

Global Warming = Climate Change

This short essay questions the actions to combat Global Warming / Climate Change from five points of view:

- The Temperature Context

- Man-made CO₂ emissions 1965 -2012.

- The Significance of Carbon Dioxide CO₂

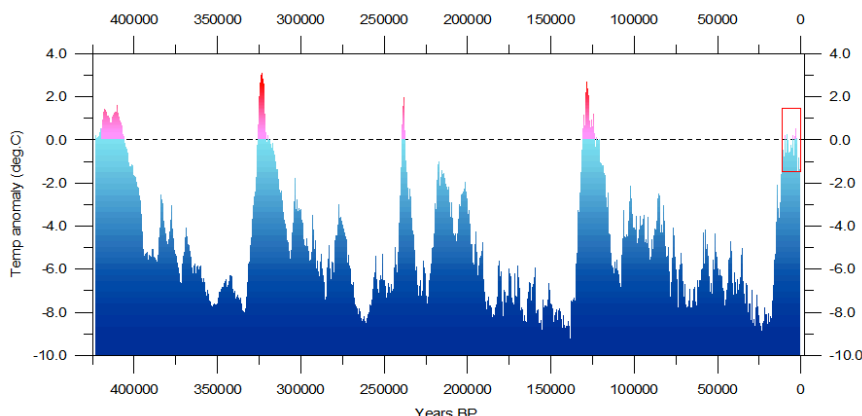
- The Influence of Carbon Dioxide CO₂ on temperature

- De-carbonisation context and consequences

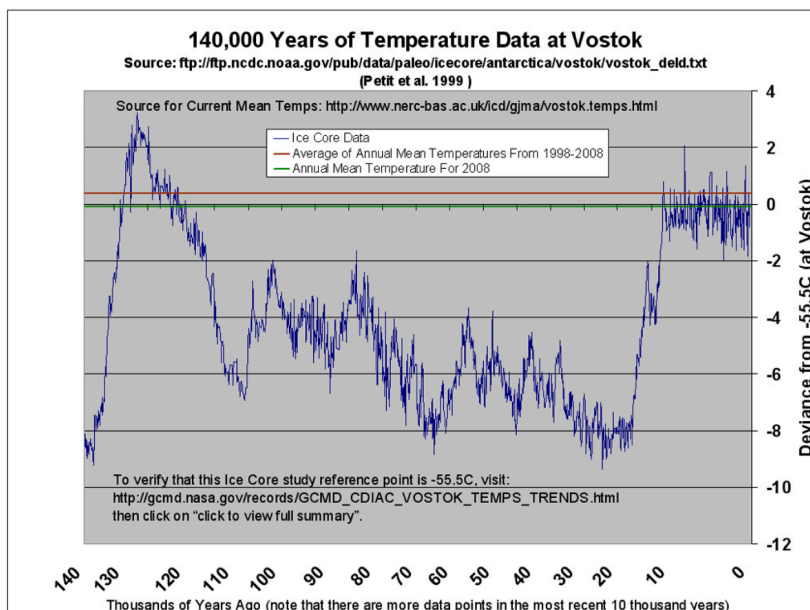
It examines wherever possible hopefully un-contentious quantifiable aspects of the question.

The Temperature Context

Mankind has thrived and developed in the last 10,000+ years, the period of the current Holocene interglacial. The more normal state of the earth in current geological times is glaciation, with ice sheets covering much of the land outside the tropics. There have been 5 interglacial warmer periods in the last 500,000 years. The timing of glaciation and inter-glacials is driven by planetary mechanics¹.



The previous Eemian interglacial epoch was some 120,000 years ago. At its peak it was about 3°C warmer than our current Holocene interglacial: hippopotami thrived in the Rhine delta. The Eemian epoch also lasted about 10,000+ years².

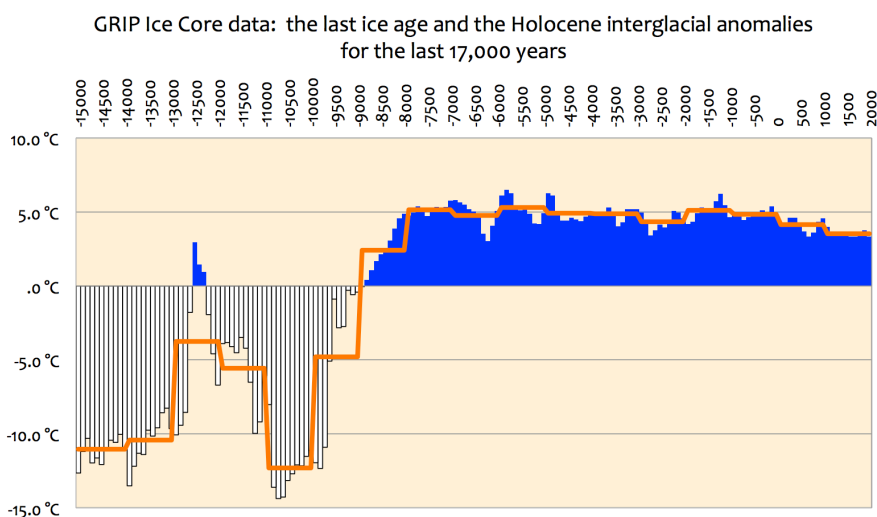


On past experience, our current benign interglacial period should or could be drawing to its close.

The temperature record of the Holocene epoch can be seen in the GRIP³ Greenland ice core data. Its information is replicated in several other similar long term ice core records.

The Holocene epoch started with a “climate optimum” with its highest temperature values. In spite of the notable Minoan, Roman and Medieval warm periods the overall temperatures have diminished by about 1.5°C since 8000BC.

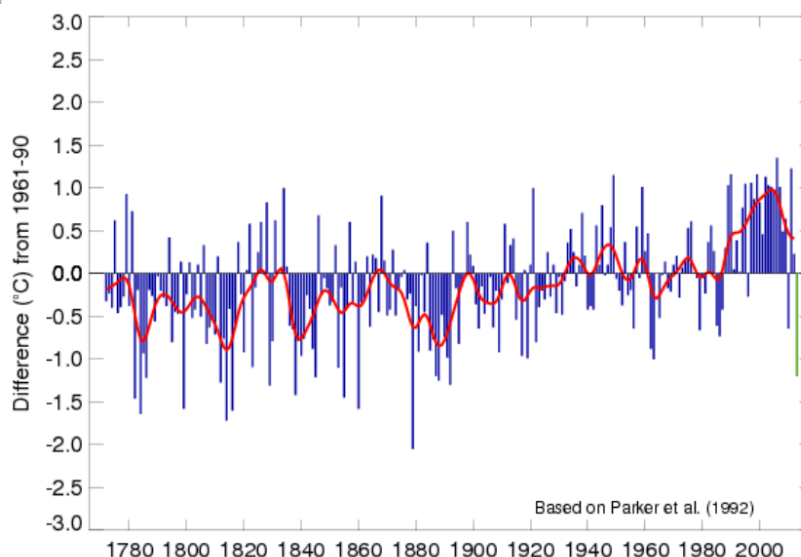
The most recent millennium 1000 - 2000 AD has been the coolest 1000 year period of the Holocene epoch⁴.



