

# NEW BIOSPHERE AGRICULTURE



# Famine Averted

**Local Farmers  
engaged in  
permaculture**



**PASCAS FOUNDATION (Aust) Ltd  
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**Queensland, Australia**

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## New Biosphere Agriculture Famine Averted

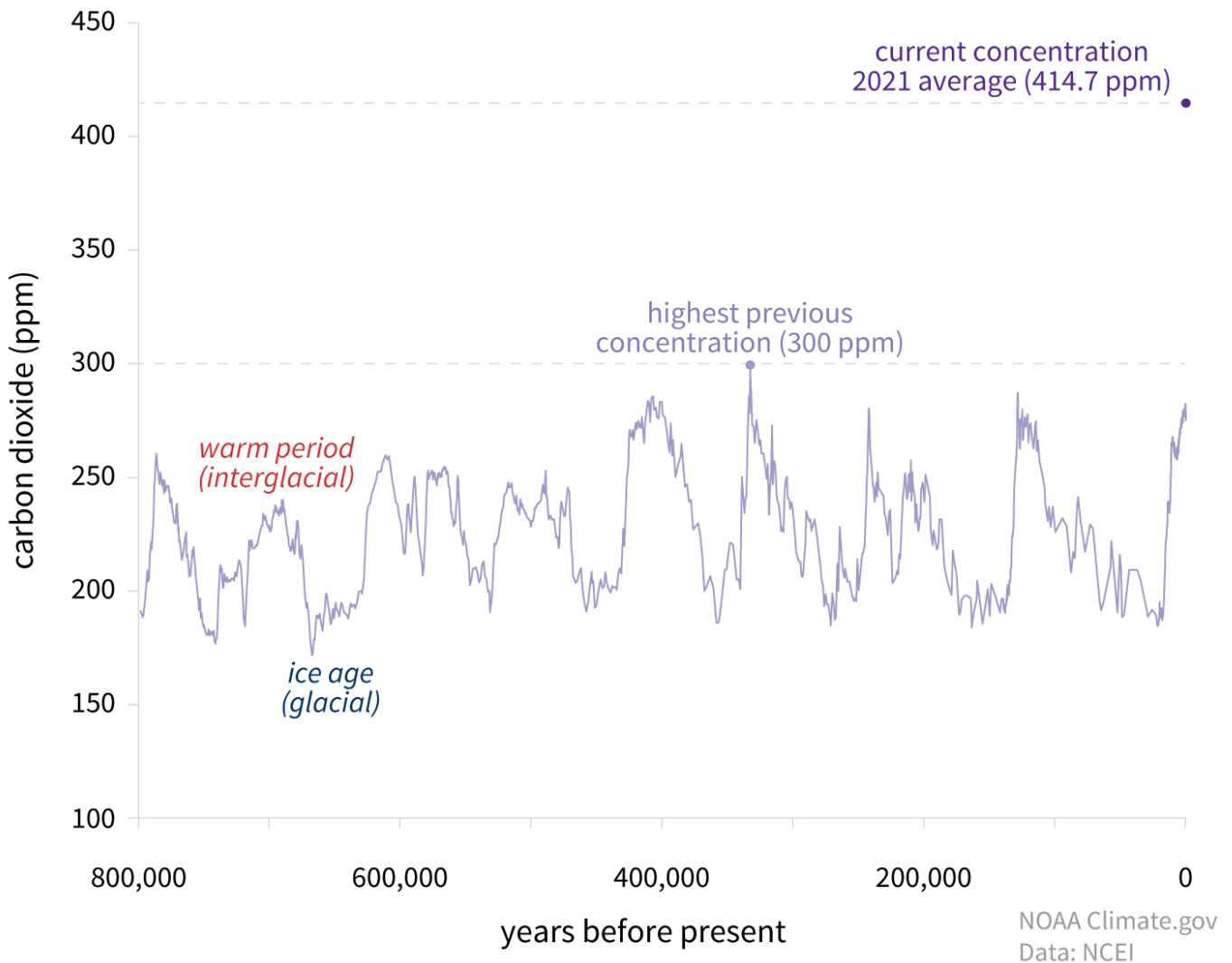
### Past carbon dioxide levels

<https://climate.mit.edu/ask-mit/what-ideal-level-carbon-dioxide-atmosphere-human-life>

<https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide#:~:text=Based%20on%20air%20bubbles%20trapped,was%20280%20ppm%20or%20less.>

Based on air bubbles trapped in mile-thick ice cores and other paleoclimate evidence, we know that during the ice age cycles of the **past million years** or so, atmospheric carbon dioxide never exceeded 300 ppm (0.030%). Before the Industrial Revolution started in the mid-1700s, atmospheric carbon dioxide was 280 ppm (0.028%) or less.

