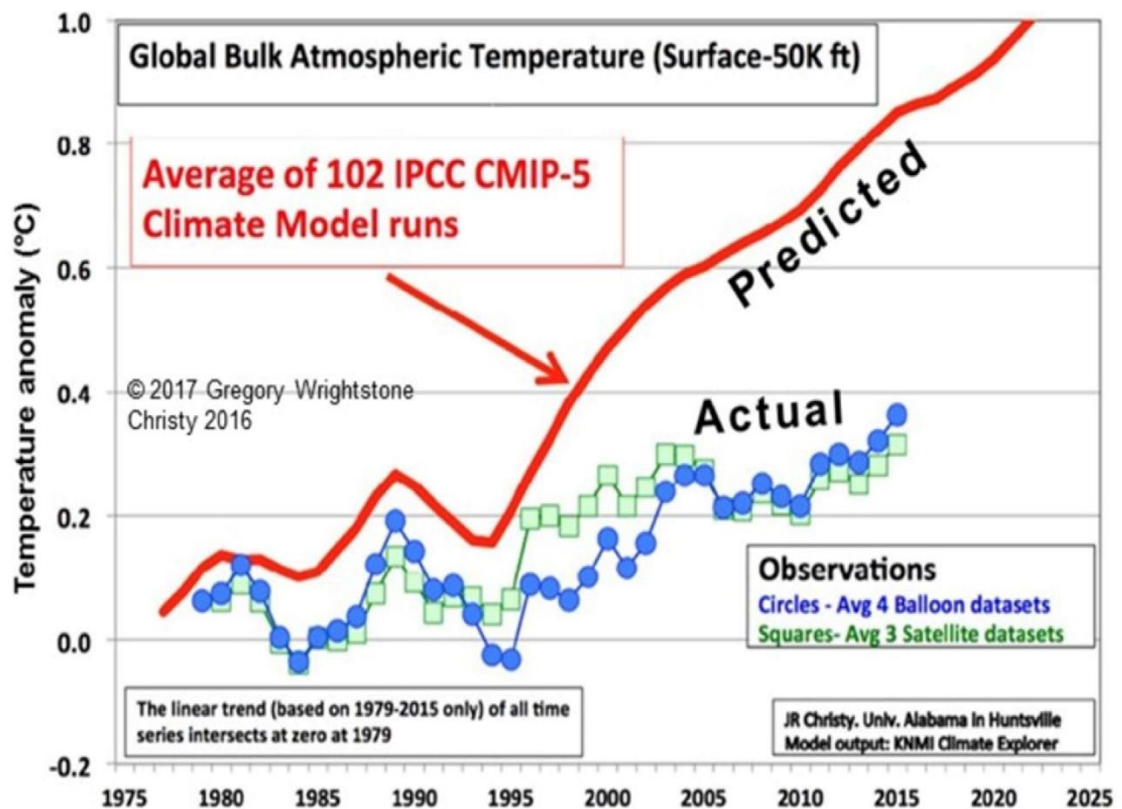
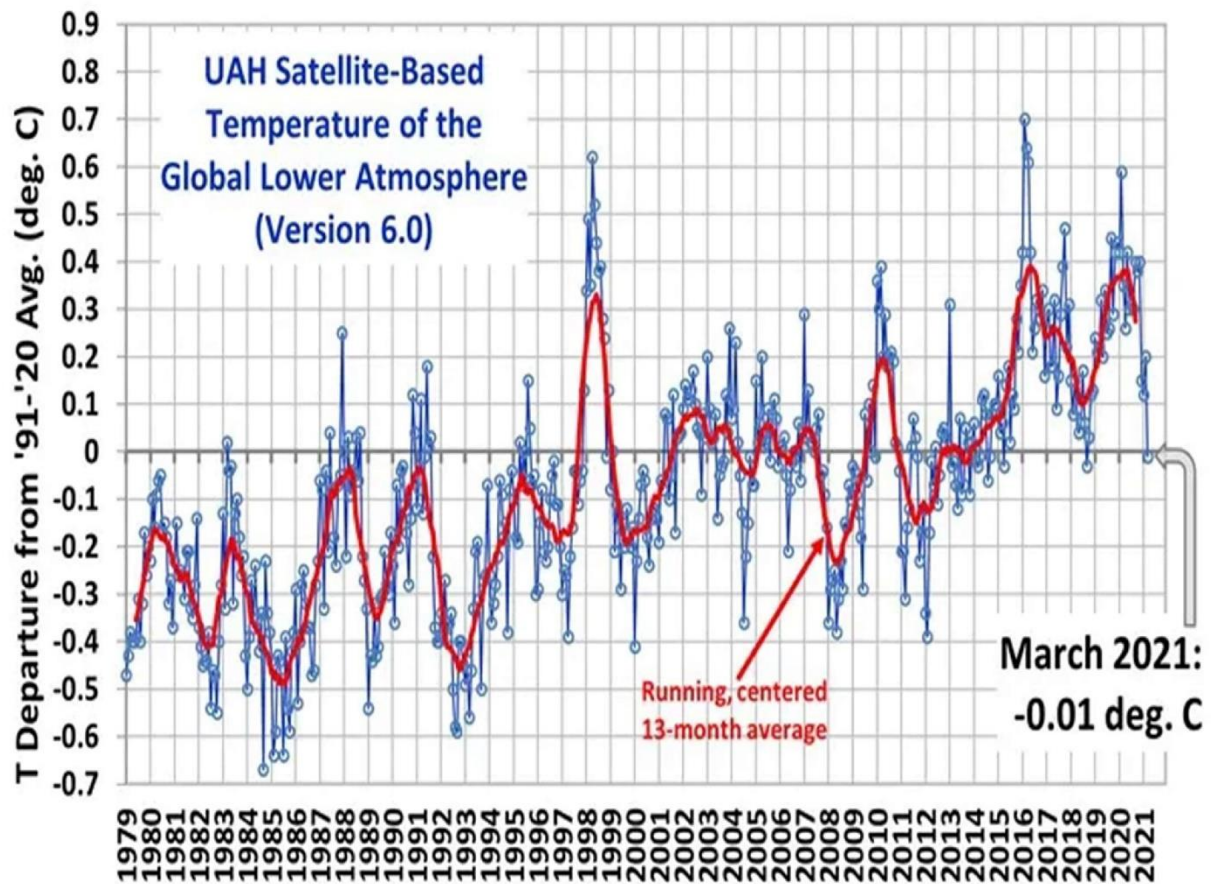
— Michael Crichton —