The longest standing land based temperature record is the Central England Temperature record, (CET) has been maintained and supported by the UK Meteorological Office since 1659⁵. It appears to be reliable and to have maintained its quality. It may not have been adjusted, save marginally for the Urban Heat Island effect, as have so many other official temperature records.



Mean Central England Temperature
Annual anomalies, 1772 to 17th Apr 2013



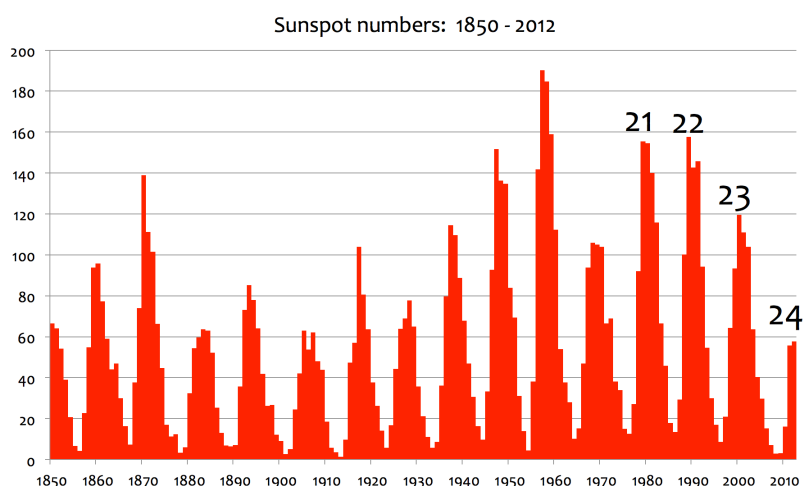
Although the CET record covers only a small part of the northern hemisphere, it has shown a consistent rise since the end of the little ice age in 1850 at a rate of about +0.45°C / century or about +0.77°C in the last 150 years. This rise accords well with other temperature records.

Mankind’s industrialisation could not have had any impact on climate prior to 1850, when CO₂ levels were ~280-300 ppm^v. The CET shows a gain of about 0.76°C 1850 to 1999 and there was a particular spurt up to the end of the last century.

This temperature spurt coincided with increasing CO₂ levels and is attributed by the IPCC, Intergovernmental Panel on Climate Change and by Anthropogenic Climate Change advocates wholly to the growing industrial CO₂ emissions of mankind.

The temperature gains since 1970 also coincided well with three active solar cycles 21 - 22 - 23. This period of high level solar activity matches the timing of the great Global Warming scare⁶.

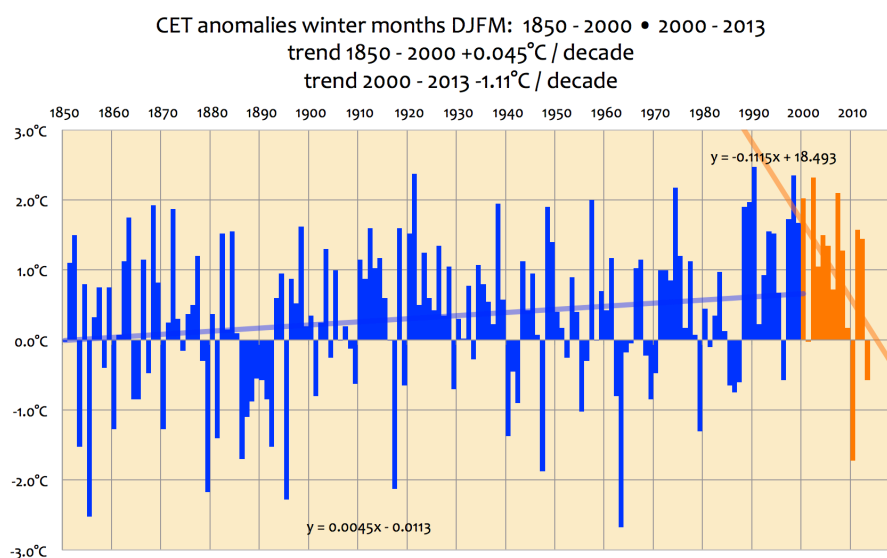
Since the year 2000 a change has occurred: the CET record shows a marked reduction from its high levels losing all the gains that it has made since 1850, even though at the same time CO₂ levels have escalated further to ~400ppm^v.



But the current solar cycle 24⁷ is very much weaker. Solar experts predict that weakness will continue at least into cycle 25 peaking in about 2020⁸ or even further. Solar activity levels are then likely to be back to the levels of the Little Ice Age, around 1800 or the Dalton minimum⁹.

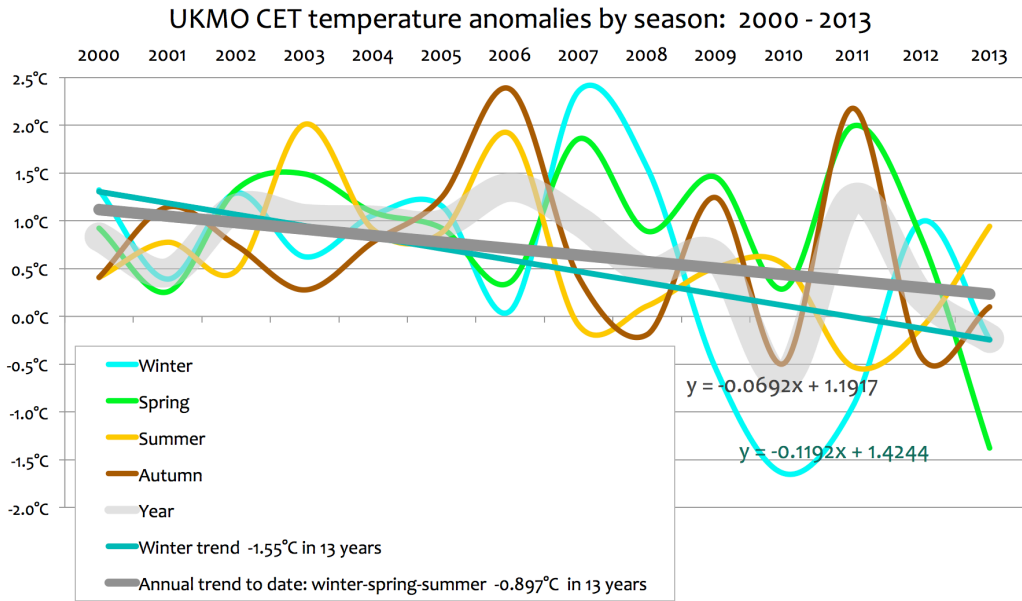
Although the visible light output of the sun is remarkably constant, its other electromagnetic radiations can vary significantly and other radiative effects that are mapped by the sunspot number may well have much more influence over world climate¹⁰.

Between 1850 and 1999 CET gained about 0.7°C¹¹. But in the last 13 years of since 2000, the CET winter December - March temperatures have shown a significant loss -1.45°C.