## CARBON DIOXIDE OVER 800,000 YEARS

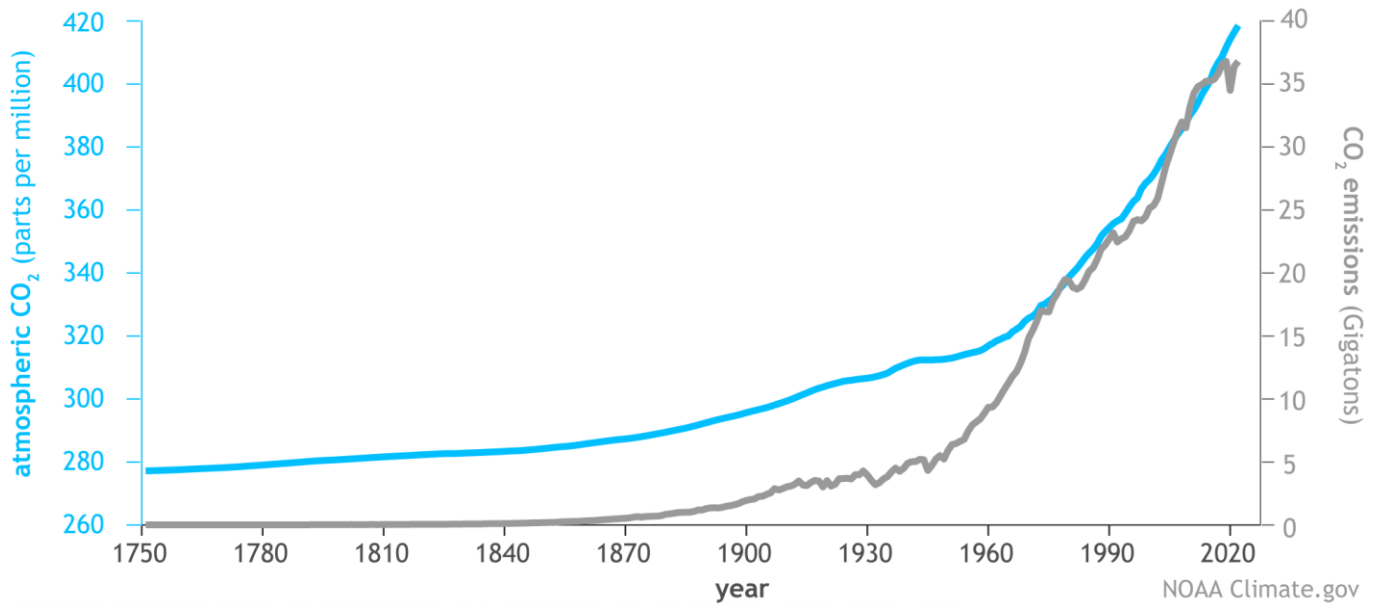


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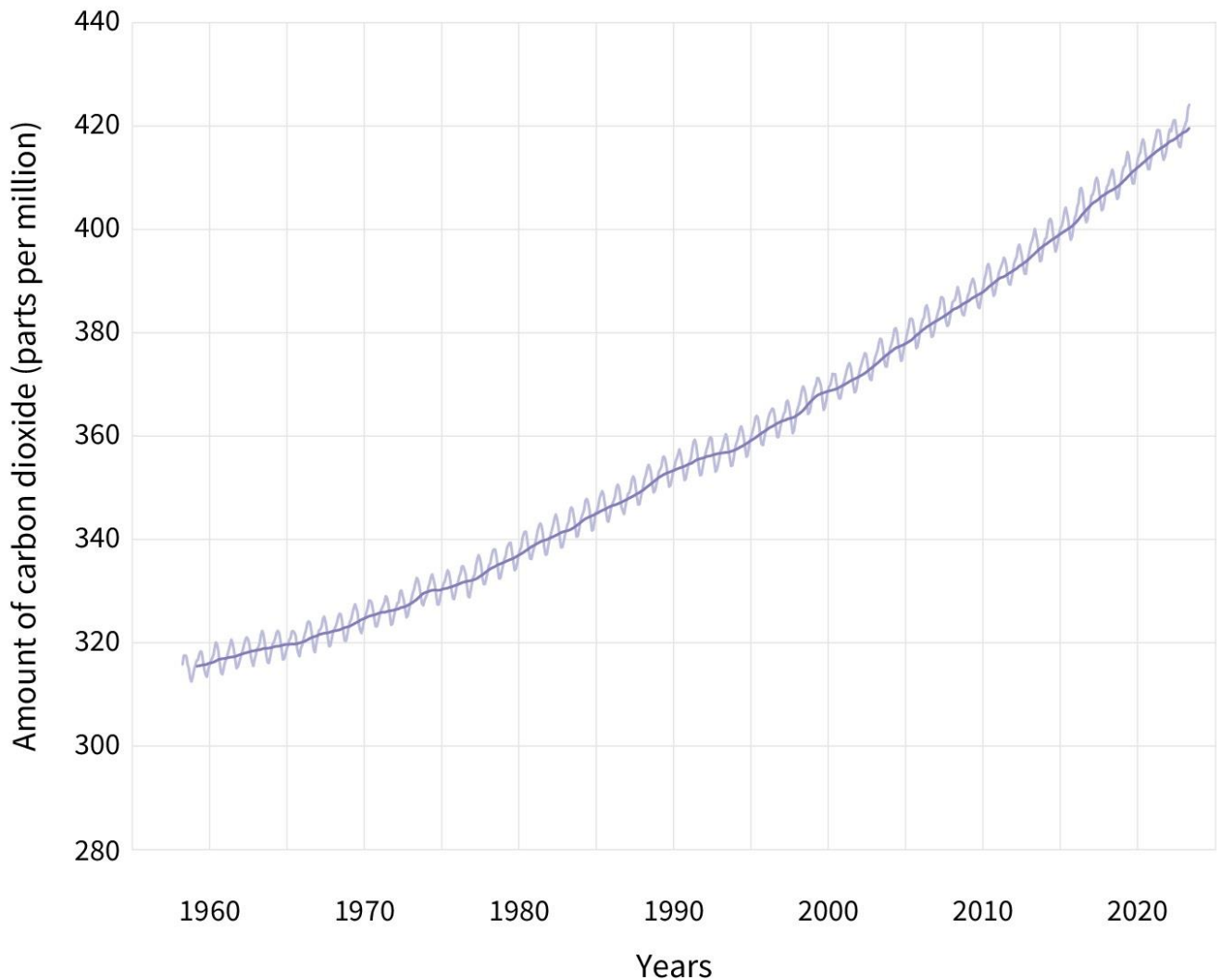
 [Pascas WorldCare Earth Changes Environmental Changes.pdf](#)