AZ QUOTES

TEMPERATURE

Current temperatures are much lower than most of Earth's history



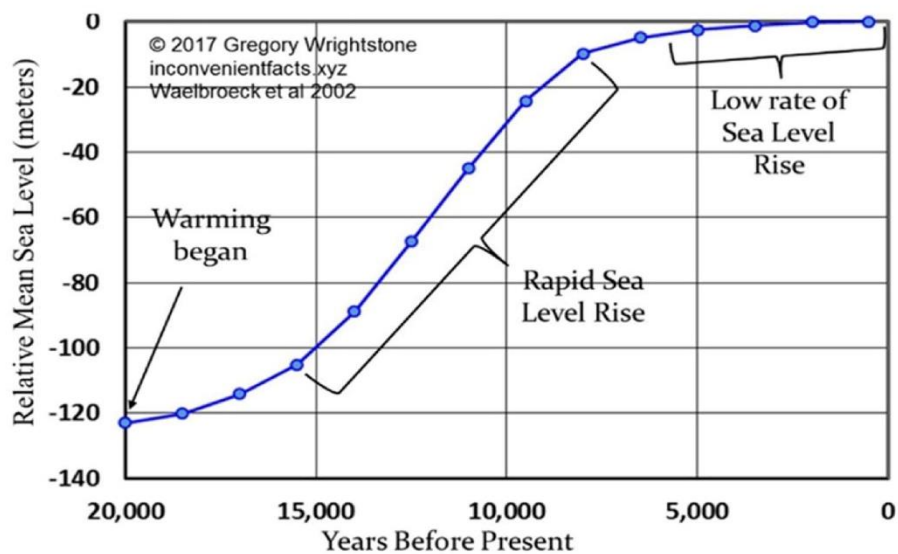


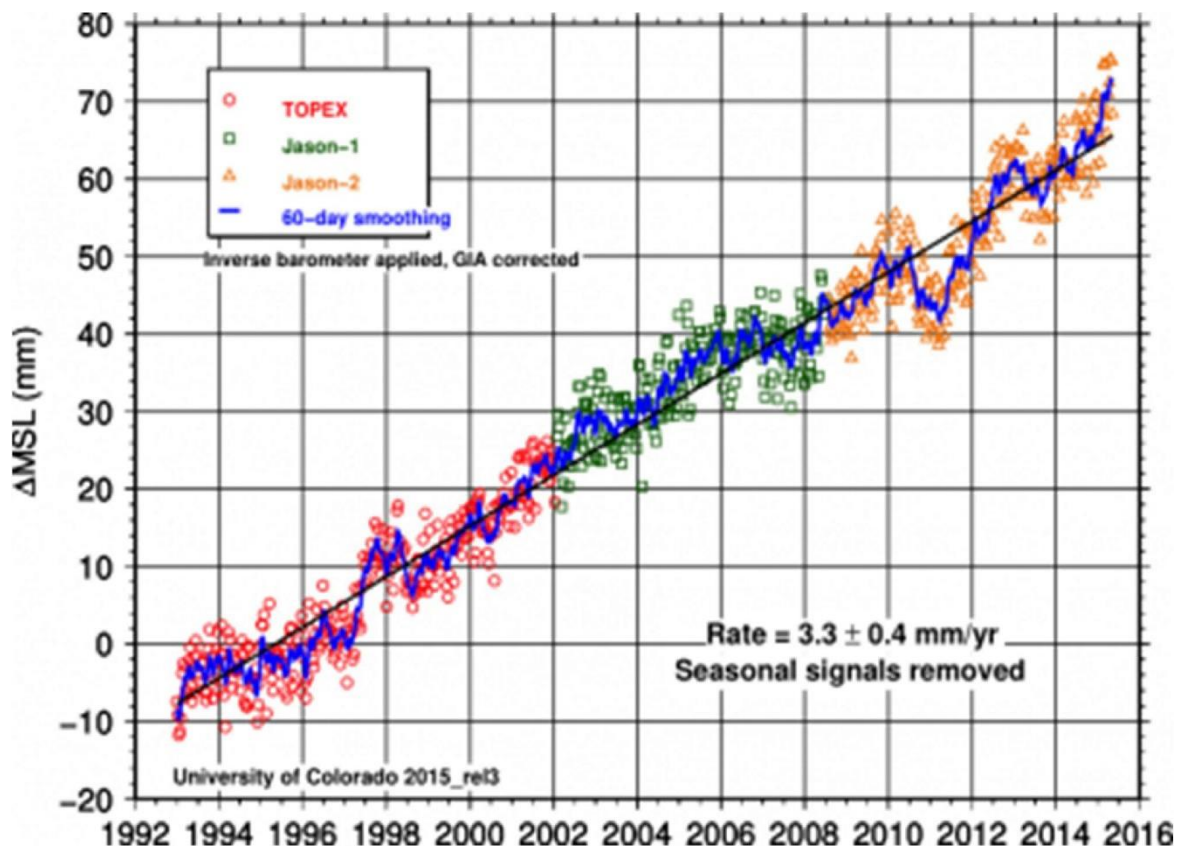
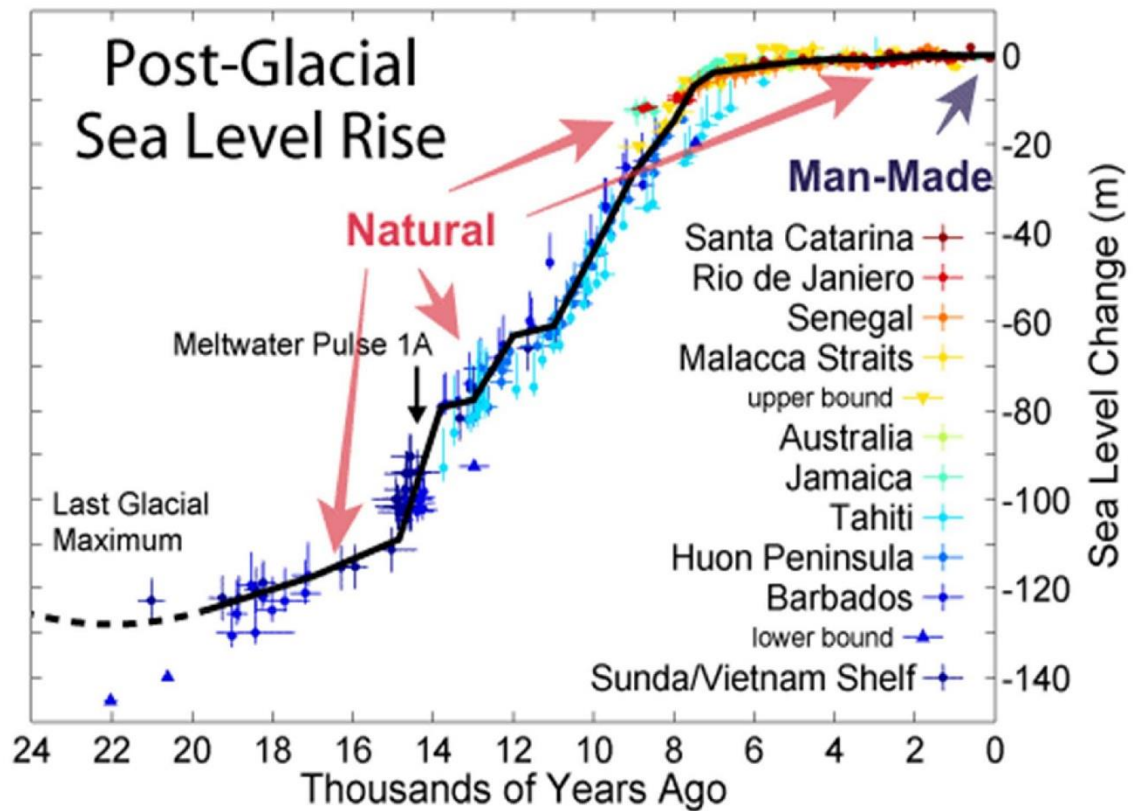
SEA LEVEL