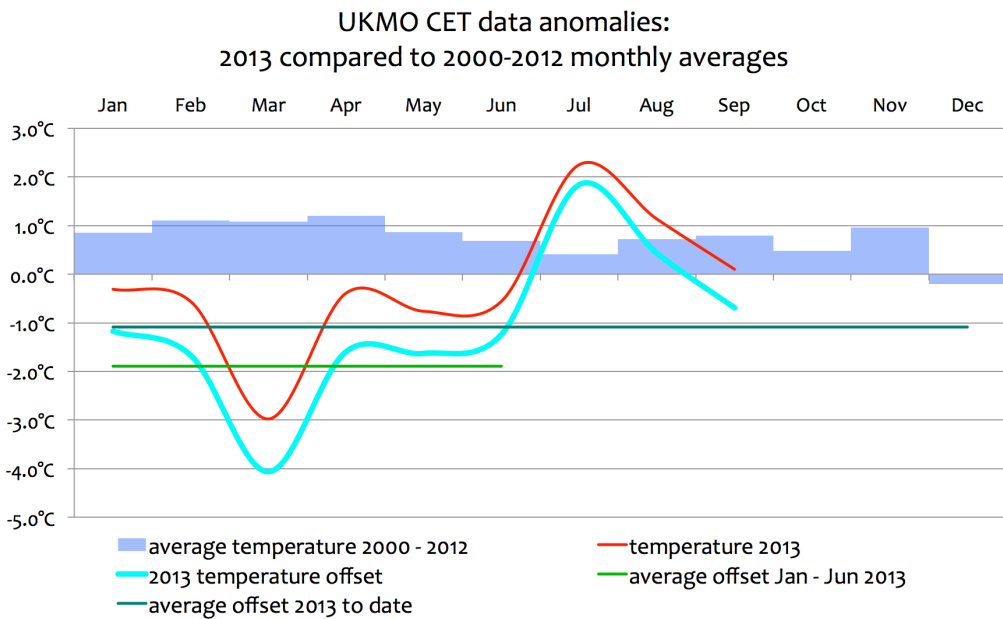
Although the CET relates to a relatively small area of the Northern hemisphere this would seem to be a truly radical change over the last 13 years.

The UKMO Central England Temperature data (CET) since 2000 shows a -1.5°C winter (DJF) decline and nearly -1.0°C decline over the period. This is as much as or more than the total CET gains since 1850.



However recently a further more extreme, perhaps extraordinary, escalation of the temperature decline has occurred. In the first half of 2013, January - June, CET temperatures were a full 1.89°C lower than the monthly averages of the previous 12 years.

The first six months were close to -2 °C offset lower than the average monthly temperature between 2000 and 2012 the green line below.



This phenomenon has been seen widely throughout Europe and the remainder of the Northern Hemisphere¹². The effect has been mirrored in the Southern hemisphere¹³. That decline has led to significant crop failures and serious loss of agricultural productivity¹⁴. In their recent report the IPCC have reluctantly accepted that global temperatures have stopped increasing and as can be seen above may be falling radically.

But throughout this period CO₂ levels have been increasing.

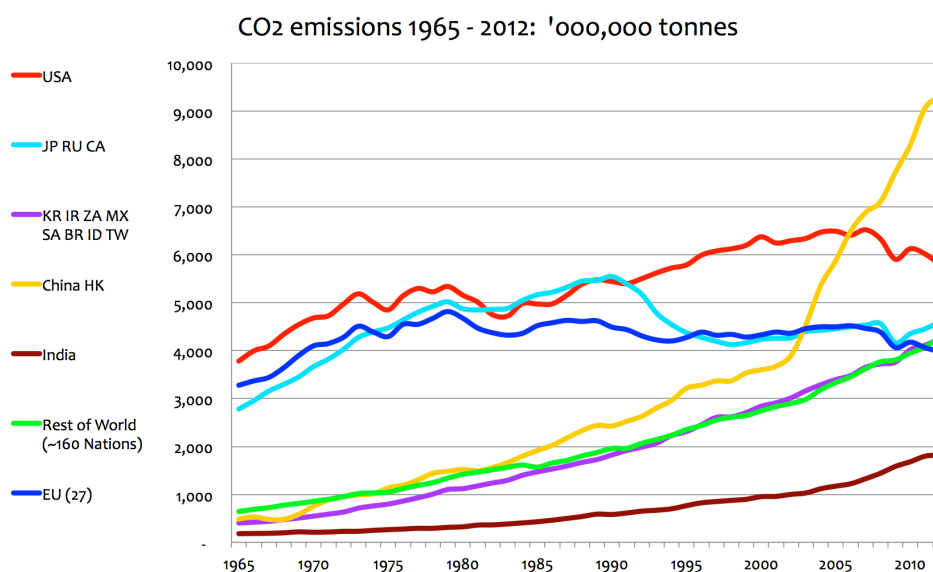
Perhaps its the sun and planetary mechanics that control the world's climate¹⁵.

Man-made CO₂ emissions 1965 -2012

The following calculations and graphics are based on information on worldwide national CO₂ emission levels published by BP¹⁶ in June 2013 for the period from 1965 up until 2012. The data is well corroborated by previous datasets published by the Guardian¹⁷ and Google up until 2009¹⁸.

A logical grouping of nations with regard to attitudes to CO₂ emissions control is used, as follows:

- The European Union, (including the UK), believers in action to combat Global Warming.
- United States of America.
- Japan, the former Soviet Union¹⁹ and Canada²⁰ are developed nations withdrawn from Kyoto.
- Korea, Iran, South Africa, Mexico, Saudi Arabia, Brazil, Indonesia and Taiwan: developing rapidly.
- China and Hong Kong: developing very rapidly.
- India: developing rapidly
- Rest of World (~160 Nations): developing rapidly.



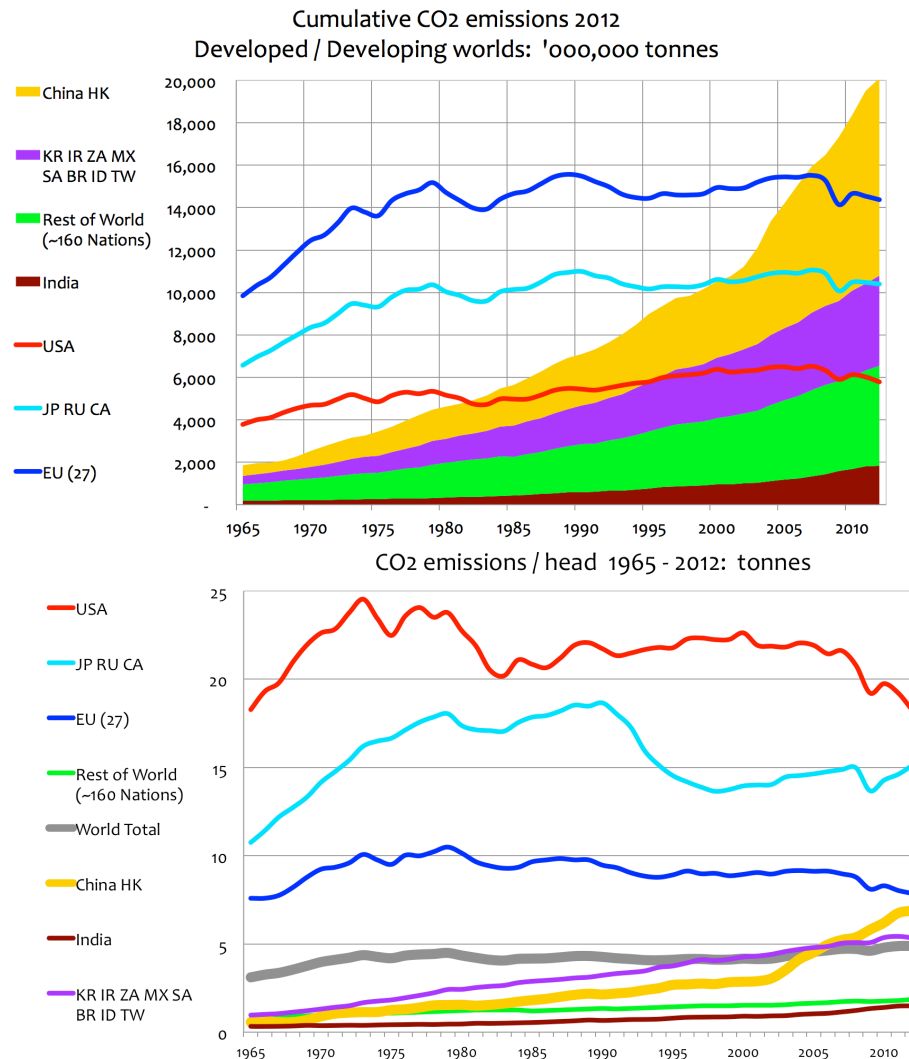
In summary the CO₂ emission and emissions per head position in 2012 was as follows:

	CO ₂ emissions	% population	CO ₂ /head tonnes
EU (27)	3,978	7.2%	7.9
USA	5,786	4.5%	18.3
JP RU CA	4,611	4.3%	15.1
KR IR ZA MX SA BR ID TW	4,252	11.3%	5.3
China HK	9,299	19.1%	6.9
India	1,823	17.3%	1.5
Rest of World (~160 Nations)	4,718	36.3%	1.8
World	34,466		4.9

These graphs of total CO₂ emission history show that up until 2012:

- CO₂ emissions from the developing world as a whole overtook the developed world in 2007 and are now ~42% higher.
- there has been a very rapid escalation of Chinese CO₂ emissions since the year 2000²¹.
- China overtook the USA CO₂ emissions in 2006, and by 2012 Chinese emissions were already ~60% greater than the USA, the escalation in Chinese CO₂ emissions will continue.
- The stabilisation or reduction of emissions from developed economies. The USA, simply by exploiting shale gas for electricity generation, has already reduced its CO₂ emissions by some 8% in the last year²². That alone has already had more CO₂ emission reduction effect than the entire Kyoto protocol²³.
- there is inexorable emissions growth from all the developing economies, from a low base.
- India has accelerating emissions²⁴, growing substantially, from a low base.

So any CO₂ emissions reduction made by the Developed Nations will be entirely negated by the increases in CO₂ emissions from Developing Nations.

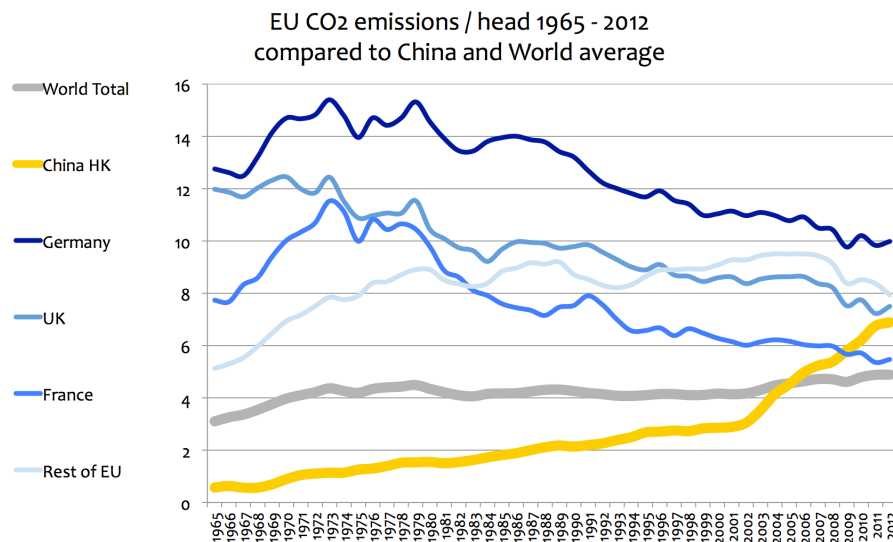


However probably more significant than the total CO₂ emissions output is the comparison of the actual emissions/head for the various national groups.

- The EU(27) even with active legal measures have maintained a fairly level CO₂ emission rate but have managed to reduce their CO₂ emissions per head by ~29% since their peak in 1977. The recent downward trend is attributed to their declining economies.
- The USA has already reduced its CO₂ emissions/head by ~32% since its peak in 1970
- Russia, Japan and Canada reduced their emissions/head by ~24% since their peak in 1989
- The eight rapidly developing nations have shown consistent growth from a low base in 1965 at 5.6 times. They exceeded the world average CO₂ emissions level in 1997
- China's CO₂ emissions/head have grown a further 140% since 2000. China overtook the world-wide average in 2003 and surpassed the rapidly developing nations in 2005.
- India's CO₂ emissions have grown by 4.7 times over the period and are now showing recent modest acceleration. That increasing rate is likely to grow substantially.
- The Rest of the World (~160 Nations), 36% of world population have grown CO₂ emissions consistently but only by 2.6 times in the period, this group will be the likely origin of major future emissions growth.
- Overall average world-wide emissions/head have remained relatively steady but with early growth in the decade from 1965. It amounts to 1.6 times since 1965.

When the participating nations particularly EU(27) are compared with Chinese CO₂ emissions/head an interesting picture arises:

- Chinese CO₂ emissions at 6.7mt/head for its 1.3 billion population are already ~41% greater than the worldwide average. Those emissions are still growing fast.
- At 5.4mt/head, France, with ~80% nuclear electricity generation, has the lowest CO₂ emission rates in the developed world and is at only ~12% above the world-wide average.
- China's CO₂ emissions/head exceeded France's CO₂ emissions/head in 2009.
- The UK at 7.2mt/head is only ~50% higher than the world-wide average and only about ~12% higher than China.
- Germany, one of the largest CO₂ emitters in Europe, has emissions/head ~100% higher than the worldwide average and is still ~63% higher than China.



If CO₂ emissions really were a concern to arrest Catastrophic Anthropogenic Global Warming / Man-made Climate Change, these results show starkly the real advantage of using Nuclear power for electricity generation. This must question the Green attitudes in opposing Nuclear power. Following Fukushima, the German government position of eliminating nuclear power in a country with no earthquake risk and no chance of tsunamis should not be tenable.