<https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide#:~:text=Based%20on%20air%20bubbles%20trapped,was%20280%20ppm%20or%20less.>

Global atmospheric carbon dioxide compared to annual emissions (1751-2022)



## ATMOSPHERIC CARBON DIOXIDE

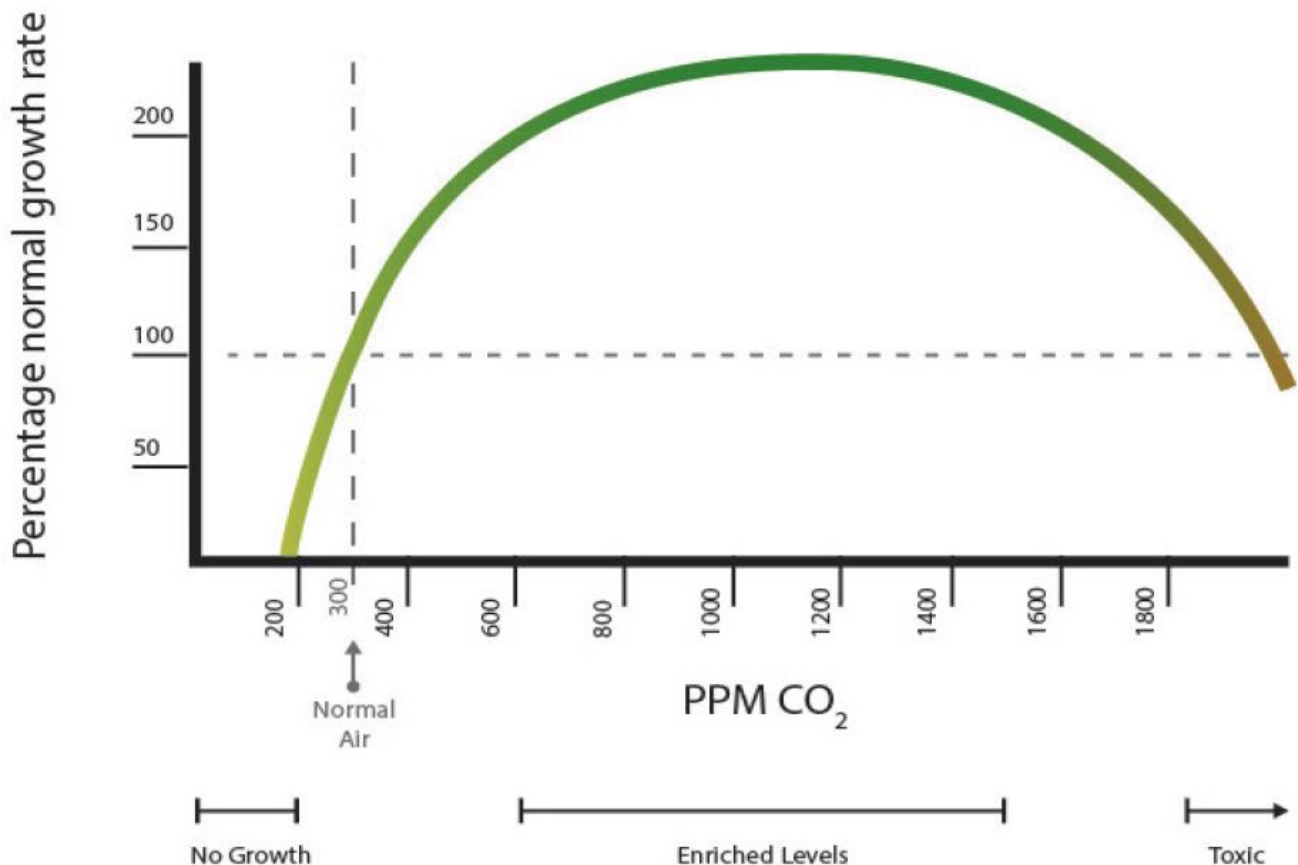


## CO<sup>2</sup> concentration in relation to plants

The level to which the CO<sup>2</sup> concentration should be raised depends on the crop, light intensity, temperature, ventilation, stage of the crop growth and the economics of the crop. For most crops the saturation point will be reached at about 1,000–1,300 ppm (0.10% – 0.13%) under ideal circumstances.