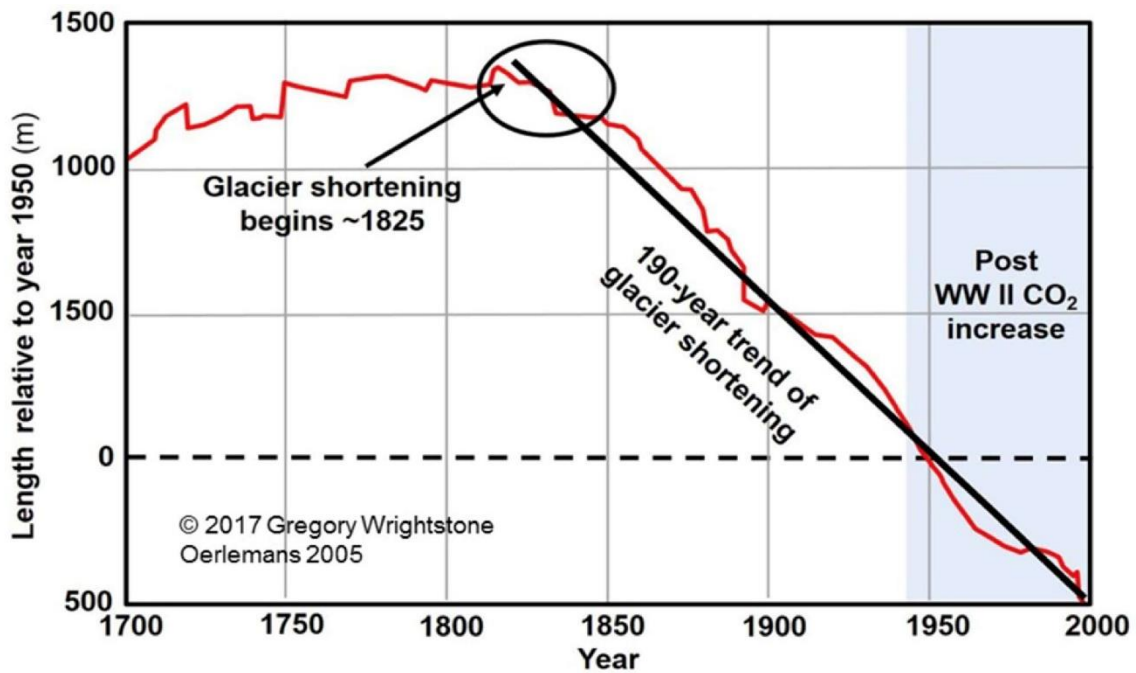
Barack Obama is apparently not worried about sea level rise with his \$11.75 million USD⁵ home in Martha's Vineyard (Edgartown)⁶.

