



CLIMATE CHANGE - BRIEF

Since developing a dynamic atmosphere, Earth's climate has always changed, is changing now, and will never cease changing. Extreme caution, even scepticism, is warranted in respect to any statement about the 'today's climate change' given the over reliance on computer models, the disregard for observed data, together with the decades of failed and overreaching predictions of 'climate scientists' and hyperbole from official and self-interested promoters.

The decades of worldwide climate research and the countless billions of dollars of public funding have advanced the original hypothesis, no further than initial proposition tendered in 1986, that increased levels of anthropogenic atmospheric carbon dioxide is driving of climate change. However, 'climate science' has neither quantified or qualified the extent that 'anthropogenic climate change' exceeds natural variation.

As the 'climate science' has for more that 30years identified carbon dioxide as the primary driver of 'Today's Climate Change', Regionals has a specific Carbon Dioxide Policy.

The Regionals shall:

require that all 'Climate Science' used to justify the expenditure of public funds be subject to independent and open scientific review;

require that all 'Climate Science' used to justify laws and regulations that mandated actions that increase and pass on costs to consumers be subject to independent and open scientific review;

require that all associated empirical data, calculations and source references be provided with 'Climate Science' publications and papers, while all working notes must be made policy makers upon request;

require any Climate Science publications or papers where the author/s or institution has received public funding, be made available, free for distribution to the public;

require any data that has been adjusted or homogenized, be clearly annotated, while the methodology and original empirical data is to be provided to policy makers;

hold accountable any publicly funded institution that adjusts, homogenises or omits data, such that resultant conclusion of the scientific finding that is knowingly, erroneous, bias, exaggerated or minimized.

withdraw all funding of climate change research as it will simply result in the same conclusion, that increased levels of atmospheric carbon dioxide drive 'climate change';

redirect all climate funding to engineering solutions to mitigate the identified impacts of climate change.

See Detailed policy below.



CLIMATE CHANGE - DETAIL

INTRODUCTION

Climate Change Policy is subordinate to those policies that provide for Australia's, national interests, security and wellbeing of its citizens. No policy herein shall harm the national interest or compromise the nation's resilience and self-reliance.

The earth's climate has always changed, is changing now, and will never cease changing. The extent to which man is responsible for climate change is not known, only surmised. There is no earthly force capable of stopping climate change. Extreme caution, even scepticism, is warranted in any statement about the climate change given the over reliance on computer models, the decades of failed and overreaching predictions of 'climate scientists' and hyperbole from official and self-interested promoters.

Source:

<https://edmhdotme.wordpress.com/climate-sensitivity-guiding-climate-policy/>

We are extremely fortunate to be living during an interglacial period. Global climate patterns have undergone a remarkable shift in the past 600,000 to 1.2 million years. Before the most recent transition, glacial cycles, consisting of cold ice ages and milder interludes, typically lasted about 40,000 years—but those weaker cycles have given way to longer-lasting icy eras with cycles lasting roughly 100,000 years and warmer periods that last for little more than 20,000 years. We are currently more than 12,000 years into this interglacial period.

Source:

<https://eos.org/research-spotlights/characterizing-interglacial-periods-over-the-past-800000-years>

While our Stone Age ancestors endured several glacial periods, our 'civilized' world has only known the current interglacial period. Even civilized man has only had the technology to reliably measure temperature for the past 400 years. Fortunately, the record of cycling through the various glacial and interglacial periods is, both 'etched in stone' and 'stored in ice'. The Climatology record of our planet's climate changes are scarred in our geology and frozen in Arctic and Antarctic ice.

Despite the role of natural forces that caused past cyclic climate changes from glacial to interglacial periods and their associated rapid temperature variations, climate scientists of various scientific institutions claim that they can confidently assert that anthropogenic activities are driving today's climate change and they can prediction the Earth's climate some 70years hence.

While the vast majority of political parties and politicians identify as 'accepting the science' the Regional Australia Party (QLD) requires that all 'science' used to justify the expenditure public funds be subject to independent scientific review.

Scientific Publications Supporting the Causation of Anthropogenic Climate Change

Publications including scientific papers must be provided complete with all associated empirical data, calculations, source references, while all working notes must be available upon request to policy makers. Additionally, any papers where the author/s or institution has received public funding shall be made available, free for distribution to the public.

