Do We Have A Climate Crisis?

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Do We Have a Climate Crisis?

- Biblical Mandate
- The Global Warming (GW)/CC Claims
- Some Climate Change (CC) Facts
- Greenhouse Effect
- Greenhouse Gases



IPCC

INTERGOVERNMENTAL PANEL ON

- UN IPCC (Intergovernmental Panel on CC)
- NIPCC (Nongovernmental International Panel on CC)
- Consider 16 Key Issues
- Summary
- Conclusions



Biblical Mandate

- Be fruitful and multiply and fill the earth and subdue it, and have dominion over the fish of the sea and over the birds of the heavens and over every living thing that moves on the earth. Gen. 1:28
- While the earth remains, seedtime and harvest, cold and heat, summer and winter, day and night, shall not cease. **Gen. 8:22**
 - But test everything; hold fast what is good. **1 Th. 5:21**



UN IPCC Claims

- Intergovernmental Panel on Climate Change (IPCC)
- GW occurring at a rapid rate
- Largely due to increased burning of fossil fuel
- Must cut back on CO2 released into atmosphere
- Representatives of 190+ nations meet annually
- 6 IPCC reports issued over last 30+ years
- Claims refuted by Nongovernmental International Panel on Climate Change (NIPCC)
 - Nature, not human activity, rules the climate

The Manmade GW/CC Claims

Predicted by the UN IPCC

- Real & human-caused
- +5 degrees C by 2100
- Arctic ice cap disappearing
- Polar bear population will decline
- Sea level will rise by 88+ cm in 2100
- Increased drought, extreme weather, more storms, heat waves, more wildfires, etc.
- Most significant threat to mankind
- Must act NOW!
- What is the Reality?

"Before this century is over, billions of us will die ... " James Lovelock, scientist





The Changing UN IPCC Reports

Climate change over the past 1000 years as shown by the IPCC



The Hockey Stick Chart

Hockey Stick Chart







MIT Researchers Slam GW Data





NASA US Temperature, 1999-2019





Global Cooling (GC) -> Global Warming (GW)? GC alarmists: Gov. Brown Jr., Dr. John Holdren, Dr. Paul Ehrlich GW alarmists – Gov. Brown Jr., Dr. John Holdren, Al Gore



Global Cooling? Global Warming?

Gov. Jerry Brown's <u>1977 Global Cooling</u> BS, Recycled As Gov. Jerry Brown's <u>2014 Global Warming</u> BS Posted on July 30, 2014

The New York Times

TUESDAY, MARCH 8, 1977

Brown Warns of Drought Disaster; Says 'Hard Choices' Face California

In 1977, Governor Brown warned that California was facing an unprecedented drought, blamed at the time on Global Cooling

CALIFORNIA GOVERNOR JERRY BROWN:

1977: UNPRECEDENTED CALIFORNIA DROUGHT CAUSED BY GLOBAL COOLING

2015: 'UNPRECEDENTED CALIFORNIA DROUGHT CAUSED BY GLOBAL WARMING'

'HOT, COLD - WHAT'S THE DIFFERENCE?'

"The entire North 'polarized' cap will disappear in 5 years." -Al Gore, 2008



North Pole Ice Cap August, 2013





Kevin Trenberth

Anthropogenic Contribution

Anthropogenic (man-made) Contribution to the "Greenhouse Effect," expressed as % of Total (water vapor INCLUDED)

Based on concentrations (ppb) adjusted for heat retention characteristics	% of All Greenhouse Gases	% Natural	% Man- made
Water vapor	95.000%	94.999%	0.001%
Carbon Dioxide (CO2)	3.618%	3.502%	0.117%
Methane (CH4)	0.360%	0.294%	0.066%
Nitrous Oxide (N2O)	0.950%	0.903%	0.047%
Misc. gases (CFC's, etc.)	0.072%	0.025%	0.047%
Total	100.00%	99.72	0.28%

Greenhouse Gases (with Water Vapor)