<https://extension.okstate.edu/fact-sheets/greenhouse-carbon-dioxide-supplementation.html>

Photosynthesis utilizes CO<sup>2</sup> in the production of sugar which degrades during respiration and helps in plant's growth. Although atmospheric and environmental conditions like light, water, nutrition, humidity and temperature may affect the rate of CO<sup>2</sup> utilisation, the amount of CO<sup>2</sup> in the atmosphere has a greater influence. Variation in CO<sup>2</sup> concentration depends upon the time of day, season, number of CO<sup>2</sup>-producing industries, composting, combustion and number of CO<sup>2</sup>-absorbing sources like plants and water bodies nearby. The ambient CO<sup>2</sup> (naturally occurring level of CO<sup>2</sup>) concentration of 400 parts per million can occur in a properly vented greenhouse. However, the concentration is much lower than ambient during the day and much higher at night in sealed greenhouses. The carbon dioxide level is higher at night because of plant respiration and microbial activities. The carbon dioxide level may drop to 150 to 200 parts per million during the day in a sealed greenhouse, because CO<sup>2</sup> is utilised by plants for photosynthesis during daytime. Exposure of plants to lower levels of CO<sup>2</sup> even for a short period can reduce rate of photosynthesis and plant growth. Generally, doubling ambient CO<sup>2</sup> level (i.e. 700 to 800 parts per million) can make a significant and visible difference in plant yield. Plants with a C<sub>3</sub> photosynthetic pathway (geranium, petunia, pansy, aster lily and most dicot species) have a 3-carbon compound as the first product in their photosynthetic pathway, thus are called C<sub>3</sub> plants and are more responsive to higher CO<sup>2</sup> concentration than plants having a C<sub>4</sub> pathway (most of the grass species have a 4-carbon compound as the first product in their photosynthetic pathway, thus are called C<sub>4</sub> plants). An increase in ambient CO<sup>2</sup> to 800-1,000 ppm can increase yield of C<sub>3</sub> plants up to 40% to 100% and C<sub>4</sub> plants by 10% to 25% while keeping other inputs at an optimum level. Plants show a positive response up to 700 to need of 1,800 parts per million, but higher levels of CO<sup>2</sup> may cause plant damage (Figure 1).





## What are the Carbon Dioxide (CO<sup>2</sup>) levels in the atmosphere?

It is one of several greenhouse gases in the atmosphere of Earth. The current global average concentration of CO<sup>2</sup> in the atmosphere is (0.042%) 421 ppm as of May 2022. This is an increase of 50% since the start of the Industrial Revolution, up from 280 ppm during the 10,000 years prior to the mid-18th century.

The concentration of carbon dioxide in Earth's atmosphere is currently at nearly 420 parts per million (ppm) and rising. This represents a 50% increase since the beginning of the Industrial Age, when the concentration was near 280 ppm, and a 14% increase since 2000, when it was near 370 ppm.

## What was the highest CO<sup>2</sup> level in the atmosphere before 1960?

CO<sup>2</sup> was at around 320 ppm

Prior to the Industrial Revolution, CO<sup>2</sup> levels were consistently around 280 ppm for almost 6,000 years of human civilization.

Then in the 1950s, a dramatic increase in the burning of fossil fuels — coal to make electricity and steel, oil for vehicles and manufacturing — vastly accelerated the rate of CO<sup>2</sup> being pumped into the atmosphere. But that is only a minor fraction of the injection of CO<sup>2</sup> into the atmosphere. **The vast majority of CO<sup>2</sup> is naturally unfolding as of a consequence to the increased energy having been received from the Sun into the core of Earth commencing from around the 1950s.**

## Climate change targets: 350 ppm and the EU two-degree target

Published 23 Jun 2008 Last modified 21 Jun 2016

The 350 ppm CO<sup>2</sup> target is the focus of an international campaign announced today in several media by the Tällberg Forum. This is the follow-up to the objective proposed by the NASA Chief Scientist James Hansen and his colleagues to limit the concentration of carbon dioxide in the atmosphere to 350 ppm (parts per million). The goal is to avoid global climate change with potentially very large and irreversible effects on human society and the natural environment.

## What is the ideal level of carbon dioxide in the atmosphere for human life?

Atmospheric CO<sup>2</sup> levels of between 280 and 350 parts per million created the climate that let humanity build and feed the modern world. The farther we get from those levels, the more we run the risk of disturbing that balance.

According to NASA, the amount of carbon dioxide (CO<sup>2</sup>) in Earth's atmosphere was about 416 parts per million (ppm) in April 2021.

## What are safe levels of CO<sup>2</sup> and CO<sup>2</sup> in rooms?

250-400ppm CO <sup>2</sup>	Normal background concentration in outdoor ambient air.
400-1,000ppm	Concentrations typical of occupied indoor spaces with good air exchange.
1,000-2,000ppm	Complaints of drowsiness and poor air.
2,000-5,000 ppm	Headaches, sleepiness and stagnant, stale, stuffy air. Poor concentration, loss of attention, increased heart rate and slight nausea may also be present.
5,000	Workplace exposure limit (as 8-hour TWA) in most jurisdictions.