Any data that has been adjusted or homogenized must be clearly annotated, while the methodology and original empirical data must be available upon request to policy makers.

Publication Acceptance Criteria

Only publications relation to the 'causation' of Climate Change are relevant and shall qualify and quantify the anthropogenic contribution as distinct from the natural contributions. Publications in relation to events resulting from Climate Change are not relevant unless they provide qualification and quantification of anthropogenic contribution.

All publications must be certified by the author/s and were applicable by the relevant institutional authority. Additionally, a copy of the publications shall be lodged with the relevant state or national archive prior to forwarding to policy makers.

BACKGROUND TO POLICY DEVELOPMENT

Catastrophic Anthropogenic Global Warming (CAGW)

The CAGW banner was the predecessor to Climate Change and coincided with the period 1986 and 2000 when there was an observed correlation between the increase in atmospheric carbon dioxide (CO₂ levels and the increase in the anomaly of the Global Mean Surface temperature (GMST). The divergence, post 2000 which saw the CO₂ levels continue to increase unabated while the GMST plateaued. After some years, with the correlation no longer being evident, reference to CAGW was replaced by Climate Change.

The CAGW Hypothesis

While accepted methodology of laboratory (close environment) physics demonstrates that the doubling CO₂ levels increases the temperature by approximately 1°C, the Earth's atmosphere is a dynamic environment and numerous external factors will influence the resulting temperature increase. The CAGW Hypothesis speculates that there will be a threefold amplification by feedbacks is based on the assumption, or guess, made around 1980, that the additional warming due to increasing CO₂ levels will cause more evaporation from the oceans and that this extra water vapor will in turn lead to even more heat being trapped as water vapor is a greenhouse gas.

The Hypothesis Remains a Hypothesis

A hypothesis a supposition or proposed explanation made on the basis of limited evidence as a starting point for further investigation without any assumption of its truth. While it has always been recognized that anthropogenic activity increased levels of CO₂, contributing to 'greenhouse effect', the origins of the CAGW Hypothesis can be traced to the testimony of James Hansen, the director of the NASA Goddard Institute for Space Studies (GISS) before a US Senate Inquiry in 1988. In the more than 30years since, the CAGW hypothesis remains exactly that, with no empirical evidence to support the proposition of positive feedback let alone a threefold amplification.

Greenhouse Effect

The Greenhouse Effect is a natural process which enables the Earth's atmosphere to absorb some of the Sun's incoming heat (infrared wavelength), as well Earth's reflected heat and be re-radiated by Greenhouse Gases (GHGs). About 4% (40,000ppm) of the earth's atmosphere is made up of GHGs that facilitate the process.

These unique natural gases enable the lower level of the atmosphere (Troposphere) to act as an insulator and effectively inhibit the cooling of the Earth's surface. As a result of the greenhouse effect the Global Mean Surface Temperature (GMST) is about + 14.5°C, without it, the GMST would be about -18°C and life on 'Snowball' Earth would cease to exist.

Source

<https://edmhdotme.wordpress.com/the-diminishing-effect-of-increasing-concentrations-of-atmospheric-carbon-dioxide-on-temperature/>

Greenhouse Gases (GHGs)

There are four notable, naturally occurring life giving GHGs. Water Vapor (H₂O) is the most abundant, makes up some 95%, Carbon Dioxide (CO₂) is the second most abundant at about 4%, then Methane (GH₄) at 2ppm and lastly, Nitrous Oxide (N₂O) at 330ppb. While Water Vapor is the most prolific GHG, it is the most variable from region to region. While the tropics are often saturated (high humidity) other regions can have low levels of humidity. Measurements of atmospheric gases samples taken at Mauna Loa Observatory; Hawaii are purged of Water Vapor before measuring levels of other gases. It is also important to note that most general information available via internet searches on GHGs fail to identify Water Vapor and its contribution.

While increasing the atmospheric levels of GHGs, adds to the greenhouse effect, there is no empirical scientific data that quantifies the amount of near surface atmospheric warming resulting from the anthropogenic contribution of Carbon Dioxide, Methane and Nitrous Oxide. Nor can it be distinguished from natural variation.

Global Warming Potential (GWP)

The ability to absorb and re-radiate of heat together with the atmospheric lifetime of a GHG will determine its Global Warming Potential (GWP). GWP is commonly stated in 20yr or 100yr atmospheric cycle. The 100yr cycle is the most commonly referenced.