Contribution to the Greenhouse Effect (Including water vapor)





Human contribution to greenhouse effect = 0.28%

Greenhouse Gases (no Water Vapor)

Greenhouse Gas Concentrations (% of total) Natural and Man-made Sources (except water vapor)





Natural & Manmade Sources

Water Vapor (not droplets) Contribution to the "Greenhouse Effect" (Natural and Man-made Sources) Man-made 0.001% 100% 95 000% 80% Natural 99.999% 60% Carbon Dioxide (CO2) 40% Man-made 3.225% 20% 3.618% 0.950% 0.360% 0 072% 0**9**% Water Vapor Methane Misc. gases Natural C02N20 96.775%

Man-made CO2 contributions cause only about 0.117% of Earth's greenhouse effect, (factoring in water vapor). This is insignificant!

Issue #1

Climate Always Changing

Mean Relative Temperature History



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GLOBAL TEMPERATURES (2500 B.C. TO 2040 A.D.)



Issue #2

CO2 Is Required For Life CO2 Increases Food Production CO2 is Not a Pollutant

Growth and Increased CO2

Figure 1. World Grain Production, 1961–2010



@ Dr. Heinz Lycklama



Here is what happens with more CO2





Botched Predictions for 2015

- Predictions by Dr. Paul Ehrlich, Dr. John Holdren [Obama's Science Advisor], the UN
 - Made in **1970's** and **1980's** about **Global Cooling**
- All came to naught:
 - UN overestimated GW by 2015
 - All Rainforest Species Will Be Extinct
 - Oil will run out by 2015
 - Arctic sea ice will disappear by 2015
 - Looking to the future: A billion people could die from climate change by 2020
- Holdren in 1971: "new ice age likely"

Actual CC Pronouncements



2000 Years of Global Temperatures





30-Year Cooling in Mid-Century





Temperature Reconstruction* for N. Hemisphere, 1 - 2000 AD Shows Modern Warm Period Not Exceptional




Battle of the graphs: Mann versus Ball



NIPCC

Nongovernmental International Panel on Climate Change



- Nongovernment scientists and scholars
- Peer reviewed technical papers
- Annual Climate Change conference
- Published reports
 - Nature, Not Human Activity, Rules the Climate
 - Climate Change Reconsidered I and II
 - Scientific Critique of IPCC's 'Summary for Policymakers
 - Why Scientists Disagree About GW (2nd Edition)

Second Edition of NIPCC Book

Why Scientists Disagree About Global Warming

The NIPCC Report on Scientific Consensus

NIPCC Key Findings

- No consensus
- Why scientists disagree
- Scientific method vs. political science
- Flawed projects
- False postulates
- Unreliable circumstantial evidence
- Policy implications

Specific Claims in WA Senate Bill 5802: **Refuted** by Easterbrook (Climate Scientist)

- 1. Emissions of greenhouse gases from human activities is the principal cause of climate change.
- 2. Sea level is rising at an increasing rate because of GW
- 3. The frequency of severe storms is increasing because of GW
- 4. Reduced winter snow packs and decreased summer streamflows
- 5. Increasing acidification of the state's marine waters
- 6. Produce more electricity from renewable energy while phasing out coal-powered electricity generation



CO2 Cannot Drive Global Warming

Possible Global Warming Causes

- A. Increased CO2 in atmosphere?
 - Insignificant GHG, follows GW
- **B.** GW by Sunspots Only?
 - Influence too small by themselves
- - Cloud Cover increase -> Cooling
 - Galactic Cosmic Radiation (GCR)
- **D**. Pacific Decadal Oscillation (**PDO**)?
 - Occurs every 30 years in North Pacific Ocean

A. Evidence for GW by CO2?

- The greenhouse gas signature missing
- No telltale "hotspot" warming pattern
 Vostoc ice cores do not show CO2 pushing up temperatures
 - Increased temperatures 800 years
 before CO2
- Temperatures are not rising