World sea-level shows much higher rates of rise for 8,000 years

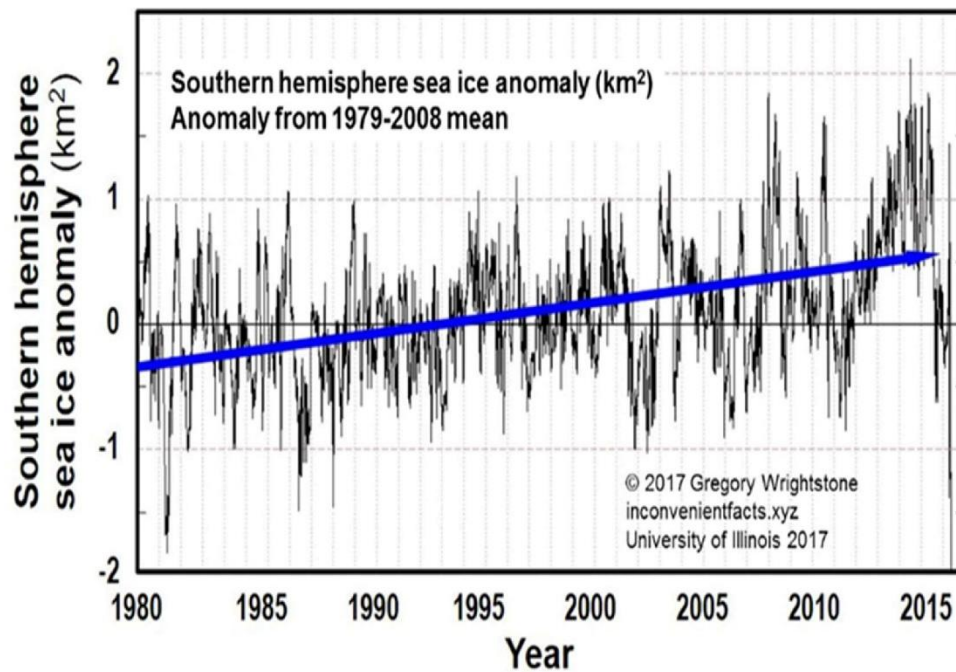


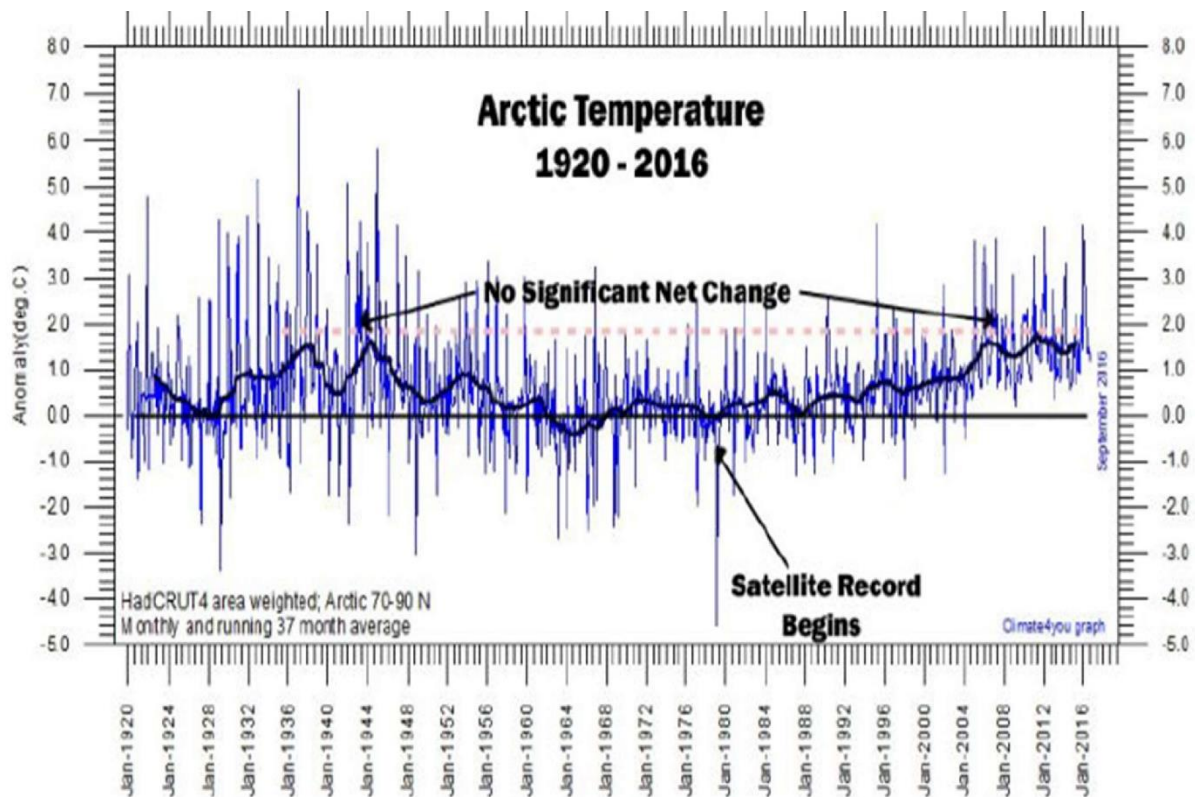


ICE

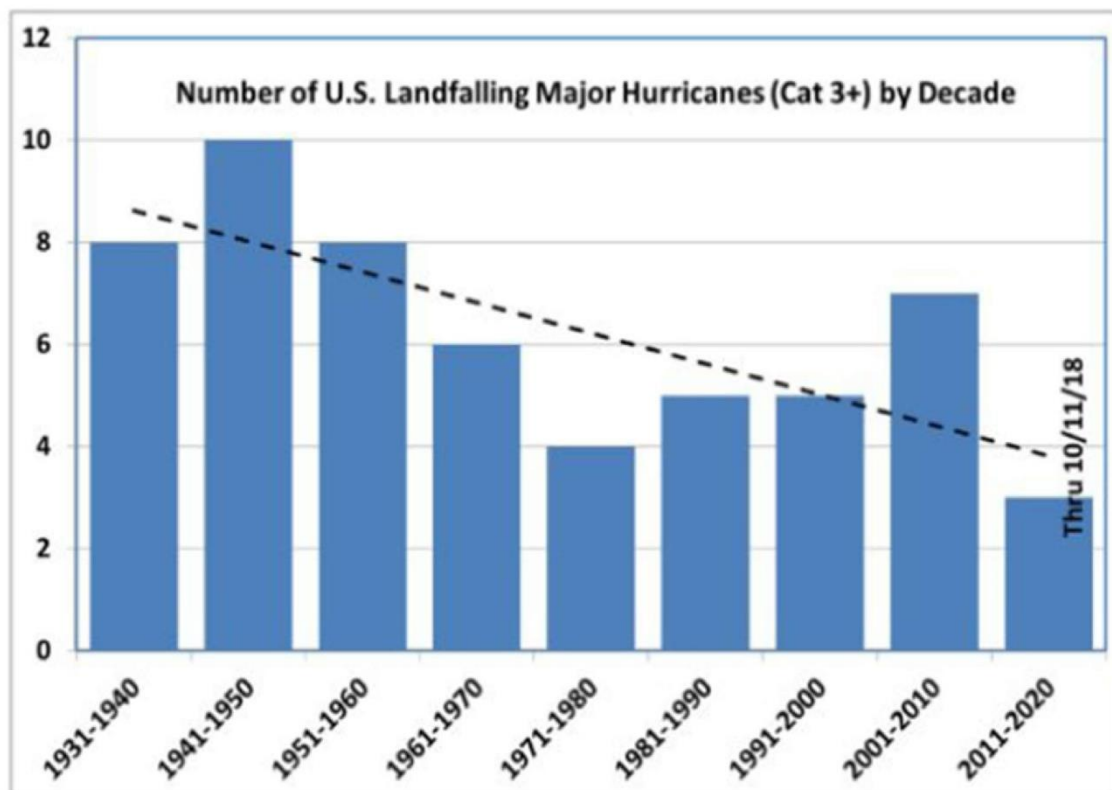
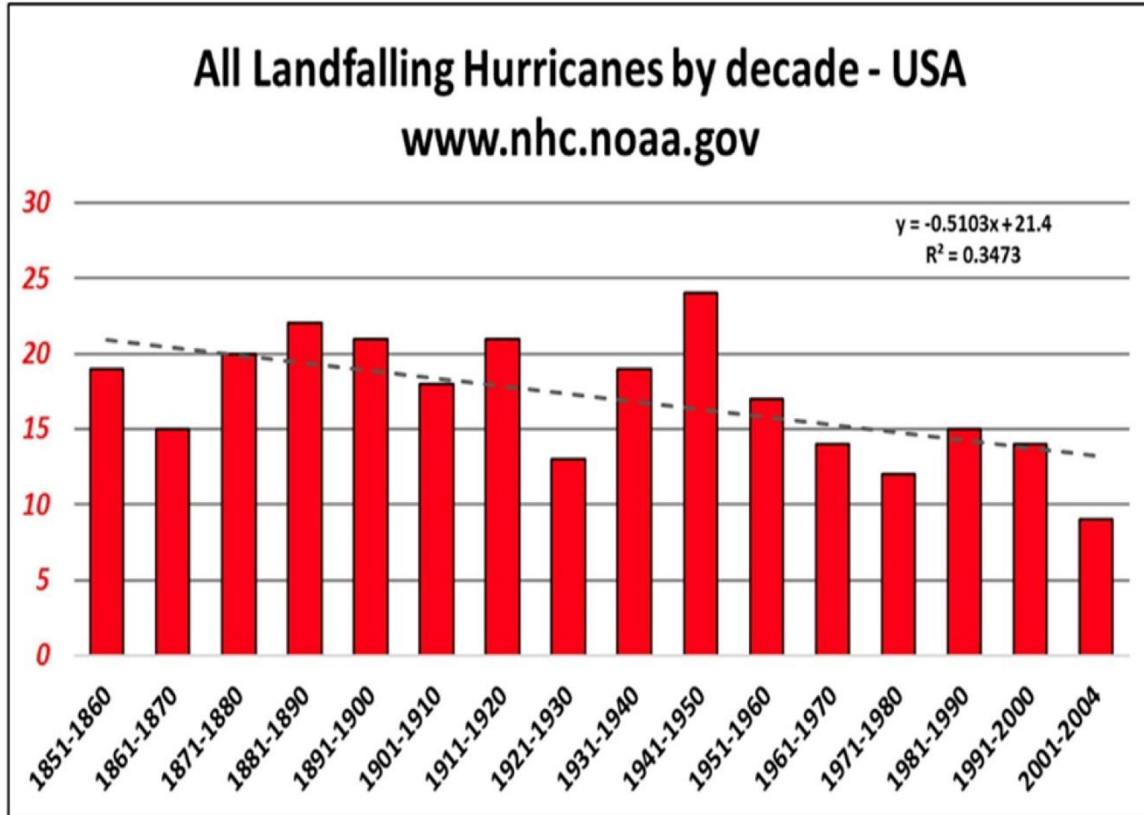