CO₂ is used as the reference for GWP and by that definition has a GWP of 1, and is the same for both the 20 and 100yr cycle. Water Vapor has identical GWP value and cycle as CO₂.

Methane (CH₄), while it only remains in the atmosphere for about 12yrs, its 20yr atmospheric cycle GWP is 84 and reducing to a value for the 100yr cycle is 21. Nitrous Oxide (NO₂) remains in the atmosphere for more than 100yrs and its GWP is approximately 300 for both the 20 and 100yr cycles.

Water Vapor (H₂O)

Water Vapor is the gaseous phase of water. Distribution across the Earth's near surface varies dramatically and a locations 'humidity' is an indicator of water vapor levels. Typical near surface water vapor is concentrated in the equatorial and tropic region at levels of more than 30,000ppm and dissipates towards the polar regions. Water vapor also dissipated with altitude with 99% being contained in the troposphere while levels in the stratosphere are as little as 4ppm.

While the CAGW hypothesis speculated the that the expected rising temperature resulting from increased levels of anthropogenic CO₂ would stimulate evaporation over the tropics amplifying the temperature increase and resulting in the creation of a 'hot spot' in the troposphere above the tropical regions. While there were claims, that climate scientists identified the elusive 'hot spot' in 2015, the failure to taking into account the El Nino effect discredited those claims which were neither supported by satellite data or weather balloon observations. The 'hot spot' remains unfound.

Carbon Dioxide (CO₂)

CO₂ is a natural occurring trace gas making up a little more than about 0.04% (May 2021, 416ppm) of the Earth's atmosphere. It is essential to life on our temperate planet, firstly by its contribution to the greenhouse effect that keeps our planet some 33 °C warmer than it would otherwise be and secondly in its role in the process of photosynthesis, as nature's plant food. At levels less than 150ppm, plants would struggle to grow and would jeopardize life on our planet. Since the advent of satellite imagery in 1986, with rise of CO₂ levels from 350ppm to 2021 levels of 416ppm, our planet's vegetation has been observed to have increased, in both spread and density by approximately 15%. This also collates with the increase of crop yields over the past three decades.

Sources:

https://gml.noaa.gov/ccgg/about/co2_measurements.html

https://www.nasa.gov/sites/default/files/thumbnails/image/change_in_leaf_area.jpg

<https://www.nasa.gov/feature/goddard/2016/carbon-dioxide-fertilization-greening-earth>

Methane (CH₃)

Methane is the simplest form of hydrocarbon and at about 2000ppb it makes up 0.0002% of the atmosphere. Naturally occurring methane is found both below ground and under the seafloor and is formed by both geological and biological processes. The largest reservoir of methane is trapped within a crystalline structure of water (methane clathrates) both under the seafloor and below the frozen tundra of the northern hemisphere.

Decomposing vegetation or animals underground, underwater or in extremely wet environments emit methane. Wetlands, flooded rain forests, sewerage, landfill and livestock are also major emitters of methane.

Methane is also associated with both coal and oil deposits and is in such vast quantities that it is an economical fuel source (natural gas). At today's consumption rate there are some 52yrs of proven conventional, economically recoverable reserves and as much as 8,000yrs supply in unproven reserves and unconventional sources of natural gas.

When burnt methane produces CO₂ and water. The GWP of methane is more than 20 times that of CO₂ thus where practical methane should be captured for energy use or flared off (burnt in situ).

Nitrous Oxide (NO₂)

Nitrous oxide is emitted during agricultural, land use, industrial activities, combustion of fossil fuels and solid waste, as well as during treatment of wastewater. Natural emissions from soil and the oceans contribute about 60% of atmospheric nitrous oxide. While nitrous oxide concentration is less than 400ppb (1/1000th of CO₂), its GWF is 265 while remaining in the atmosphere for more than 120yrs.

Anthropogenic activities account for 40% of nitrous oxide emissions. Agriculture, nitrogen-based fertilizers and animal manure are major contributors of nitrous oxide emissions. Advances in farming methods, the development of fertilizers (nano technology) and their application (localized rather than broadacre) provide opportunities reduce emissions.