- Since 1999 temperatures have been flat
- CO2 already doing almost all the warming it can do
 - Twice the CO2 does not make twice the difference

The Skeptic's Handbook, Joanne Nova 2009



Actual Climate Change Facts CO2 in Atmosphere Insignificant



Issue #5

Total Solar Irradiation (TSI) Can Cause Significant Fluctuations in the Climate

B. GW by Sunspots Only?

Temperature, CO₂, and Sunspots



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Temperature Correlation With Sun



49

C. Total Solar Irradiance?

The following charts show clearly that climate change seems to be directly correlated to Solar Irradiance, rather than CO₂, as the "Global Warming Crisis" alarmist crowd would have you think.



Modified from Soon, 2004



International Sunspot Number





— Monthly mean total sunspot number

— 13-month smoothed monthly total sunspot number

WDC-SILSO, Royal Observatory of Belgium, Brussels



Svensmark Global Cosmic Ray Theory
Inactive SunInactive SunHigh cosmic raysMore cloudsFewer cloudsCool earthHot earth



Cloud Experiment Supports GW Theory, Dr. Larry Vardiman @ Dr. Heinz Lycklama



Total Solar Irradiance Forecast



Variations of both the TSI and solar activity in 1978-2011 and a forecast of their variations in cycles 24-26 (up to the year 2045)



Anthropic GW Hoax Unravelling

- The Sun is continually being revealed as the main driver of Earth's climate, and <u>the Sun is shutting down</u> (relatively), <u>cloud-nucleating Cosmic Rays</u> are on the increase, and a <u>meridional</u> <u>jet stream flow</u> is becoming evermore prevalent
- The upshot of all these forcings is most likely Global Cooling



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Issue #6

Pacific Decadal Oscillations (PDO) Can Cause Significant Fluctuations in the Climate

D. Pacific Decadal Oscillation (PDO)





PDO – Key to the GW Debate?



 Switch between two circulation patterns every 30 years in North Pacific Ocean
 ENSO – El Nino Southern Oscillation every few years of tropical Pacific Ocean

Pacific Ocean Oscillations

Pacific Decadal Oscillation



Ocean Warming Minimal



Issue #7

Full Implementation of the Paris Climate Agreement Would Have Almost No Effect on the Climate, Even by 2100

Paris Climate Agreement

- Work of the UN Framework Convention on CC
 - Deals with Green House Gas emissions mitigation, adaptation and finance
- Adopted on December 12, 2015
 - Start planned for 2020
 - Signed by 195 nations, ratified by 144
 - Implementation implications
 - Prevent 0.306 degrees Fahrenheit of GW by 2100
 - At a cost of \$65 to \$132 Trillion, 2030 to 2100

COP21 final deal: Key points...



SIX KEY POINTS OF THE PARIS CLIMATE AGREEMENT

The 31-page document that details a landmark agreement reached in Paris on 12 December 2015 could be a turning point in the struggle to contain global warming. The historic pact, approved by 195 countries, will take effect from 2020.



Source: UNEP, Global Trends in Renewable Energy Investment 2015



Emissions Targets for USA & China

- The Obama administration agreed to an economy-wide target of reducing U.S. greenhouse gas (82% of which is carbon dioxide (CO_2)) emissions by 26%-28% below its 2005 level in 2025.
 - China agreed "to achieve the peaking of CO_2 emissions around 2030" and to other measures such as those designed to increase the share of non-fossil fuels in primary energy consumption. Taking into consideration expected economic growth in China and other factors, their target translates into about a 70% *increase* above its 2005 level in 2025.