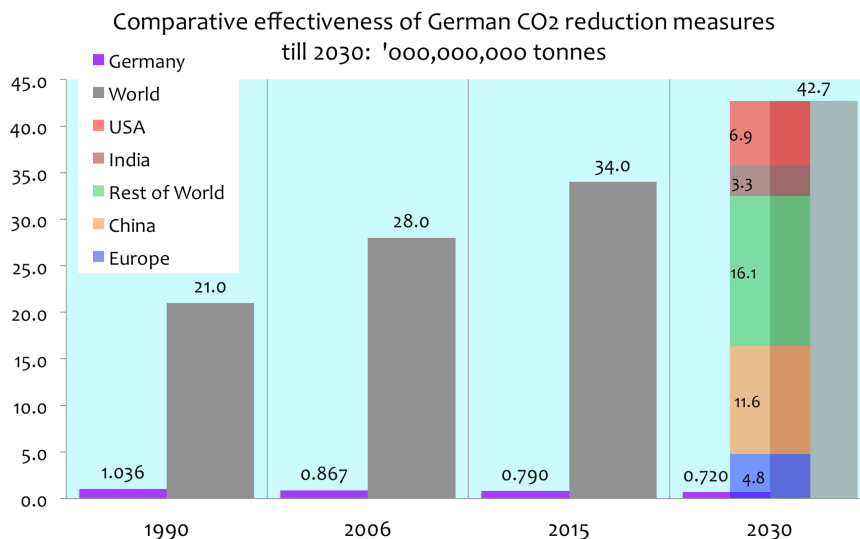
In October 2010 Professor Richard Muller made the dilemma for all those who hope to control global warming by reducing CO₂ emissions clear: in essence he said²⁵:

“the Developing World is not joining-in with CO₂ emission reductions nor does it have any intention of doing so. The failure of worldwide action negates the unilateral action of any individual Nation”.

Professor Fritz Vahrenholt again re-emphasised this point in a July 2012 lecture at the Royal Society²⁶²⁷. As CEO of RWE Innogy, the major German windpower supplier, Professor Vahrenholt pioneered Germany's significant advances in renewable energy, especially in the development of wind power. Previously Professor Vahrenholt had accepted the IPCC as the foundation of his understanding of mankind's effect on climate change. However, as a trained chemist he re-examined IPCC reports in detail. He found many errors, inconsistencies and unsupported assertions. He has now entirely revised his position.

His diagram below shows the miniscule effect of the enormously costly efforts at decarbonisation in Germany, (die Energiewende), in comparison with the escalation of CO₂ emissions from the rest of the world. The underdeveloped nations are bound to become progressively more industrialised and more intensive users of fossil fuels to power their development and widen their distribution of electricity.

The futility of the expenditure of vast resources on Green activities in Germany becomes clear. German actions with increasing risks to its energy security and the risk to the German economy as a whole, could only ever reduce Germany's CO₂ emissions by ~150,000,000 tonnes between 2006 and 2030. That would only amount to ~1/100 of the concomitant growth in other CO₂ emissions from the developing world. According to Bjorn Lomborg the \$100billion German investment in solar power alone, not including other renewable investments, can only reduce the onset of Global Warming by about 37 hours by the year 2100²⁸.



Professor Varhenholt is now convinced that it is nature and in particular the behaviour of the sun that is responsible for continually changing climate, and as he said as the final point of his RS lecture:

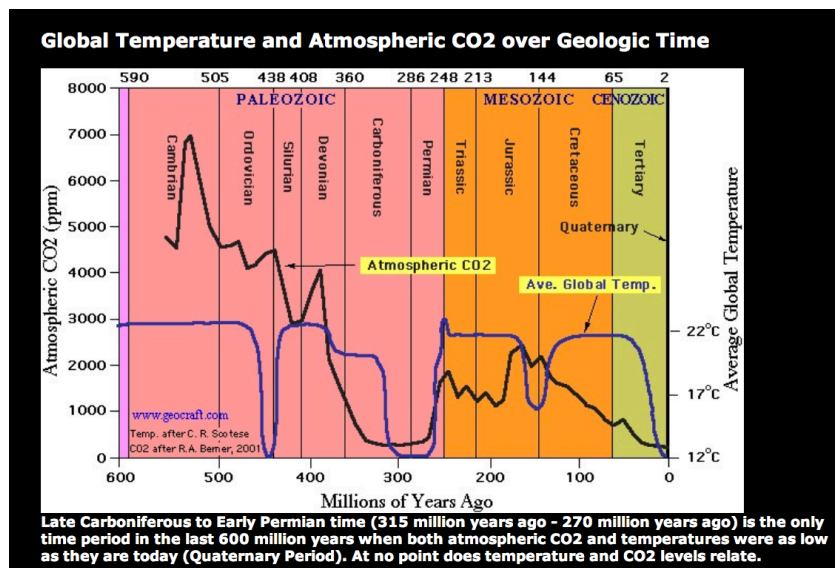
“This change can only develop first with a revolution of our minds.”

“It's not mankind creating climate, it's the sun stupid.”

Professor Varhenholt and his colleague Sebastian Luening have now published a best seller in Germany “Die Kalte Sonne”, the book is soon to be released in English as “The Neglected Sun: Why the Sun Precludes Climate Catastrophe”²⁹.

The significance of Carbon Dioxide CO₂

All plant life and thus the whole biosphere is dependent on atmospheric CO₂. At 400 ppm^v CO₂ is still a trace gas, which is at a comparatively low concentration when compared with the geological past. Plants evolved at times when the CO₂ levels were much higher. Increased levels of CO₂ markedly improve plant growth and reduce their water requirements for transpiration as plants need fewer and smaller, water releasing, stomata to ingest their essential CO₂.



Plants are stressed by low CO₂ levels and cannot survive at levels of less than ~200 ppm^v. It is estimated that the CO₂ increases since 1850 are already to have enhanced all planetary plant growth and greening of deserts by ~15%³⁰. Horticulturalists deliberately add extra CO₂ to their greenhouses up to a level of some 1200 ppm^v to enhance plant growth and fertility. In the past the world has seen much higher CO₂ levels that were not necessarily associated with higher temperatures.

Presently CO₂ is at a remarkably low level when compared with past levels when life thrived on planet earth. If plants could vote they would want at least 1,500ppm^v. Whatever politicians and Global Warming advocates may think, CO₂ is “clean”, essential to life and is not “pollutant”.

Nor is it evident that renewable energy technologies are necessarily “clean”, non pollutant and produce less CO₂ for the equivalent energy output when examined in the round³¹, compared to fossil fuel use, as opposed to taking the simplistic view that the fuel itself is for free.

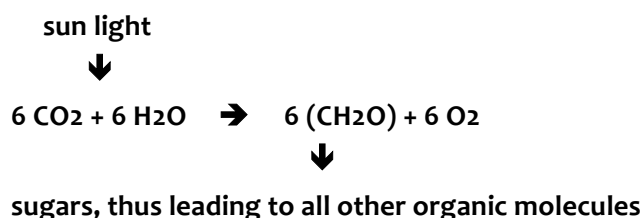
CO₂ is an essential plant food and is thus fundamental for all life on the planet.

That is the real stuff of life. Global warming advocates who negate that also negate the ability of all the world’s biosphere to exist on planet earth.

Photosynthesis in plants consists of a series of chemical reactions that use carbon dioxide (CO₂) and water (H₂O), catalysed by chlorophyll, that as a result stores the sun’s output as chemical energy initially in the form of sugars.

This chemical reaction then leads onto all the other organic compounds within the biosphere. The process is slow and inefficient³² plants absorbing and converting only about 1/2% to 1/4% of the energy falling on their leaves. Fossil fuel have taken that inefficient process and concentrated the stored energy over the long term for many millions of years.

Oxygen (O₂) is a by-product of photosynthesis and is released into the atmosphere. The following equation summarizes photosynthesis:



Cyanobacteria started producing oxygen 2,700 million years ago, so the amazing, almost miraculous, photosynthetic process has been working for half of the time that Earth has existed. Land plants have only existed for about 475 million years, and their successors the vascular plants able to reach up towards the sunlight for some 425 million years.