# ATMOSPHERE and CARBON DIOXIDE levels

100.000%

Atmosphere of planet Earth

0.150%

Carbon Dioxide (CO<sup>2</sup>) historically mostly above this level

0.100%

Carbon Dioxide (CO<sup>2</sup>) is a natural plant fertilizer – optimum food supply

0.042%

Carbon Dioxide (CO<sup>2</sup>) level in 2020

0.032%

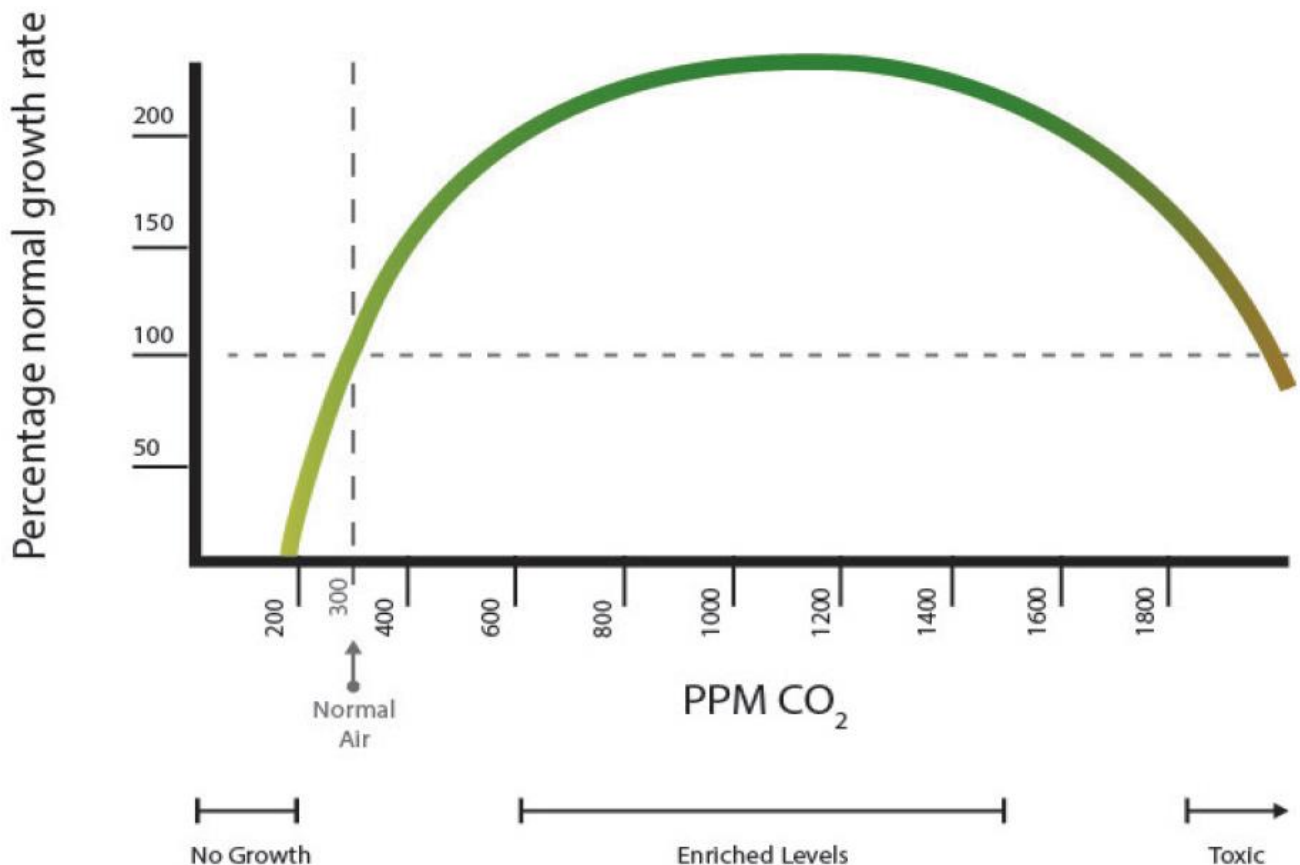
Carbon Dioxide (CO<sup>2</sup>) level in 1960