The UN IPCC Climate Models Are Not Realistic

Models & Estimates




IPCC Change in Projections





Global mean temperature near-term projections relative to 1986-2005



Water Vapor (H₂0)



Issue #9

Surface Weather Stations Give Less Accurate (and Higher Average) Temperatures Than Satellite Measurements

Urban Heat Island Effect













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Correlation of Average Temperature and Number of Surface Stations



Satellite-Based Temperature



Issue #10: Polar Bears Thriving, Not Becoming Extinct

1960's - 5,000 Polar Bears Today - 25,000+ Polar Bears

Inconvenient Fact

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CFACT.org

Issue #11

Sea Levels Are Not Rising As Fast As Predicted

Sea Level Rise Projections

Sea level rise due to global warming



Source: Climate change 1995, The science of climate change, contribution of working group 1 to the second assessment report of the intergovernmental panel on climate change, UNEP and WMO, Cambridge university press, 1995; Sea level rise over the last century, adapted from Gormitz and Lebedelf, 1987.

Sea Level Unaffected by CO2



Sea Level Rise Reality

In the last 140 years, since 1880, we have increased CO2 by 38%, yet the predicted sea rise hasn't happened. Look at Wismar, Germany? Wismar sits on the Mecklenburg Bend, in the Baltic Sea. It is halfway between Norway and Sweden, and the Netherlands. Both Norway and Sweden are actually rising, and have been doing so since the last Glacial Maximum, as melting ice removed weight. <u>So, people in Norway</u> are saying, "Hey, sea levels are falling!" Well, no, their land is rising. Then on the other side, you have Holland and Belgium. Here, the land is in fact sinking. It's like a seesaw. Norway goes up, Holland goes down.

Issue #12

Arctic Sea Ice Is Not Disappearing



THE SCIENCE IS SETTLED. YOU'RE BEING HUSTLED!



ClimateHustle.com

ACTUAL DATA REFUTE CLIMATE MODELS



DON'T BE HUSTLED BY GLOBAL WARMING HYPE!

Hey Climate Marchers:

"POLAR BEARS AT



(a) Dr. Heinz Lycklama

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Arctic Ice Cap Actual vs. Prediction



Sea Ice Thickness, 30-Sep-2019



Winter Temperatures near North Pole



Issue #13 Weather Extremes Are Not Increasing Drought, hurricanes, tornadoes, more storms, heat waves, forest fires, <u>ocean temperature</u>, <u>snow level</u>

Drought 800 -> 2000 AD



Tony Heller @Tony_Heller · 5m

Replying to @RyanMaue

Ryan Maue gives in to superstition. Drought is the normal climate for California. The wet 20th century was the anomaly.

mercurynews.com/2014/01/30/gra...



Policy Based Science Fiction





Intense Hurricanes since 1880 by Decade

(Cat 3,4,5 - http://www.nhc.noaa.gov/data/)



Rank	Hurricane	Season	Fatalities
1	"Galveston"	1900	8,000-12,00
2	"San Ciriaco"	1899	3,400
3	Maria	2017	2,982*
4	"Okeechobee"	1928	2,823
5	"Cheniere Caminada"	1893	2,000
6	Katrina	2005	1,200
7	"Sea Islands"	1893	1,000-2,000
8	"Indianola"	1875	771
9	"Florida Keys"	1919	745

1:57 / 7:54

Play (k)

Climate Misinformation From The USA Today Moderator

Annual Count of US Tornadoes EF-3 and Stronger

US Tornadoes

1970 to 2015



U.S. Annual Count of Strong to Violent Tornadoes (F3+) 1970-2020

Data Source: NOAA/NWS Storm Prediction Center



Number of Winter Tornadoes EF3 and over

1950 to 2019



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Strong to Violent Tornadoes (F3+) in the US, 1954 to 2018

Graph showing the number of severe and non-severe tropical cyclones from 1970-2017 which have occurred in the Australian region. Severe tropical cyclones are shown here as those with a minimum central pressure less than 970 hPa.



Extreme Weather?