Increasing Antarctic Sea-ice NSIDC: increase of 1.8% per decade

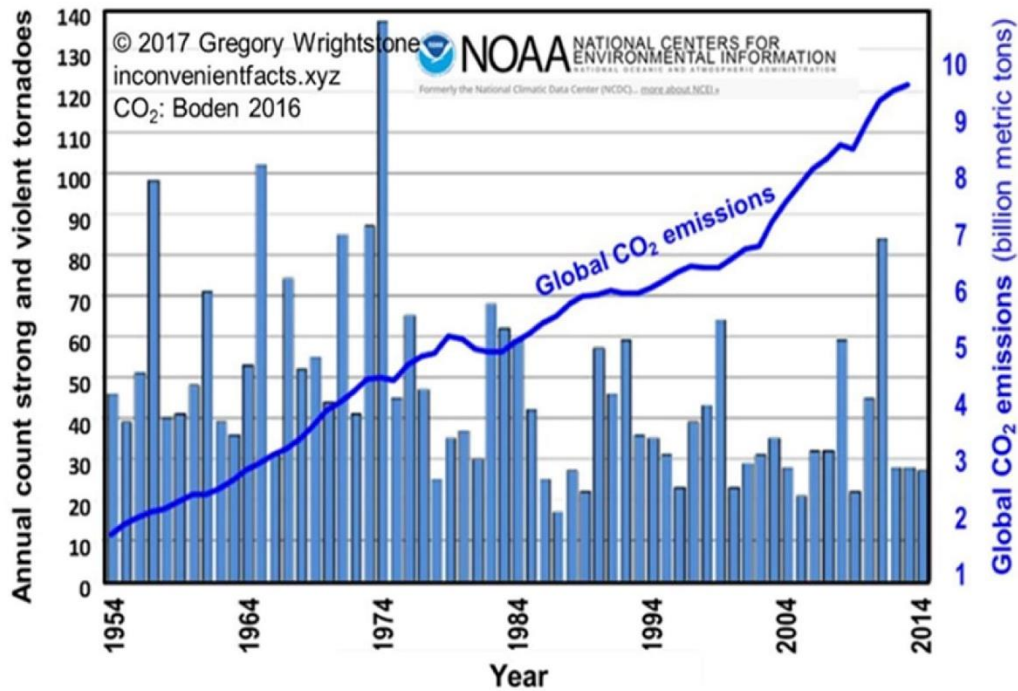




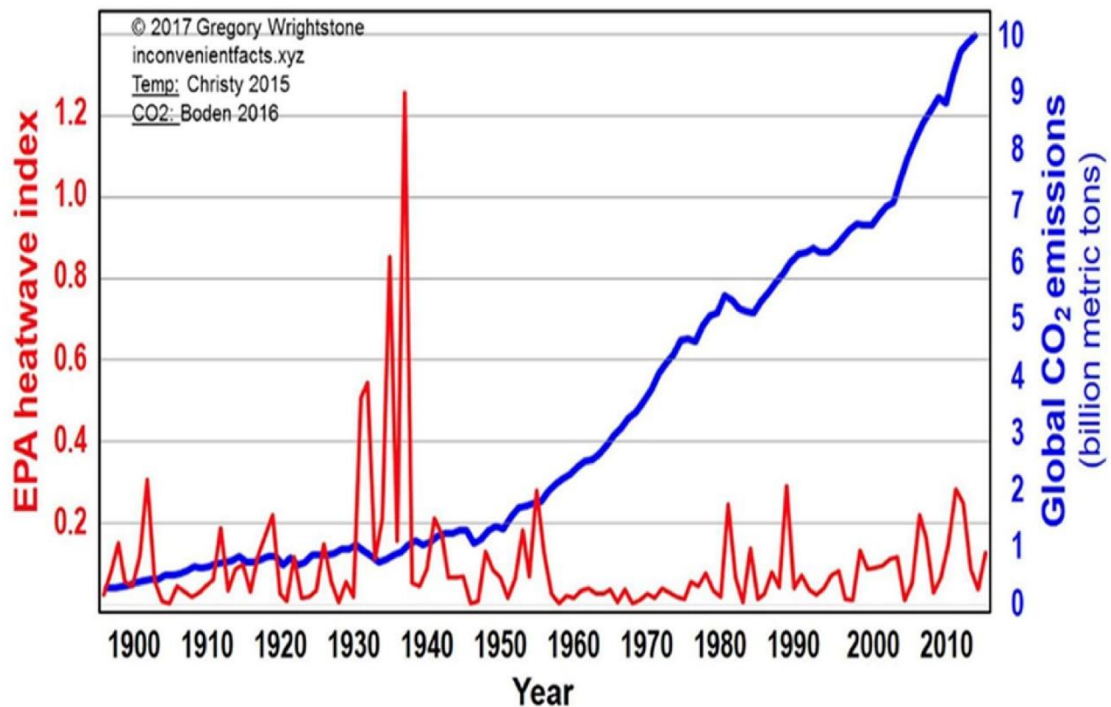
EXTREME WEATHER

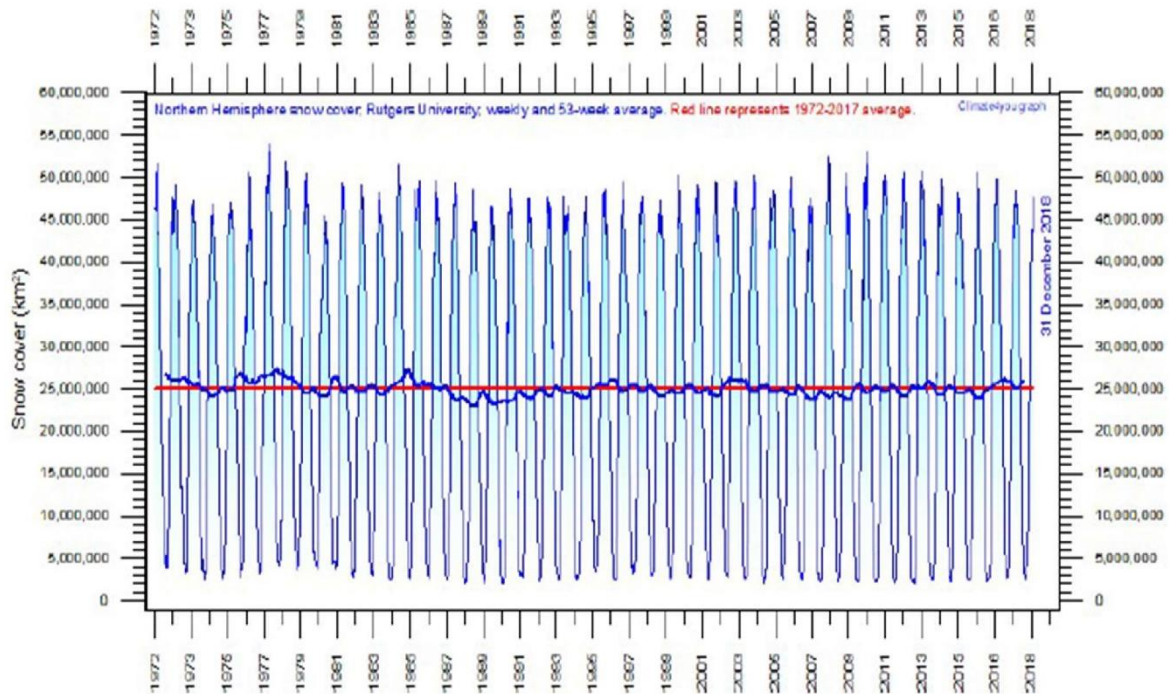


Extreme tornadoes (F3+) are declining

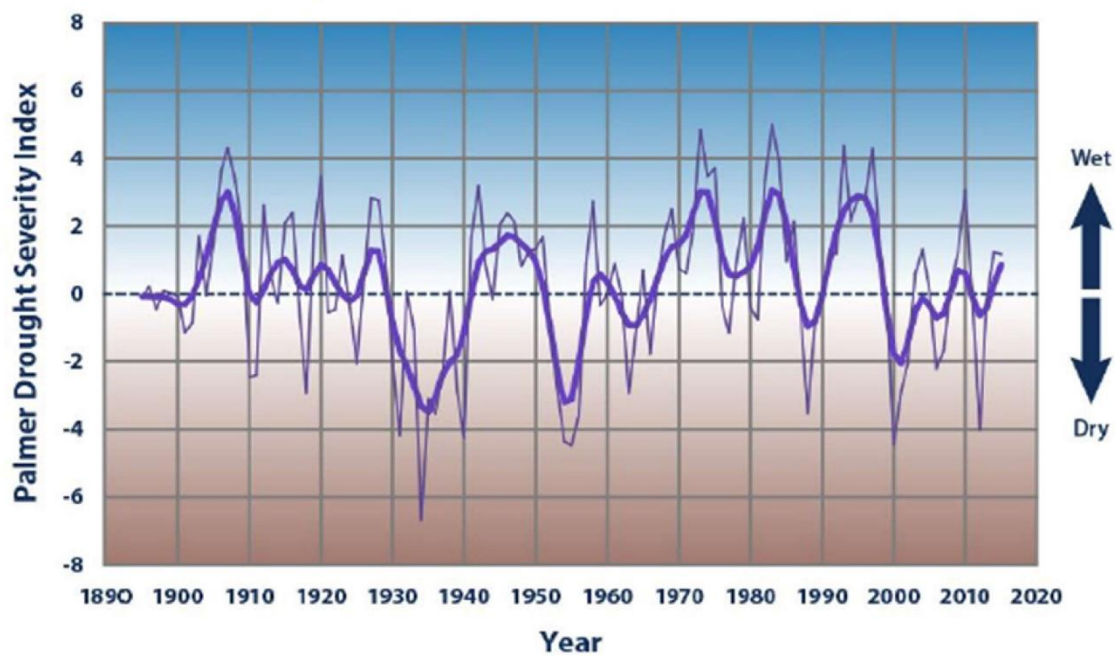


EPA heatwave index: no increase in extreme heat





Average Drought Conditions in the Contiguous 48 States, 1895–2015