Temperature

Despite the failed alarmist predictions of Catastrophic Anthropogenic Global Warming (CAGW) and the vagaries of the Climate Change, the alarmism that remains steadfast, is that the increase in the Global Mean Surface Temperature (GMST) experienced over the past 100yrs is supposedly beyond natural variation, and is deemed to be the result of anthropogenic activities. While not directly impacting on temperature or climate, the carbon dioxide (CO₂), methane and nitrous oxide emitted by these activities, increase the atmospheric levels of these GHGs, enhancing the greenhouse effect to further inhibit the cooling of the Earth's surface thereby raising the GMST. While it is accepted that increase levels of GHGs will increase GMST, the rate and the amount of the temperature increase is disputed in the wider scientific community.

Geological Period Temperature/Carbon Dioxide (CO₂) Reconstructions

In its four and half billion years, the Earth has undergone thousands of changes, all of which are etched into its geology. Even the changing atmosphere and climate has been captured in its layers over these eons and in more recent millennia, have been stored in Arctic and Antarctic ice packs. The Earth's Climate and GMST have never been constants and we should never expect them to be.

Sources:

https://www.geosociety.org/GSA/Education_Careers/Geologic_Time_Scale/GSA/timescale/home.aspx

https://www.youtube.com/watch?v=dXuLJ3YZ_GU

For the majority (80%) of the nearly 600million years since the existence of 'earliest' lifeforms evolving on our planet, the GMST has been about 8°C higher than today's temperatures. Similarly, during this period, the level of CO₂ has been much higher, falling from some 7000ppm to 280ppm till the recent uptick to today's 416ppm.

The geological data does not support a direct relationship between CO₂ levels and fluctuations in the GMST. There were extensive periods when the GMST fluctuated dramatically, yet the level of CO₂ was constantly declining, substantive periods when GMST was rising while the CO₂ level was falling as well as periods when both the GMST and the CO₂ level increase, though it is generally accepted that the change in the CO₂ level lags the temperature change by at least 800yrs.

However, it is somewhat disingenuous to make a case of the relationship between the CO₂ level and the GMST based on the event of billions or even tens of millions of years past, when we are aware that numerous calamitous events and major changes have occurred. Volcanic activity, asteroid impacts and dramatic Teutonic plate movements have been instrumental the shifts in the Earth's climate and temperature.

Sources:

<https://edmhdotme.wordpress.com/climate-sensitivity-guiding-climate-policy/>

<https://edmhdotme.wordpress.com/holocene-context-for-catastrophic-anthropogenic-global-warming/>

<https://www.dr-robert-fagan.com/posted-articles/>

Time of Man Temperature/Carbon Dioxide (CO₂) Reconstructions

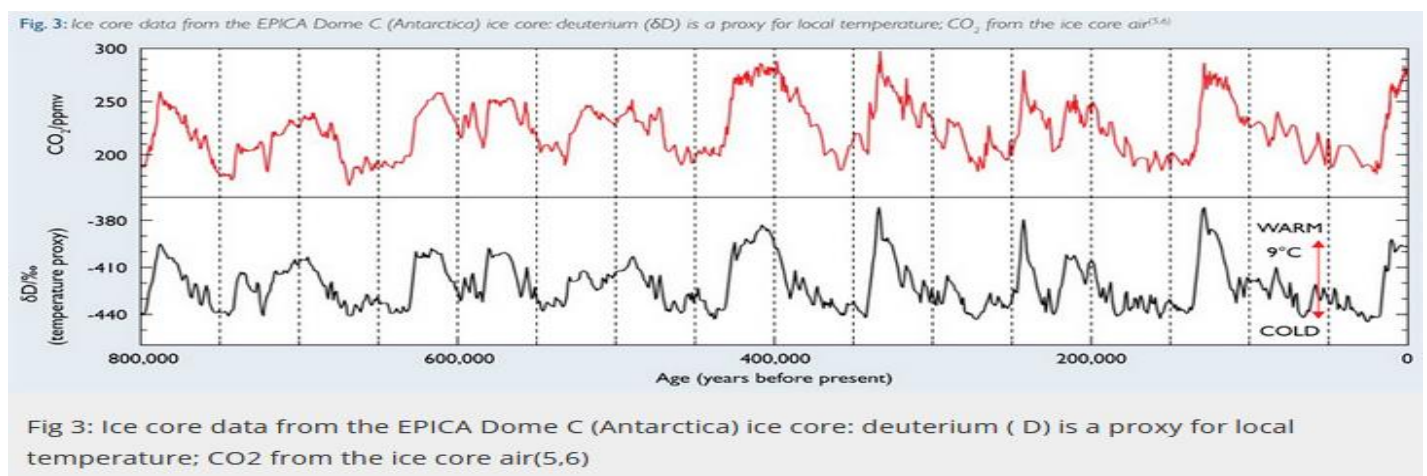
Our current geological period, the Quaternary, is a mere 2.58 million years (0.06% of geologic time). Our 'human' ancestors have only ever known this period while modern man (homo sapiens) is estimate to have evolved less than 300,000yo. As this period has seen 'humans' evolve, survive and thrive, it is reasonable to make a more considered examination of the period and the Climate Changes man has endured.