Global Tropical Storm and Hurricane Frequency



A U.S. Annual Heat Wave Index





U.S. State Maximum and Minimum Monthly Records by Decade





Average Maximum Temperature Vs. Year 1900-2018 At All US Historical Climatology Network Stations Red Line Is 5 Year Mean



Percent Of Days Above 100.0F (37.8C) Vs. Year 1895-2021 At All US Historical Climatology Network Stations Red Line Is 5 Year Mean



U.S. Temperature, 1880-2000





noaa

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US Average Percent Of Days Over 95F (35C)

At 1192 USHCN Stations



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2000 Years of Global Temperature





Temperature Data Manipulation

Fig. 2: Alteration of temperature data for the entire USA, 1920-1960 values were reduced, 1980 values increased:



Frequency of U.S. Wildfires

US Forest Fire Count



Year

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US Forest Fire Burn Acreage

US Forest Fire Burn Acreage

National Interagency Fire Center



Figure 16-1. Total acreage burned.



Fire Burn Acreage vs. Year

National Interagency Fire Center



Year

Trends in Ocean Temperatures (20S-60N) 10 to 20 Year periods ending in 2014



Fall Northern Hemsiphere Snow Extent





Total snow mass for Northern Hemisphere, excluding mountains







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Global annual deaths from natural disasters, by decade

Absolute number of global deaths from natural disasters, per year. This is given as the annual average per decade (by decade 1900s to 2000s; and then six years from 2010-2015).



Source: EMUAT (2017): OF DAVCHED International Disaster Database, Universite catholique de Louvain – Brusseis – Beigur The data visualization is available at OurWorldinData.org. There you find research and more visualizations on this topic.

Licensed under CC-BY-SA by the authors Hannah Ritchie and Max Roser.

Average annual global deaths from natural disasters by decade, 1900-2015²



Issue #14

UN IPCC Charter Limits It To Identifying Only Human Causes of Global Warming

UN IPCC Charter

The [Intergovernmental Panel on **<u>Climate Change</u>**] IPCC's charter NTERGOVERNMENTAL PANEL ON climate chanee from the outset has been "to assess on a comprehensive, objective, open and transparent basis the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts and options for adaptation and mitigation. IPCC reports should be neutral with respect to policy. ... may need to deal objectively with scientific, technical and socio-economic factors relevant to the application of particular policies."

UN IPCC Reports

- Report #1 in 1990: Ignored satellite data (showed no warming)
- Report #2 in 1995: Significant alterations after approval by scientists
- Report #3 in 2001: Claimed 20th century showed "unusual warming"
- Report #4 in 2007: Completely devaluated climate changes in solar activity
- Report #5 in 2014: Confidence increased to 90-95% despite no global warming for 15 years
- Report #6 in 2021-3: Science, Impacts, Vulnerability, Mitigation, Synthesis, Assessment

Issue #15

UN IPCC Officials Admit That Its Real Agenda Is To Redistribute Wealth

UN IPCC Reality

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INTERGOVE

"We (UN-IPCC) redistribute de facto the world's wealth by climate policy ... " "One has to free oneself from the illusion that international climate policy is environmental policy. This has almost nothing to do with environmental policy anymore "

-Dr. Ottmar Endenhofer, IPCC co-chair of Working Group 3, November 13, 2010 interview [H/t Dr. Charles Battig]

Climate policy used to impose Marxism

"But one must say clearly that we redistribute de facto the world's wealth by climate policy. Obviously, the owners of coal and oil will not be enthusiastic about this. One has to free oneself from the illusion that international climate policy is environmental policy. This has almost nothing to do with environmental policy anymore, with problems such as deforestation or the ozone hole."

Ottmar Edenhofer, Interview with Bernard Potter in Neue Zürcher Zeitung (New Zurich Times), 14 Nov 2010.

U.S. primary energy consumption by energy source, 2021

total = 97.33 quadrillion British thermal units (Btu)

eia

total = 12.16 quadrillion Btu



Data source: U.S. Energy Information Administration, *Monthly Energy Review*, Table 1.3 and 10.1, April 2022, preliminary data

Note: Sum of components may not equal 100% because of independent rounding.

