# THE OTHER SIDE OF THE GLOBAL WARMING STORY



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's wrong.

—Richard Feynman.



#### **Questions:**

- Has the Earth warmed since 1950?
- How much will it warm this century?
- Is warming dangerous?
- Can we afford to radically reduce CO2?

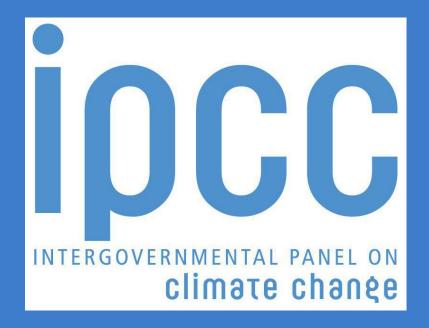


# Media Alarmism

The media has promoted unwarranted fear and unmitigated arrogance as to man's impact on his climate.



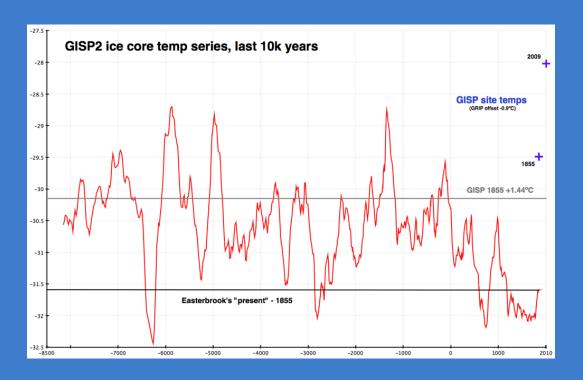




The IPCC was chartered to find man's impact on our climate. It does not vote by science members but by country. It is a political body rather than a scientific body.



While temperatures have fluctuated over the past 5,000 years, today's Earth temperature is below the average for these past 5,000 years.





Temperature fluctuations during the current 300year-recovery from the Little Ice Age, which ended around the time George Washington's soldiers were freezing at Valley Forge, correlate almost perfectly with our sun's changes in activity level.



## Greenland



Greenland is named for "green."
Archeologists know its inhabitants grew corn, barley, and oats, and there is evidence of coral reefs near its coast.



The National Aeronautics and Space Agency (NASA) has determined that during the time the Earth was warming in the past century, so were Mars, Pluto, Jupiter, and the largest moon of Neptune.

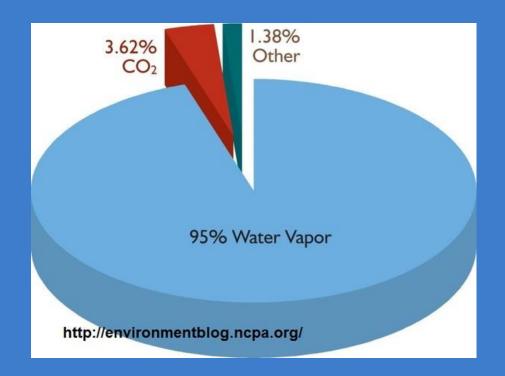


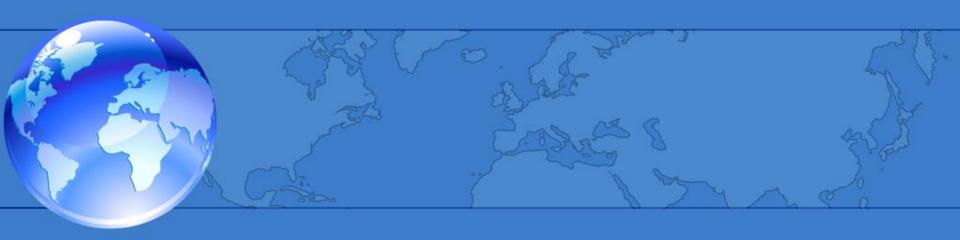


We know that 200 million years ago, when dinosaurs walked the Earth, the average carbon dioxide concentration in the atmosphere was 1800 parts per million, more than four times higher than today.



Water vapor accounts for 95% of the greenhouse effect.

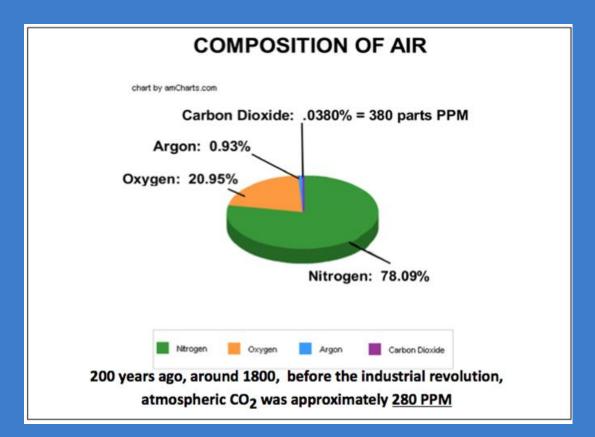




If greenhouse gases were responsible for increases in global temperature, then atmospheric physics predicts higher levels of our atmosphere would show greater warming than lower levels. This was not found to be true during the 1978 to 1998 period of 0.3 degrees centigrade surface warming.