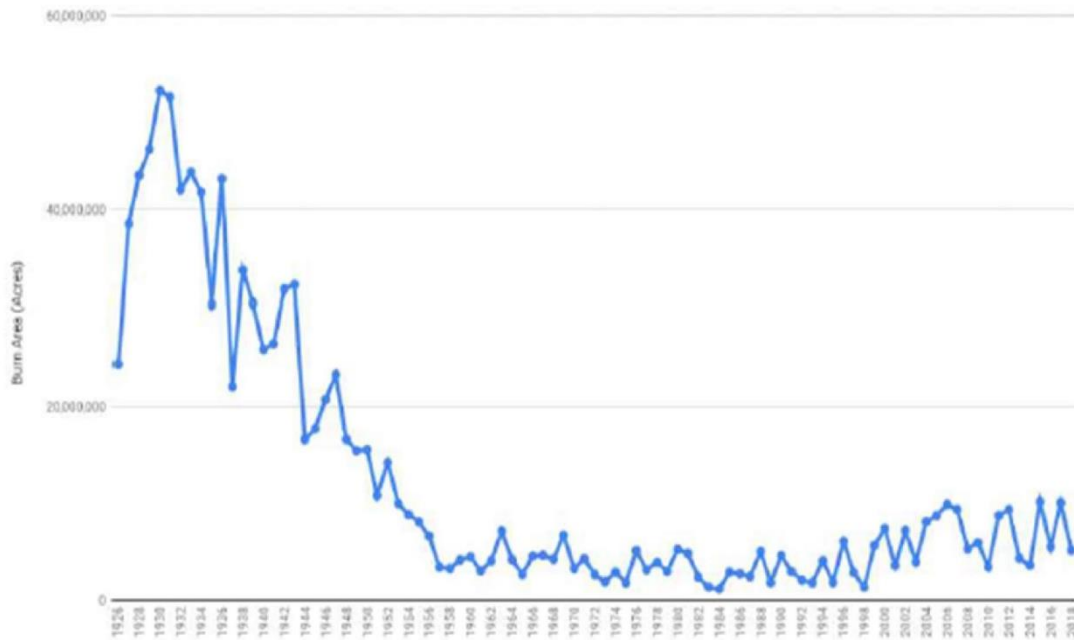
Data source: NOAA (National Oceanic and Atmospheric Administration), 2016. National Centers for Environmental Information. Accessed January 2016. www7.ncdc.noaa.gov/CDO/CDODivisionalSelect.js.

For more information, visit U.S. EPA's "Climate Change Indicators in the United States" at www.epa.gov/climate-indicators.