Energy consumption by source, World

1965



Primary energy consumption is measured in terawatt-hours (TWh). Here an inefficiency factor (the 'substitution' method) has been applied for fossil fuels, meaning the shares by each energy source give a better approximation of final energy consumption.



Source: BP Statistical Review of World Energy OurWorldInData.org/energy • CC BY Note: 'Other renewables' includes geothermal, biomass and waste energy.



2021

Global Primary Energy Consumption by Energy Source



CROGUE ECONOMICS

Source: EIA

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Global primary energy consumption by source

Our World in Data

Primary energy is calculated based on the 'substitution method' which takes account of the inefficiencies in fossil fuel production by converting non-fossil energy into the energy inputs required if they had the same conversion losses as fossil fuels.

O Relative



Source: Our World in Data based on Vaclav Smil (2017) and BP Statistical Review of World Energy OurWorldInData.org/energy • CC BY



Global Energy Needs Won't Disappear Overnight

Traditional Energy Demand



Minerals Used in Electric Cars

kg/vehicle



Energy prices on the rise





Issue #16

The Alleged "97 % Consensus of Scientists" Is Bogus

The 97% Claim – False!

"Probably the most widely repeated claim in the debate over global warming is that "<u>97 percent of scientists agree</u>" that climate change is man-made and dangerous. This claim is not only false, but its presence in the debate is an insult to science."



Why Scientists Disagree About GW, pg. 1 [Introduction].

"In May 2014, Secretary of State John Kerry warned graduating students at Boston College of the "crippling consequences" of climate change. "Ninety-seven percent of the world's scientists tell us this is urgent," he added (Kerry, 2014). Three days earlier, President Obama tweeted that "Ninety-seven percent of scientists agree: #climate change is real, man-made and dangerous" (**Obama**, 2014). What is the basis of these claims?"

Why Scientists Disagree About GW, pg. 8.

Consensus on Consensus – Cook, 2016

Studies into scientific agreement on human-caused global warming

TheConsensusProject.com

Why Scientists Disagree on GW, pg. 8ff

Oreskes 2004, **Doran 2009**,

Seven climate consensus studies

Anderegg 2010, Cook 2013, Verheggen 2014, Stenhouse 2014, Carlton 2015

Two key conclusions:

- 1) Depending on exactly how you measure the expert consensus, it's somewhere between 90% and 100% that agree humans are responsible for climate change, with most of our studies finding 97% consensus among publishing climate scientists.
- 2) The greater the climate expertise among those surveyed, the higher the consensus on human-caused global warming.

e.g. Doran Survey Bias

- Doran/Zimmerman 2009 two-question survey:
 - "Q1. When compared with pre-1800s levels, do you think that mean global temperatures have generally **risen**, fallen, or remained relatively constant?
 - Q2. Do you think human activity is a <u>significant</u> contributing factor in changing mean global temperatures?"
- Survey Sent to 10,257 Earth scientists
 - Limited to academic, government workers
 - Solar scientists & meteorologists excluded
 - Responses from 3,146
 - Q1 risen 90+
 - Q2 yes 82
- Survey results considered
 - 79 who listed climate science as their area of expertise, and 50%+ of recent papers on climate science
 - Asked wrong questions of wrong people

Why Scientists Disagree on GW, pg. 13-14



Doran GW Survey Results



Conclusions

Summary by Dr. William Happer

- Basic science shows increasing levels of CO₂, N₂O and CH₄ will not cause a "climate emergency." This is another "extraordinary popular delusion and madness of crowds" in the sad history of human lust for money and power, folly and cowardice.
- More CO₂ will benefit life on Earth because of its value to agriculture, forestry and photosynthetic life.
- More N₂O and CH₄ will have negligible effects on Earth's climate.
- Rational people need to push back against climate fanaticism, which is not based on science at all.
 Appeasement will not work.