But it is as if many western politicians, much of the scientific establishment, and all Green Global Warming advocates have all collectively and conveniently forgotten all their elementary school biology about photosynthesis and the carbon cycle. As a result of the failure to appreciate the elementary biology, the Western world has been forced into a massive guilt trip with endless predictions of impending global catastrophes from the over production of CO₂ by mankind.

But in reality any added CO₂ is useful and essential food for plants.

Mankind's use of fossil fuels simply releases the very diffuse and intermittent energy from sunlight converted by plants, that has been concentrated and stored by earlier geologic processes over many millions of years. And its release back into the biosphere now is to the benefit of all plant life.

As an aside this means that Carbon Capture and Storage, CCS, is a physically difficult and very costly way to try to throw away comparatively miniscule quantities of useful plant food.

Global Warming Advocates only ever emphasise the catastrophe that awaits the world in the future as a result of Man-made Global warming. The obverse is likely to be true. Increased levels of CO₂ and a rather warmer climate within natural limits can bring real benefits to mankind. The world could well survive having additional areas available for viable, well fertilised, agriculture.

Instead it is likely that any current global warming is a natural process, is within normal limits and is probably beneficial to Mankind even up to a level of about an additional +2.0°C. Sadly warming may be not now even be occurring at all in the coming century.

The probability is that any current global warming is not man-made and in any case it could be not be influenced by any remedial action, however drastic, taken by a minority of nations. That prospect should be greeted with **unmitigated joy**.

If it is so:

- all concern over CO₂ as a man-made pollutant can be entirely discounted.
- it is not essential to disrupt the Western world's economy to no purpose.
- the cost to the European economy alone is considered to be ~ £175 billion per annum till the end of the century, not including the diversion of employment and industries to elsewhere. This deliberate self harm and these vast resources could be spent for much more worthwhile endeavours.
- if warming were happening it would lead to a more benign and healthy climate for mankind.
- any extra CO₂ has already increased the fertility of all plant life on the planet.
- if warming is occurring at all, a warmer climate within natural variation would provide a future of greater opportunity and prosperity for human development, especially so for the third world.

As global temperatures have already been showing cooling³³ over at least the last fifteen years or more, the world should fear the real and detrimental effects of global cooling³⁴ rather than being hysterical about limited or now non-existent warming^{35 36}. The concern that cooling should engender was evidenced as an agenda item at the Bilderberg meeting in September 2010³⁷. It appears that the global elite is perfectly well aware that global cooling represents a far more serious and imminent threat to the world than global warming, but is so far unwilling to admit it except behind closed doors.

It remains absolutely clear that our planet is vastly damaged by many human activities such as:

- toxic environmental pollution. (whatever is asserted CO₂ is neither toxic nor a pollutant).
- over fishing.
- rain forest clearance, especially for the production of biofuels³⁸.
- biosphere destructive industrial farming at all levels.
- wild habitat destruction throughout the biosphere.
- many green and renewable energy activities actually detrimental to the environment.
- etc.

The world should indeed be strenuously finding ways to improve these situations. But the unwarranted concentration on reducing CO₂ emissions has deflected even well-meaning green activists from these more immediate and more worthwhile objectives.

The influence of Carbon Dioxide CO₂ on temperature

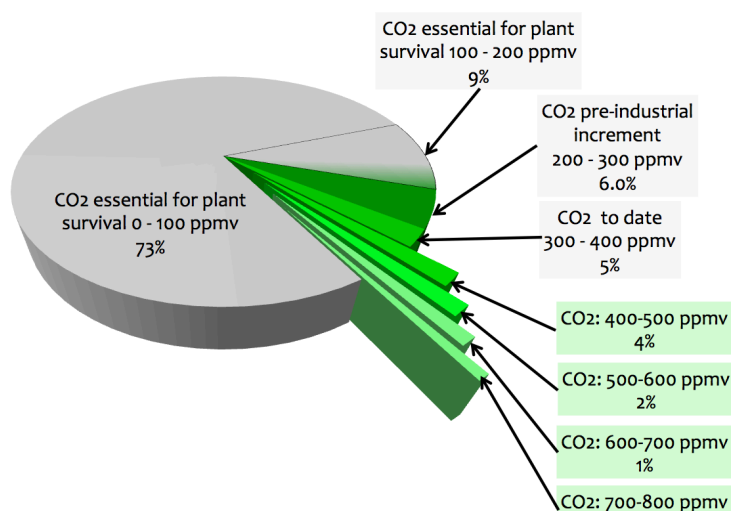
The temperature increasing capacity of atmospheric CO₂ is known to diminish as concentrations increase. This diminution effect is probably the reason why there was no runaway greenhouse warming caused by CO₂ in earlier eons when CO₂ levels were known to be at levels of several thousands ppm^v.

Both sceptics and Global Warming advocates agree on this. IPCC Published reports, (TAR3), acknowledge that the effective temperature increase caused by growing concentrations of CO₂ in the atmosphere radically diminishes with increasing concentrations. This information has been in the IPCC reports. It is well disguised for any lay reader, (Chapter 6. Radiative Forcing of Climate Change: section 6.3.4 Total Well-Mixed Greenhouse Gas Forcing Estimate)³⁹.

Up to 200 ppm^v, the equivalent to about 82% of the temperature increasing effectiveness of CO₂, is essential to maintain plant life and thus all life on earth. The current level of ~400 ppm^v is already committed and immutable. At that level it amounts to ~93% of the potential warming effect of CO₂ in the atmosphere .

Thus only ~7% of the effectiveness of CO₂ as a warming greenhouse gas now remains.

Proportions of the Greenhouse Temperature Effect attributable to increasing concentrations of CO₂ in measured tranches of 100ppm^v



Thus there can only ever be a minor temperature reduction impact of any de-carbonization policy, controlling CO₂ emissions. Whatever political efforts are made to de-carbonize free world economies or to reduce man-made CO₂ emissions, (and to be effective at temperature control those efforts would have to be universal and worldwide), those efforts can only now affect at most ~7% of the future warming effect of CO₂.

The rapid diminution effect is an inconvenient fact for Global Warming advocates, nonetheless it is well understood within the climate science community but it is certainly not much discussed.

So more CO₂ in the atmosphere cannot inevitably lead directly to much more warming. And increased CO₂ levels in the atmosphere cannot give rise to any dangerous temperature increase.

Thus de-carbonization policies could never have useful impact to realistically control any rising world temperatures and the future world climate. As the future temperature effect of increasing CO₂ emissions is now so minor, therefore there is no possibility of ever reaching the political target of less than +2.0°C by the control of CO₂ emissions.

Both CO₂ sceptics and Global Warming advocates agree that CO₂ is a greenhouse gas and does increase temperature: the question between them is one of degree. The table below sets out the scale of those differing views. Sceptics analyse the remaining CO₂ impact to be about 0.15°C, whereas Global Warming advocates estimate it at about 1.19°C, accounting for the logarithmic diminution.