The preceding geological period, the Tertiary, commenced some 65 million years ago with the end of the dinosaurs and saw the 'steady' reduction of the CO₂ level from approximately 700ppm to 280ppm some 5 million years ago and remaining reasonably constant till the recent uptick to 416ppm. During the same time temperature, rather than falling steadily as CO₂ did, remained high initially and fell to today's temperature in two readily identifiable steps, the first initiated some 55 million years ago and the second some 5 million years ago that set the Earth on its protective towards its current 'Ice Age' about 1.6 million years ago.

An 'Ice Age' is any period when large permanent ice sheets form in both hemispheres. Our current 'Ice Age' has cycled through numerous glacial and interglacial periods. We are extremely fortunate to be living at the peak of an interglacial period. In fact, civilized man has only ever known this temperate period while our primitive ancestors endured several glacial and interglacial cycles.

As well as temperature and carbon dioxide reconstructions from geological records we are also extremely fortunate to have both Antarctic and Greenland Ice Core data for much of the period. The longest ice cores extend to 3km in depth. The oldest continuous ice core records to date extend 123,000 years in Greenland and 800,000 years in Antarctica. Ice cores contain information about past temperature, and about many other aspects of the environment. Crucially, the ice encloses small bubbles of air that contain a sample of the atmosphere – from these it is possible to measure directly the past concentration of gases (including carbon dioxide and methane) in the atmosphere.

Natural climate changes of the glacial-interglacial cycles have been identified by measuring the ratios of different water isotopes in the ice cores, to determine how temperature in Antarctica and Greenland has changed in the past. The 800,000 years of Antarctica ice cores show a succession of long, cold 'glacial' periods, interspersed roughly every 100,000 years by warm short 'interglacial' periods. This succession glacial-interglacial events are confirmed by geological records.



Source

<https://www.bas.ac.uk/data/our-data/publication/ice-cores-and-climate-change/>

Ice core data also clearly shows that changes in carbon dioxide levels lag atmospheric temperature changes by approximately 800 years. While events can change atmospheric rapidly, oceans temperature changes take much longer. Cooling oceans will absorb atmospheric carbon dioxide and expel carbon dioxide as they warm. Typically, past glacial periods have resulted in atmospheric carbon dioxide levels falling to 180ppm while interglacial periods saw levels of 280ppm.

Entry into the current Ice Age and the cycling through glacial and interglacial period is thought to be a product of the three orbital cycles identified more than a century ago, Serbian scientist Milutin Milankovitch:

Eccentricity - change in shape of Earth's orbit;

Obliquity – change in angle of Earth's axis is tilted with respect to Earth's orbital plane and

Precession – change in the direction Earth's axis of rotation is pointed.

Each cycle has significantly different durations, Eccentricity, about 100,000 years, Obliquity about 41,000 years and Precession about 26,000 years. The small changes set in motion by Milankovitch cycles operate separately and together to influence Earth's climate over very long timespans, leading to larger changes in our climate over tens of thousands to hundreds of thousands of years. Milankovitch's comprehensive mathematical model for calculating differences in solar radiation at various Earth latitudes along with corresponding surface temperatures has been validated by sediment cores and more recently by ice core.

While the ice core data clearly shows that atmospheric carbon dioxide levels do not drive temperature and our planet's natural orbital cycles have influenced climate during the 'time of man' it appears of little interest to today's climate science.

Source:

<https://climate.nasa.gov/news/2948/milankovitch-orbital-cycles-and-their-role-in-earths-climate/>