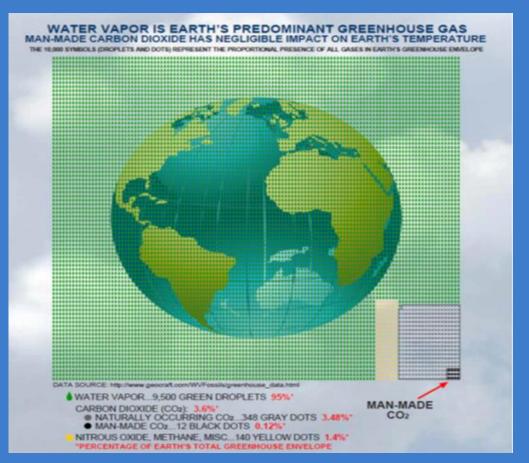


Carbon dioxide is tiny compared to other gases in the atmosphere





Carbon dioxide is tiny compared to other gases in the atmosphere





900,000 years of ice core temperature and carbon dioxide content records show that CO2 increases *follow* rather than lead increases in Earth temperature. This is logical because the oceans are the primary source of CO2, and they hold more CO2 when cool than when warm, so warming causes the oceans to release more CO2.



The effect of additional CO2 in the atmosphere is limited because it only absorbs certain wave lengths of radiant energy. As the radiation in that particular wave length band is used up, the amount left for absorption by more of the gas is reduced.



## Glaciers

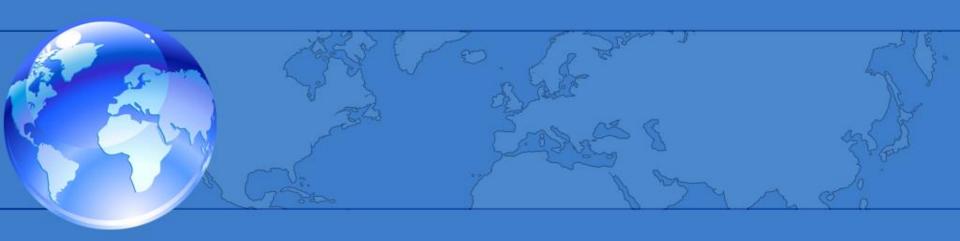


While we hear much about some melting glacier or other, a recent study of 246 glaciers around the world indicated a balance between those that are losing ice, gaining ice, and remaining in equilibrium.



It is amusing that the polar bear has become the symbol of global warming while its North American population has increased from 5,000 in 1960 to more than 25,000 today.





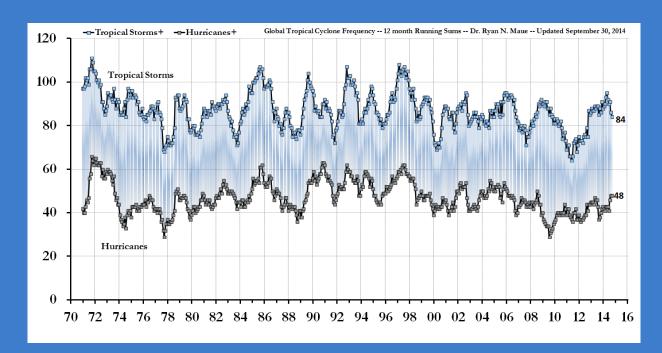
## **Rising Sea Levels?**



NOAA's tide gauge analyses show there has been no acceleration of the sea level's normal rise of 7 inches per century for the past 800 years.



### More Extreme Weather?



There has been no increase in extreme weather since CO2 has increased in the atmosphere.



Coral reefs do not bleach from warming. Any changes in environment, including water temperature, can cause a change in bacterial population; coral turn white when a new group of bacteria moves in and the older group leaves.



A New Zealand study of the Marshall Islands from 1976 to 2006 showed that 73 of the 87 islands increased in size, meaning sea level lowered.





Cheap, reliable energy is not going to come from wind and solar power, which must be subsidized.





Question: To the nearest whole number, what percentage of the world's energy consumption was supplied by wind power? 20%, 10%, or 5%?



Answer: None of the above. It was zero. Wind provided 0.46%. Solar and tidal power together supplied 0.35%.



14% of the world's power is renewable, but it is not wind or solar—it is wood and hydroelectric.





Were wind to supply all the 2% annual increase in world energy requirements from now on, 350,000 wind turbines would be needed each year. At 50 acres per megawatt, that would require the land mass of the British Isles (including Ireland) each year and the land mass of Russia over 50 years.