	Sceptic views Plimer et al	IPCC Kondratjew
CO ₂ 0 - 100 ppm ^v	2.22°C	5.93°C
CO ₂ 100 - 200 ppm ^v	0.29°C	0.89°C
CO ₂ essential for plant survival ~200 ppm ^v	2.50°C	6.82°C
CO ₂ preindustrial increment ~+100 ppm ^v	0.14°C	0.44°C
Total pre-industrial effect of CO ₂	2.65°C	7.27°C
IPCC 100% extra man-made CO ₂ to date: ~+100ppm ^v	0.06°C	0.45°C
Remaining available influence of CO ₂ : 400-1000 ppm ^v	0.15°C	1.19°C
Total warming effect of CO ₂ by 1000 ppm ^v	2.86°C	8.90°C
Other GHGs including Methane CDIAC estimate	0.41°C	0.41°C
Residue assigned to Water Vapor and Clouds	29.73°C	23.69°C
	90%	72%

What is clear from this is that there is a large differential between views of the amount of warming that can result from additional CO₂ in future.

The concomitant effect of that is the amount of residual warming up to the total ~33°C that is attributable the water vapour and clouds in the atmosphere. The range discussed can be from ~95% (5% for greenhouse gasses⁴⁰) to ~70% (30% for greenhouse gasses⁴¹).

It is questionable whether it is plausible that marginal changes to the concentration of a minor trace gas at ~400 parts/million (400/1,000,000) by volume of the atmosphere could affect such radical temperature increases when compared to the greenhouse effect of water vapour in the atmosphere.

In addition the Global Warming advocates assume that all increases to CO₂ concentration are due solely to man-made additions. This is not necessarily the case, as the biosphere and slightly warmer oceans will outgas CO₂ and the Man-made contribution is only a minor part of that CO₂ transport within the biosphere, possibly as small as 3% of the total⁴².

De-carbonisation context and consequences

The efforts of western nations with their decarbonisation policies should be seen in the following context:

- the changing global temperature patterns, the current standstill and impending cooling.
- the rapidly growing CO₂ emissions from the bulk of the world's nations as they continue their development.
- the diminishing impact of any extra CO₂ emissions on any temperature increase.

To understand what might be achieved by any political action for de-carbonization by Western economies, the table below gives the likely range of warming, (without feedbacks), that might be averted with an increase of CO₂ from 400 ppm^v to 800 ppm^v, assuming that the amount of CO₂ released by each of the world's nations or nation groups in future is reduced by 50%.

Efforts by participating nations to reduce temperature by de-carbonization should be seen in context:

- normal daily temperature variations at any a single location range from 10°C to 20°C.
- normal annual variations value can be as much as 40°C to 50°C.
- participating Europe as a whole only accounts for about 12% of world CO₂ emissions.
- the UK itself is now only about 1.5% of world CO₂ emissions.

temperature effect comparison basis		sceptic	IPCC	
residual available CO ₂ warming effect 400 - 800 ppm ^y		0.15°C	1.19°C	
		50% CO ₂ emission reduction up to 800 ppm ^y		
CO ₂ emissions 2012 000,000 tonnes	2012 percentage	sceptic <i>Plimer et al</i>	IPCC <i>Kondratjew</i>	
USA	5,786	16.8%	0.013°C	0.100°C
JP RU CA	4,611	13.4%	0.010°C	0.080°C
KR IR ZA MX SA BR ID TW	4,252	12.3%	0.009°C	0.073°C
China HK	9,299	27.0%	0.020°C	0.161°C
India	1,823	5.3%	0.004°C	0.031°C
Rest of World (~160 Nations)	4,718	13.7%	0.010°C	0.081°C
EU (27)	3,978	11.5%	0.009°C	0.069°C
Germany	815	2.4%	0.002°C	0.014°C
UK	530	1.5%	0.001°C	0.009°C
France	383	1.1%	0.001°C	0.007°C
Rest of EU	2,249	6.5%	0.005°C	0.039°C
World Total ^r	34,466	100.0%	0.075°C	0.595°C

The result shows a range of only a matter of a few thousandths to a few hundredths of a degree Centigrade.

As the margin of error for temperature measurements is about 1.0°C, the miniscule temperature effects shown above arise from the extreme economic efforts of those participating nations attempting to control their CO₂ emissions.

But the outcomes in terms of controlling temperature can only ever be marginal, immeasurable and thus irrelevant.

So it is clear that all the minor but extremely expensive attempts by the few convinced Western nations at the limitation of their own CO₂ emissions will be inconsequential and futile.

Their actions alone, whatever the costs they incurred to themselves, might only ever effect virtually undetectable reductions of World temperature.

The participating Western Nations have isolated themselves on the basis that it is their duty to set an example for the rest of the world. This is in the expectation that other, particularly developing, nations will follow them down the same costly course of action. But regrettably for all those committed Nations and for all the efforts of the IPCC over the last 30 years, the rest of the world is neither listening nor is it going to be joining-in.

The use of fossil fuel based energy is the only available development route for the remainder of the developing and underdeveloped world.

The IPCC acknowledges that the diminution effect with increasing CO₂ concentrations exists, but it does not explain its consequences. Like the Medieval Warm Period, that the IPCC attempted to eliminate with the Hockey Stick graph in 2001, but has now recognised as being real, the IPCC knows that wide public knowledge of the diminution effect with increasing CO₂ concentration would be entirely detrimental to their primary message.

“Man-made CO₂ emissions are the cause of global warming or now climate change”.

The IPCC certainly does not explain the devastating consequences outlined here for the Catastrophic Anthropogenic Global Warming assertion in their Summary for Policy Makers.

The IPCC is misleading in its central claim for Policy Makers, as they say, now apparently with 95% confidence:

“Warming of the climate system is unequivocal. Most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations.”

Any unquestioning, policy making reader is thus lead to assume that all increasing Man-made CO₂ concentrations are progressively more harmful because of their escalating Greenhouse impact.

In addition Global Warming advocates only ever propose solutions for the control of Global Warming, (overheating), by reducing CO₂ emissions. However at present the climate appears to be changing, (as it continues to do naturally), to a colder phase, probably because of reducing solar activity and changes of ocean circulation patterns.

Catastrophic Anthropogenic Global Warming advocates fail to explain how reduction of man-made atmospheric CO₂ can ever can help to control Climate Change towards a cooling world.

Having made so many dire predictions of the impending adverse climate catastrophes from overheating, Global Warming / Climate Change advocates fail to accept that a climate change towards a cooler climate is more likely to lead to more intense adverse weather⁴³. However there is good reason to expect this, simply because the energy differential between the poles and the tropics is bound to be greater and that in itself leads to less stable atmospheric conditions.

It has been shown in the past that the warmer climate in the Roman and Medieval warm periods, now once again recognised by the IPCC, was more conducive to the wellbeing of the biosphere and of man-kind. If it were to get somewhat warmer, the world could well adapt to having larger areas for a more productive agriculture, better fertilised by CO₂.

The Intergovernmental Panel on Climate Change, IPCC, stated in September 2013 that they have radically overestimated the impact of CO₂ on world temperatures by at least twofold^{44 45}. It is also clear that any temperature rise below 2.0°C would have a net benefit both for the biosphere and for mankind⁴⁶.

It is now estimated that Climate Change policies in Europe alone will cost ~ £174,000,000,000 annually in 2020 or about 1.5% of European GDP⁴⁷. But this figure does not include the attendant losses to Europe of industries already leaving the EU for regions with more rational energy policies.

And these are expenditures which may well be trying to combat a problem that does not exist, but current governments do not want to hear that good news⁴⁸, from Hansard, UK Parliament, 10/11/2013.