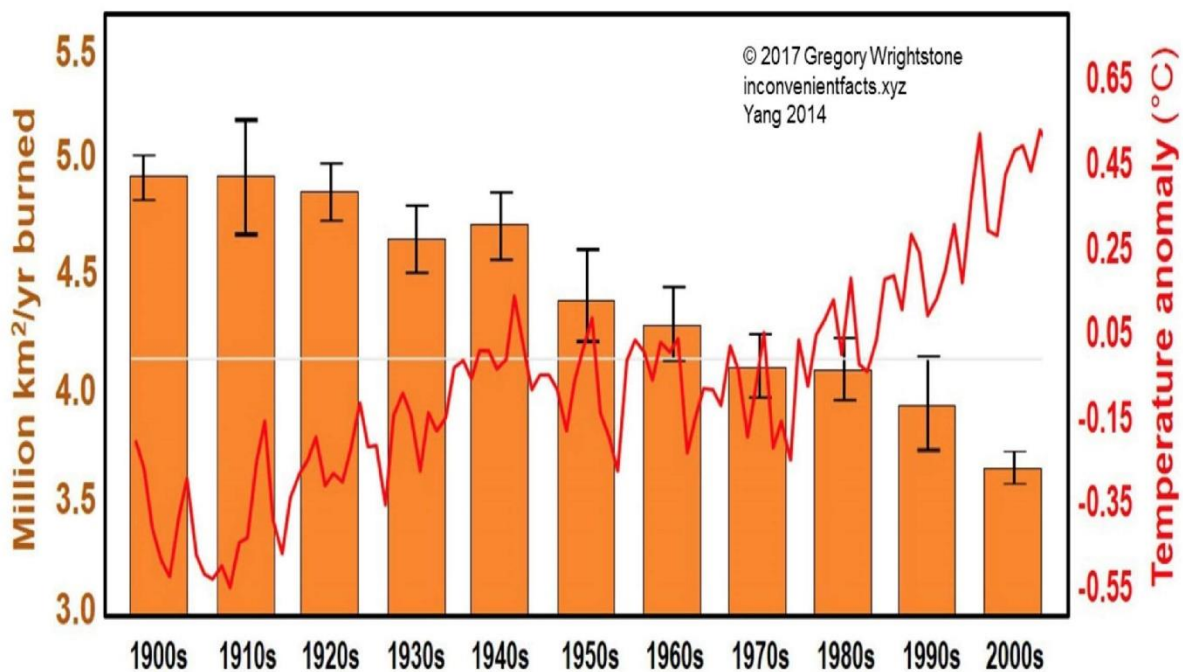
FIRES

US Forest Fire Burn Acreage

National Interagency Fire Center



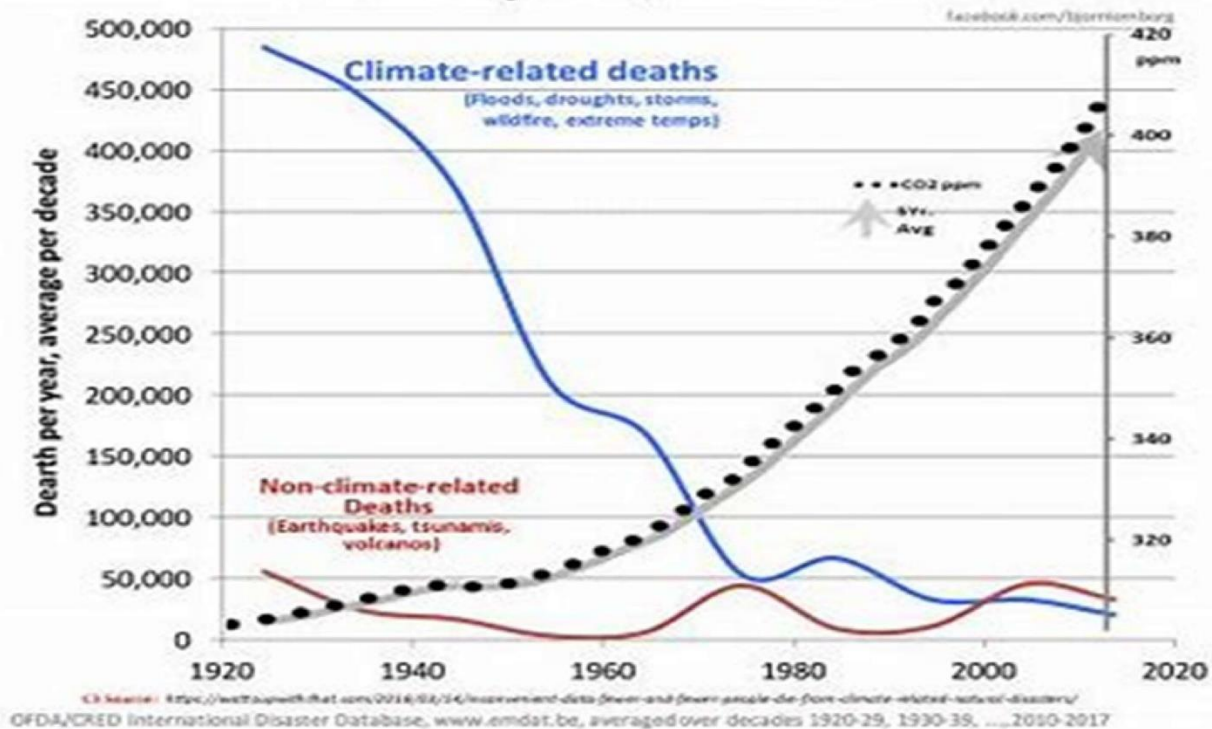
Global area burned: 100 years of decline



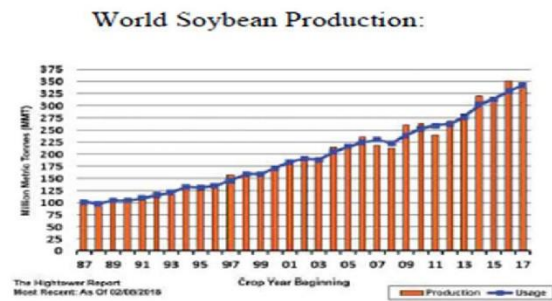
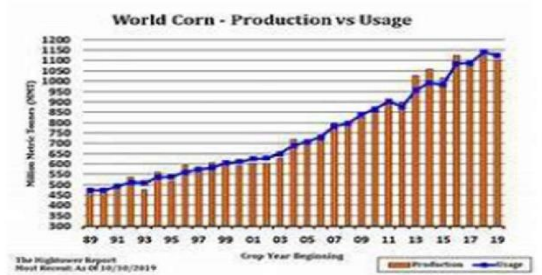
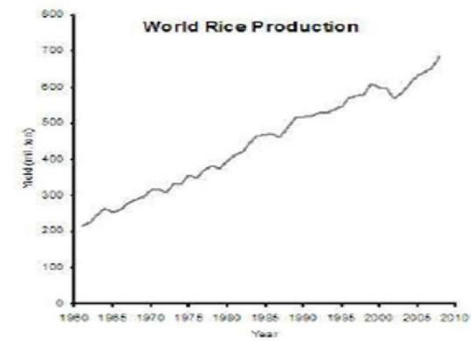
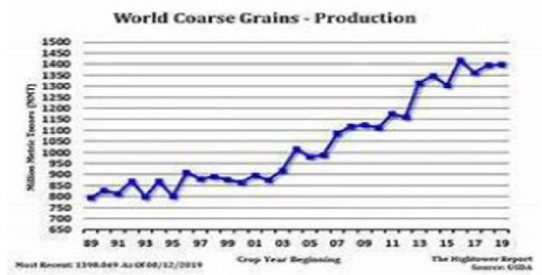
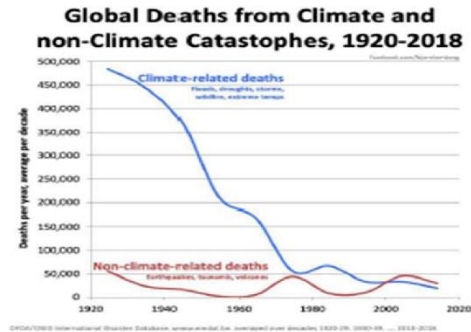
Yang, J, Tian H, Tao B, Ren W, Kush J, Liu Y, and Wang Y (2014) Spatial and temporal patterns of global burned area in response to anthropogenic and environmental factors: Reconstructing global fire history for the 20th and early 21st centuries, *J Geophys Res Biogeosci*, 119, 249–263, doi:10.1002/2013JG002532.