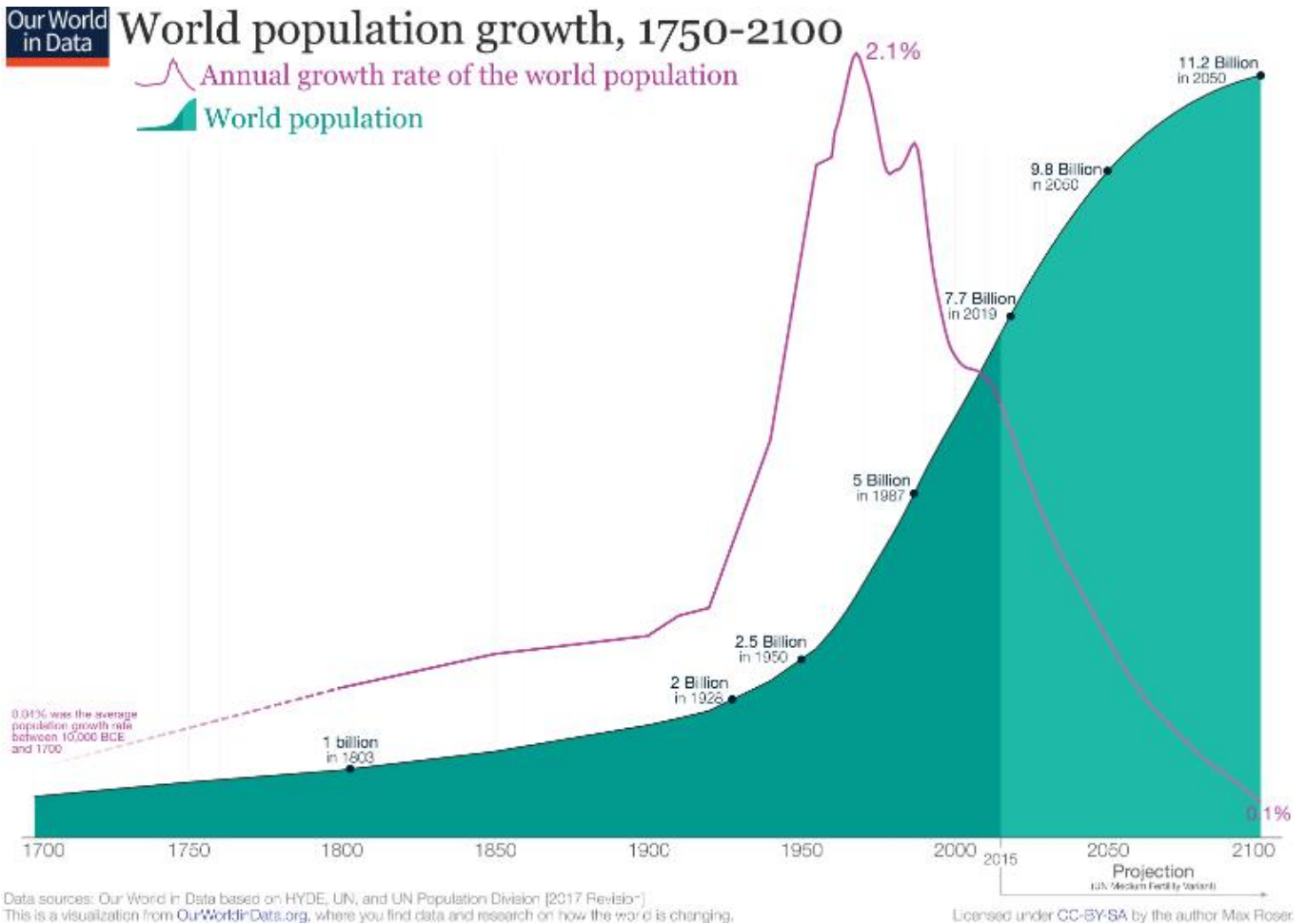
0.025%

At this level of CO<sub>2</sub> plants begin to have difficulty going to seed!

0.018%

At this level we have worldwide famine – time of dinosaur extinction!



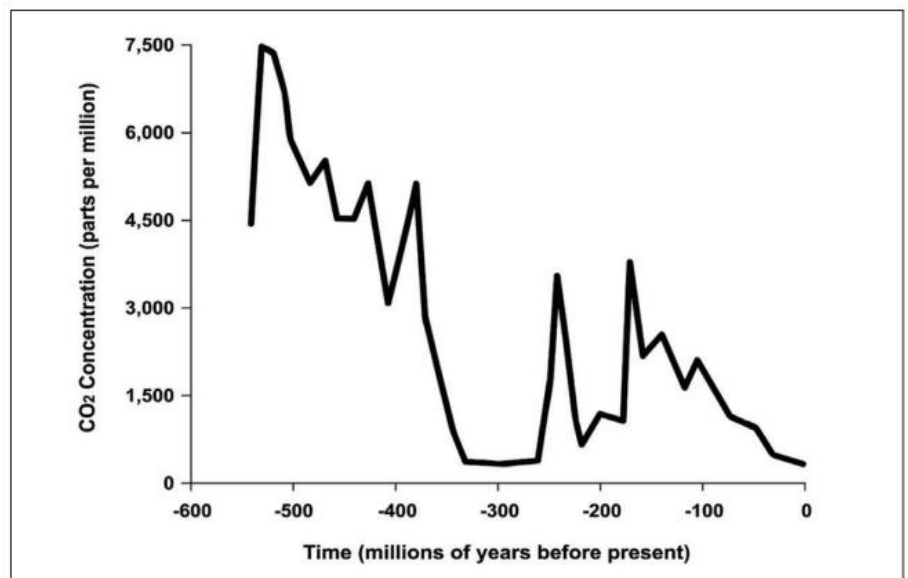


<https://www.commerce.senate.gov/services/files/FC7C4946-11A3-4967-BF28-8D0386608D3E>

That Earth has experienced a CO<sup>2</sup> “famine” for millions of years is also not widely known. As illustrated in Figure 5, in the 550 million years since the Cambrian period—when abundant fossils first appeared in the sedimentary record—CO<sup>2</sup> levels have averaged many thousands of ppm, that is, much larger than the CO<sup>2</sup> level of 400 ppm today.