Wind turbines are not green.
They need 200 times as much material per unit capacity of a modern gas turbine, including cement, steel, rare earth metals, and coal to make steel. A two megawatt wind turbine weighs about 250 tons.





Mount Kilimanjaro lost 90% of its 14,000 year old glacial ice over the past 100 years, though the temperature at the top never dropped below 32°F. At 19,340 feet of elevation, warm dry air rising up a deforested mountain caused the ice to sublimate, going from solid to gas without passing through the liquid state.



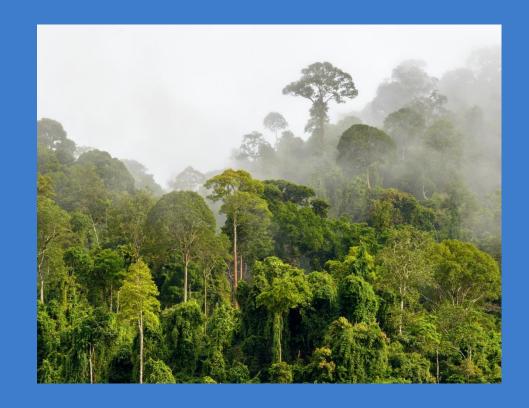
The United States government budgets \$6 billion a year for climate research supporting a growing industry of scientists and university labs that specialize in the subject of human-caused climate change rather the search for evidence wherever it might lead.



Climate change is not a scientific problem that found political support. It is about eco-activists and politicians who found a scientific issue they feel can leverage them into power and control. The environment is a great way to advance a political agenda that favors central planning and an intrusive government.



A new study using high-definition satellite images has found 378 million additional hectares of forest around the globe, almost half the size of Australia.





A study released by Ghent University in England in April discovered that 36% of the African continent had become greener in the past 20 years while only 11% had become less green.





# Benefits?



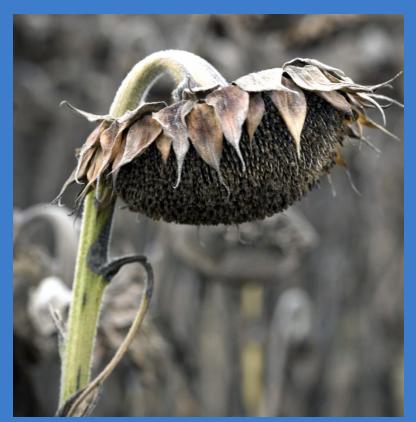
All objective scientific evidence shows that more CO2 will be a major benefit to humanity because it benefits agriculture and primary photosynthetic productivity.



If you are concerned that CO2 is a hazard, be aware that in a lecture hall with 200 people, the CO2 content will be about 2,000 ppm. On submarines they try to keep the CO2 content just below 5,000 ppm. Atmospheric CO2 levels today are just 400 ppm.



Over most of geologic history, CO2 levels have been higher than today's 400 ppm. Below 150 ppm, plants do not survive because they lose all their moisture while attempting to draw enough CO2 from the air.





If you worry about CO2 emissions, you should be happy with hydraulic fracturing to extract natural gas for power plants that emit only 25% as much CO2 as coal plants.







Climate has always changed and will continue to do so whether humanity commits economic suicide by outlawing fossil fuels or not.



## Alarmism

Scare stories about rapidly rising sea levels, ocean acidification, extreme weather, etc. are phony.





Five times more people die of extreme cold than of extreme heat.





I believe the climate is always changing because of variable sunspot activity, the Earth's unstable orbit around the sun, and the Earth's unstable rotation on its axis. These are cosmic forces having nothing to do with human activity.





I believe if the Earth were to be a little bit warmer, it would be a good thing, whether or not man had anything to do with it.



It is immoral to deprive the poorest members of the world's population the benefits of affordable energy from fossil fuels.





The idea that 97% of scientists believe man affects the planet's climate is absurd. Naomi Oreskes made subjective judgements on 928 abstracts written between 1993 and 2003. David Legates' 2015 paper for Science & Education journal read 11,944 abstracts. 4,014 of those abstracts expressed an opinion on climate, of which only 41 endorsed human-caused global warming. In fact, no group would arrive at 97% agreement of anything.



31,478 scientists, 9,021 with Ph.D.s, signed a petition in 2015 circulated by the Oregon Institute of Science and Medicine stating that no human evidence exists that man controls his climate or that a crisis was at hand.



## **Funding**

Funding for alarmist groups is 10 times the funding for skeptics.





## **Opportunity Cost**



Are the benefits of spending to stop global warming greater than providing clean water or electricity to billions living in poverty?



It is likely that there will be minor cooling within 30 years due to fewer sunspots and less energy being emitted from our sun now and in recent decades.