DEATHS

Deaths from Climate and non-Climate Catastrophes, 1920-2017



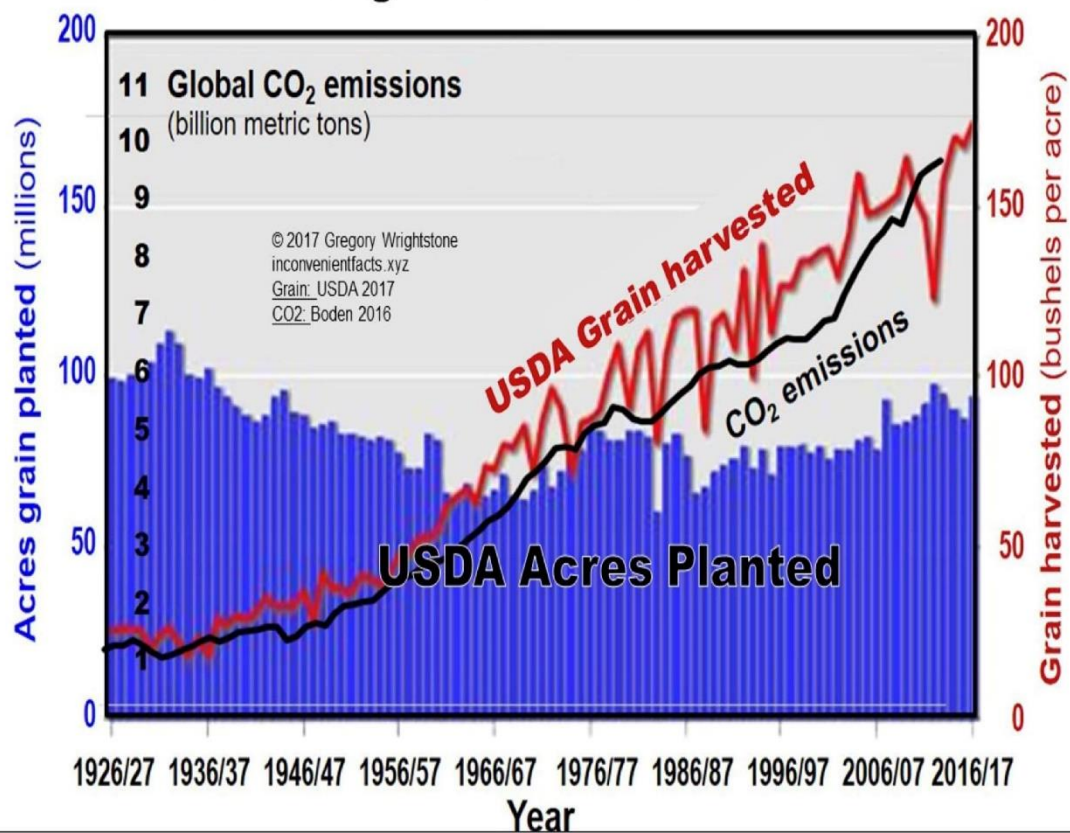
CROP YIELDS



Record Maize Crop - South Africa



Record-setting harvests track CO2 increase



TO CONCLUDE

BE AFRAID, BE VERY AFRAID OF CARBON DIOXIDE (“CO₂”)!

The whole aim of practical politics is to keep the populace alarmed (and hence clamorous to be led to safety) by menacing it with an endless series of hobgoblins, all of them imaginary. H. L. Mencken

MISADVENTURES WITH CARBON

Is the climate debate ever winnable? We doubt it. The Left is getting rather good at coming up with non-falsifiable hypotheses. Climate change should not be blamed for most natural disasters, but did climate change cause the California earthquakes⁷ starting on July 4, 2019? This book of misadventures ends by leaving that question to the Dodo from *Alice’s Adventures in Wonderland*⁸.

“This question, the Dodo could not answer without a great deal of thought, and it sat for a long time with one finger pressed upon its forehead (the position in which you usually see Shakespeare, in the pictures of him), while the rest waited in silence.”

<http://watsongallery.ca/ClimateReality/CR/ClimateReality.htm>

END NOTES

¹ Scientist (Tim Flannery): 'I'm certain' climate change caused Australia fires, Video by CNN's Christiane Amanpour. Retrieved August 9, 2021 from <https://www.cnn.com/videos/tv/2020/01/06/amanpour-tim-flannery-australia-bushfires.cnn>

² Burton, David, CO₂ and Crops: NAS (National Academy of Sciences) versus Science, Watts Up With That?, Retrieved August 8, 2021 from <https://wattsupwiththat.com/2019/01/21/co2-and-crops-nas-vs-science/>

³ Sherwood B. Idso, Wikipedia, Retrieved August 8, 2021 from https://en.wikipedia.org/wiki/Sherwood_B._Idso

⁴ Atmospheric CO₂ levels, 1800 to the present, Retrieved August 8, 2021 from <https://www.sealevel.info/co2.html>

⁵ Bleau, Hannah, Obamas Officially Purchase \$11.75 Million Waterfront Mansion in Martha's Vineyard, Breitbart News, December 2019, Retrieved August 9, 2021 from <https://www.breitbart.com/politics/2019/12/06/obamas-officially-purchase-11-75-million-waterfront-mansion-in-marthas-vineyard/>

⁶ Reiss, Jaclyn, Barack and Michelle Obama are reportedly buying a Martha's Vineyard mansion, The Boston Globe, August 22, 2019, 11:53 a.m., Retrieved August 9, 2021 from <https://www.bostonglobe.com/lifestyle/names/2019/08/22/barack-and-michelle-obama-are-reportedly-buying-martha-vineyard-mansion/cuoVonwx5Uxen9GAQMo1bP/story.html>

⁷ Maxouris, Christina, Steve Almasy and Paul Vercammen, CNN, Aftershocks rattle California after region's strongest earthquake in two decades, CNN, Updated 7:50 PM ET, Friday July 5, 2019, Retrieved September 7, 2019 from <https://www.cnn.com/2019/07/05/us/california-earthquake-friday/index.html>

⁸ Carroll, Lewis, *Alice's Adventures in Wonderland*, 1865, Kindle Edition. Page 16 of 89.