All animals, including humans, owe their existence to green plants that use energy from sunlight to convert CO<sup>2</sup> and water molecules into carbohydrates, releasing oxygen into the atmosphere in the process. Land plants get the carbon they need from CO<sup>2</sup> in the air, and they obtain other essential nutrients from the soil. Just as plants grow better in fertilized, well-watered soils, they grow better with CO<sup>2</sup> concentrations several times higher than the Earth’s current level. For this reason, additional CO<sup>2</sup> is often pumped into greenhouses to enhance plant growth.

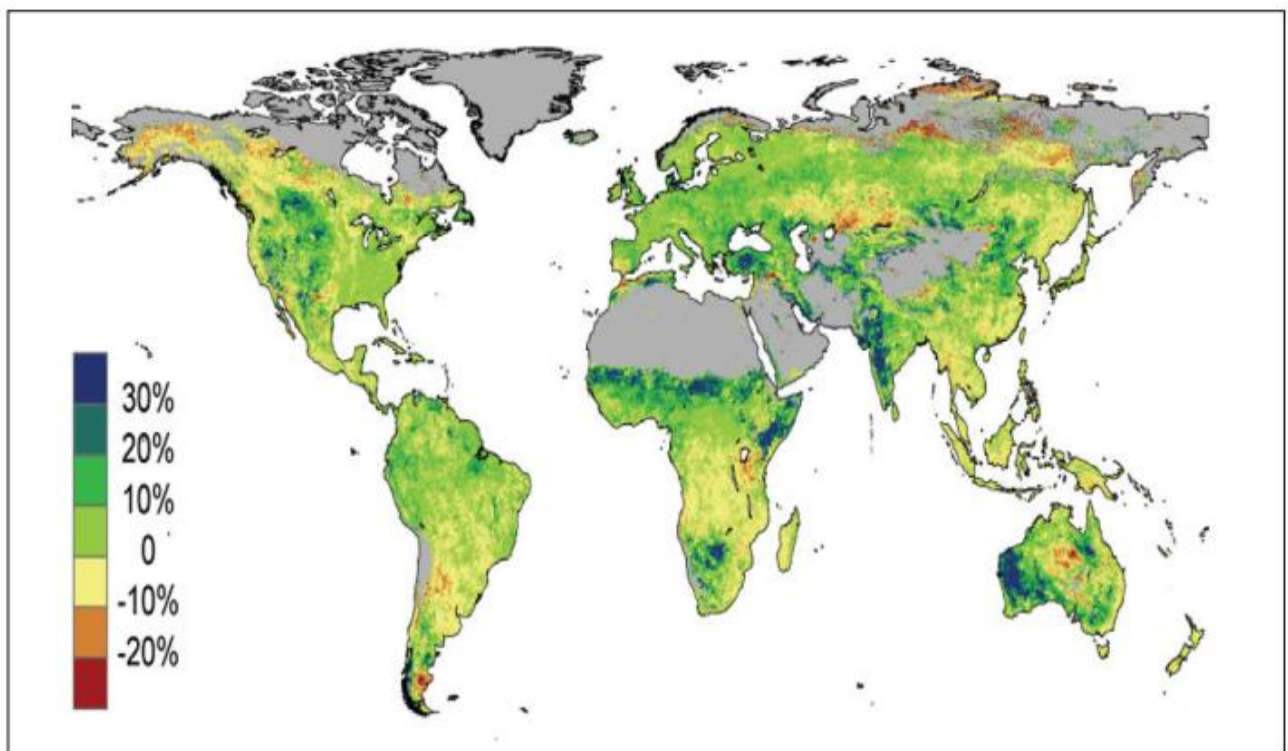
**Figure 5. CO<sub>2</sub> Levels on Earth: A Long View\***



CO<sup>2</sup>'s nutritional value is only part of its benefit for plants. No less important is CO<sup>2</sup>'s contribution to making plants more drought-resistant: plant leaves are perforated by stomata, surface holes that allow CO<sup>2</sup> to diffuse from the atmosphere into the leaf's interior, where they are photosynthesized into carbohydrates. Depending on the relative humidity of the outside air, as many as 100 H<sup>2</sup>O molecules can diffuse out of the leaf for each CO<sup>2</sup> molecule that diffuses in. This is why most land plants need at least 100 grams of water to produce one gram of carbohydrate. The 30% increase in atmospheric CO<sup>2</sup> during the 20th century boosted crop productivity by around 15%. Continued improvements in crop variety, fertilizer, and water management—coupled with higher CO<sup>2</sup> levels—will strengthen food security in large parts of Africa and Asia where hunger remains widespread.

Figure 7 shows how the Earth is getting greener. The study from which the image is drawn analysed plant growth at desert margins and other semi-arid areas and found an 11% percent net growth in foliage ground cover during 1982–2006—growth attributed to improved water-use efficiency arising from higher atmospheric CO<sup>2</sup> levels. The study's authors conclude: "Our results confirm that the anticipated CO<sup>2</sup> fertilization effect is occurring alongside ongoing anthropogenic perturbations to the carbon cycle and that the fertilization effect is now a significant land surface process." As CO<sup>2</sup> levels continue to rise, the Earth will grow greener and agricultural yields will continue to increase, with additional contributions from better varieties, improved cropping practices, more efficient use of fertilizer, and other factors.