Steve Baker: "We have agreed here that science proceeds by conjecture and refutation, so in an attempt not to have a cloying consensus, will the Minister fund some climate scientists who wish to refute the current thesis?"

Gregory Barker, The Minister of State, Department of Energy and Climate Change: "I am afraid that I do not have a budget for that sort of research."

And to a recent quote Douglas Carswell MP⁴⁹

"We're spending money that we don't have to solve a problem that doesn't exist at the behest of people we didn't elect."

On the other hand, a cooling world as both Hemispheres have seen in the years since 2000 leads to much more dire consequences for the biosphere and mankind than any realistic amount of warming that could arise from man-made CO₂ emissions. Cold is a much greater threat than any moderate amount of additional warmth that would result from the release of Man-made CO₂. National policy makers and the United Nations are neither recognizing nor are they preparing for the eventuality.

With a quietening sun, changing ocean circulation patterns and the growing evidence of much colder winter weather in both Hemispheres, that cooling could already be upon us⁵⁰.

The cooling climate could well last for many decades or even centuries.

- 1 http://icecap.us/images/uploads/Probability_of_Sudden_Global_Cooling.pdf
- 2 Petit, J.R., et al., 2001. Vostok Ice Core Data for 420,000 Years. IGBP PAGES/World Data Center for Paleoclimatology Data Contribution Series #2001-076. NOAA/NGDC Paleoclimatology Program, Boulder CO, USA.
- 3 <http://www.ncdc.noaa.gov/paleo/icecore/greenland/greenland.html>
- 4 see: <http://theinconvenientskeptic.com/chapters-8-10/>
- 5 <http://www.metoffice.gov.uk/hadobs/hadcet/data/download.html>
- 6 <http://www.project-syndicate.org/commentary/realism-in-the-latest-ipcc-climate-report-by-bj-rn-lomborg>
- 7 <http://www.irishtimes.com/sun-s-bizarre-activity-may-trigger-another-ice-age-1.1460937>
- 8 <http://wattsupwiththat.com/2012/03/02/the-sun-is-still-in-a-funk-sunspot-numbers-are-dropping-when-they-should-be-rising/>
- 9 <http://wattsupwiththat.com/2013/12/02/study-predicts-the-sun-is-headed-for-a-dalton-like-solar-minimum-around-2050/>
- 10 <http://informthepundits.wordpress.com/2013/07/09/sunspot-double-peak-over/>
- 11 <http://www.metoffice.gov.uk/hadobs/hadcet/data/download.html>
- 12 <http://notrickszone.com/2013/08/01/germanys-mean-temperature-anomaly-for-2013-still-well-below-normal-despite-heat-wave-hysteria/>
- 13 http://www.americanthinker.com/2013/07/sunspots_and_the_great_cooling_ahead.html
- 14 <http://uk.reuters.com/article/2013/07/17/uk-china-wheat-idUKBRE96G00020130717>
- 15 http://www.climate-science-america.org/index.php?option=com_content&view=article&id=55:cern-cloud-experiment-confirms-solar-influence-on-climate
- 16 <http://www.bp.com/sectiongenericarticle800.do?categoryId=9037130&contentId=7068669>
- 17 <http://www.guardian.co.uk/news/datablog/2011/jan/31/world-carbon-dioxide-emissions-country-data-co2#data>
- 18 <https://spreadsheets.google.com/ccc?key=0AonYZs4MzIzbdFF1QWooCKYzOGoyWkZqcUhnNDVSWc&hl=en#gid=1>
- 19 http://english.ruvr.ru/2012_12_31/Russia-wont-renew-Kyoto-Protocol/
- 20 <http://www.torontosun.com/2012/12/31/kyoto-good-as-dead-and-harper-was-right-to-kill-it>
- 21 <http://www.pbl.nl/en/news/pressreleases/2011/steep-increase-in-global-co2-emissions-despite-reductions-by-industrialised-countries>
- 22 <http://www.c3headlines.com/2013/07/a-fracking-revolution-us-now-leads-world-in-co2-emission-reductions-.html>
- 23 http://www.slate.com/articles/health_and_science/project_syndicate/2012/09/thanks_to_fracking_u_s_carbon_emissions_are_at_the_lowest_levels_in_20_years_.html
- 24 http://articles.timesofindia.indiatimes.com/2011-06-10/global-warming/29642669_1_kyoto-protocol-second-commitment-period-
- 25 <http://www.youtube.com/watch?v=U5m6KzDnv7k>
- 26 <http://www.thegwpf.org/vahrenholt-lecture/>
- 27 <http://kaltesonne.de/wp-content/uploads/2012/09/vahrenholt-2012-annual-gwpf-lecture.pdf>
- 28 <http://www.lomborg.com/content/2013-03-germany-pays-billions-delay-global-warming-37-hours>
- 29 <http://notrickszone.com>
- 30 http://www.theregister.co.uk/2013/07/11/co2_greens_the_deserts/
- 31 <http://junkscience.com/2013/11/12/ethanol-is-stupid-really-stupid-ask-sel-graham/>
- 32 http://en.wikipedia.org/wiki/Photosynthetic_efficiency
- 33 <http://www.spectator.co.uk/melaniephillips/3436241/the-inescapable-apocalypse-has-been-seriously-underestimated.shtml>
- 34 http://www.iceagenow.com/Triple_Crown_of_global_cooling.htm
- 35 <http://notrickszone.com/2010/12/28/global-cooling-consensus-is-heating-up-cooling-over-the-next-1-to-3-decades/>
- 36 http://www.iceagenow.com/New_Little_Ice_Age_to_Begin_in_2014.htm
- 37 <http://wattsupwiththat.com/2010/09/26/bilderberg-group-discusses-global-cooling-at-2010-meeting/>
- 38 <http://www.masterresource.org/2010/09/wind-ethanol-economic/>
- 39 http://www.grida.no/publications/other/ipcc%5Ftar/?src=/climate/ipcc_tar/wg1/222.htm
- 40 http://www.geocraft.com/WVFossils/greenhouse_data.html
- 41 http://pubs.giss.nasa.gov/docs/2010/2010_Schmidt_etal_1.pdf
- 42 http://www.geocraft.com/WVFossils/greenhouse_data.html
- 43 <http://climatesense-norpag.blogspot.fr/2013/06/oklahoma-tornadoes-and-sandy-type.html#comment-form>
- 44 <http://www.dailymail.co.uk/news/article-2420783/Global-warming-just-HALF-said-Worlds-climate-scientists-admit-computers-got-effects-greenhouse-gases-wrong.html>
- 45 <http://www.telegraph.co.uk/earth/environment/climatechange/10310712/Top-climate-scientists-admit-global-warming-forecasts-were-wrong.html>
- 46 <http://www.spectator.co.uk/features/9057151/carry-on-warming/>
- 47 <http://www.telegraph.co.uk/earth/environment/climatechange/10313261/EU-policy-on-climate-change-is-right-even-if-science-was-wrong-says-commissioner.html>
- 48 <http://www.publications.parliament.uk/pa/cm201314/cmhansrd/cm130910/halltext/130910h0002.htm>
- 49 <http://www.telegraph.co.uk/earth/environment/climatechange/10469434/Britains-bill-for-climate-aid-rises-to-4.5-billion.html>
- 50 <http://www.dailymail.co.uk/news/article-2415191/Global-cooling-Arctic-ice-caps-grows-60-global-warming-predictions.html>