Reasons Secular Scientists Think Earth's Climate is Unstable

- 1. Faulty computer climate models
 - Feedback positive or negative?
- 2. Fraudulent politicized research
 - Use of surface vs. satellite temperature measurements
 - Cherry-picked data
 - Manipulated data
- 3. Dependence on the Milankovitch theory
What News Media Isn't Telling You

- There has been <u>NO</u> Global Warming in 19 years
- Global Warming from 1978 to 1998 has been replaced by Global Cooling
- The Antarctic ice sheet is growing, not melting
- Sea level is rising 7" per century, not 20 ft.
- 4 of the past 5 years have set snowfall records
- CO2 <u>cannot</u> cause global warming
- Severe storms are not more frequent than normal
- The oceans are not racidicycklama

What Should the Church Do About GW?

- Commit to viewing the world from God's perspective
- Understand and rely on Scripture as a foundation for life
- Use the Bible to understand the world and evaluate all problems
- Help inform other believers
- Promote the truth and oppose
 false beliefs with gentleness
 and respect



Gen. 8:22, *While the earth remains, seedtime and harvest, cold and heat, summer and winter, day and night, shall not cease.*

In Conclusion

- UN IPCC CC models have failed miserably
- No significant GW for the last 19 years
- Sea levels only increased 1.5 mm per decade
- Man-made causes are insufficient
 - CO2 component of atmosphere insufficient
- Natural causes of CC are more credible
 - Sun energy alone is insufficient
 - Cosmic radiance with sunspots can explain CC
 - Pacific Decadal Oscillation may explain CC
- Paris Climate Agreement <u>NOT</u> a solution for a <u>non-existent problem</u> @ Dr. Heinz Lycklama

60+ Books Refuting GWA



Marc Moran

Unsettled

WHAT CLIMATE SCIENCE TELLS US, WHAT IT DOESN'T, AND WHY IT MATTERS

Steven E. Koonin Jormer underbecretary for science, U.S. department of energy under the obsam administration

APOCALYPSE NEVER

WHY ENVIRONMENTAL ALARMISM HURTS US ALL

MICHAEL Shellenberger









FALSE AL! RM HOW CLIMATE CHANGE PANIC COSTS US TRILLIONS, HURTS THE POOR, AND FAILS TO FIX THE PLANET BJORN LOMBORG









Climate Change is <u>NOT</u> a Crisis Let's Not Panic!

Thank you for your attention!

> Dr. Heinz Lycklama heinz@osta.com HeinzLycklama.com



AN INCONVENIENT TRUTH

HeinzLycklama.com/RefutingGWA

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- The Great GW Debate by Michael Oard (DVD)
- Global Warming by Coral Ridge (DVD)
- Articles by Dr. Larry Vardiman, Climate Scientist at ICR
 - Does CO2 Drive Global Warming?
 - A New Theory of Climate Change

More References

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- The Skeptic's Handbook, Joanne Nova 2009
- Climate Change Reconsidered II Series (NIPCC)
 - Physical Science Full Report.
 - Physical Science Summary for Policymakers
 - Biological Impacts Full Report.
 - Biological Impacts Summary for Policymakers
- Nature, Not Human Activity, Rules the Climate (SEPP)
- Why Scientists Disagree About GW (NIPCC)

Five Key Climate Questions

- Is the world warming?
 - Yes, but historic record likely overstated, and there has been no warming in last 10 years
- Is that warming due to man's CO_2 ?
 - Likely "some," but probably not "most"
- *Will future man-made warming be substantial?*
 - Perhaps a degree, at most, over the next century
- Will we see catastrophic effects from warming?
 - Likely not we have not seen them so far
- Do CO₂ abatement laws like cap-and-trade make sense?
 - Costs far more than it helps. Many more important priorities. Carbon tax better than cap-and-trade.



Metals Demand 2022



Metals Demand for Clean Energy



Metals demand for clean energy technologies compared to other power generation sources

Source: MA 2022. The Role of Critical Minerals in Clean Energy Transitions.





Physical footprint per megawatt of energy produced using various energy technologies



energy technologies