**Figure 7. Greening of the Earth, 1982–2006\***



\*Percentage change in foliage cover as revealed by satellite.



## Why are the positive effects of global warming not being mentioned?

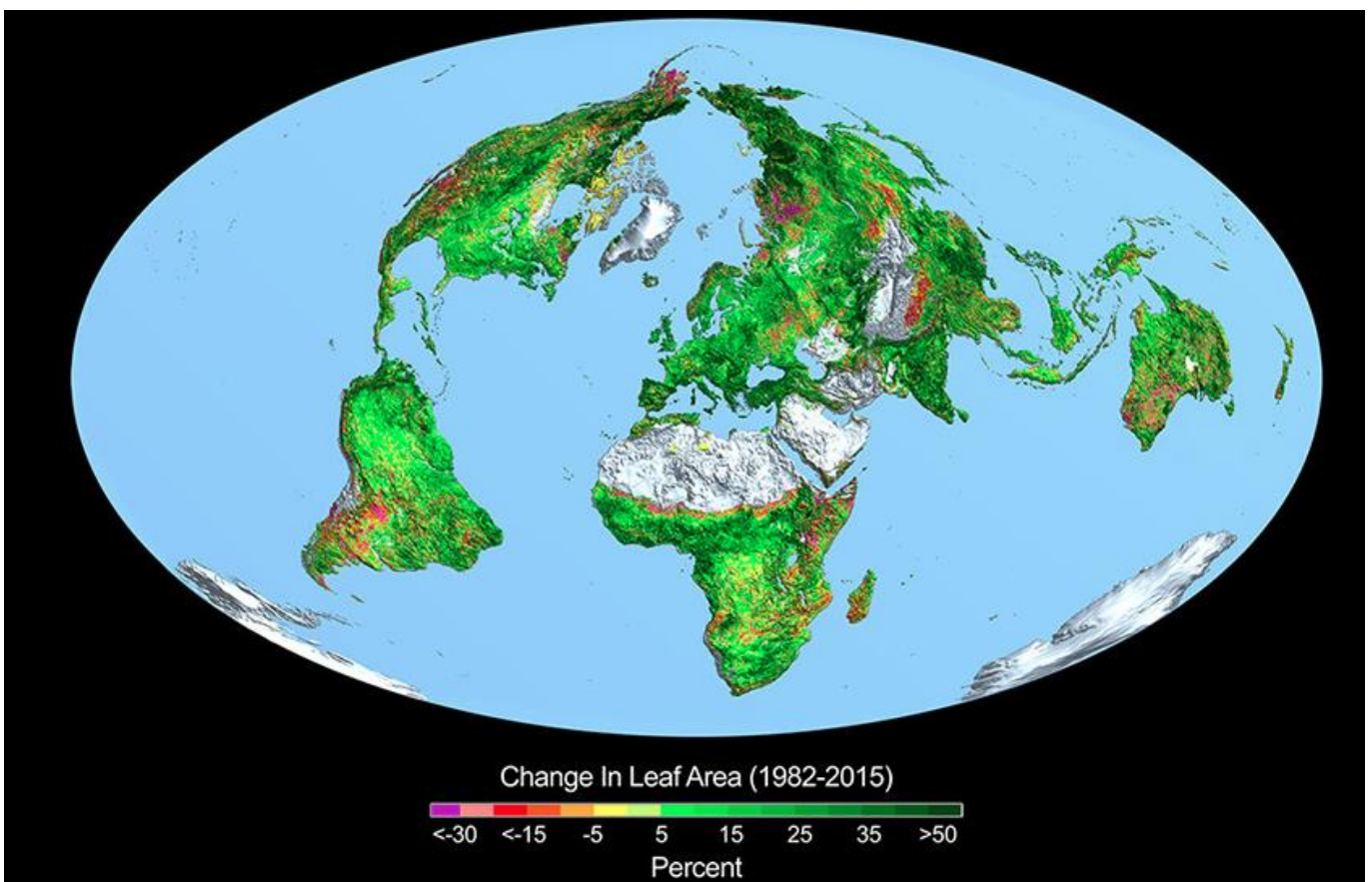
<https://www.quora.com/>

Ken Towe: former Senior Scientist at Smithsonian Institution (1964–1996)

14 June 2023

Since pre-industrial time the small amount of warming that has taken place and the release of CO<sup>2</sup> for our energy needs has combined to turn the Earth greener as seen from NASA satellites. That's a positive for agriculture, especially in the poorer parts of the world. It is rarely mentioned in the media because it doesn't fit the narrative of a catastrophic future unless we remove all of the energy that gets us to zero emissions by 2050.

From a quarter to half of Earth's vegetated lands has shown significant greening over the last 35 years largely due to rising levels of atmospheric carbon dioxide, according to a new study published in the journal *Nature Climate Change* on 25 April 2016. The greening represents an increase in leaves on plants and trees equivalent in area to two times the continental United States. Research results showed that carbon dioxide fertilisation explains 70% of the greening effect



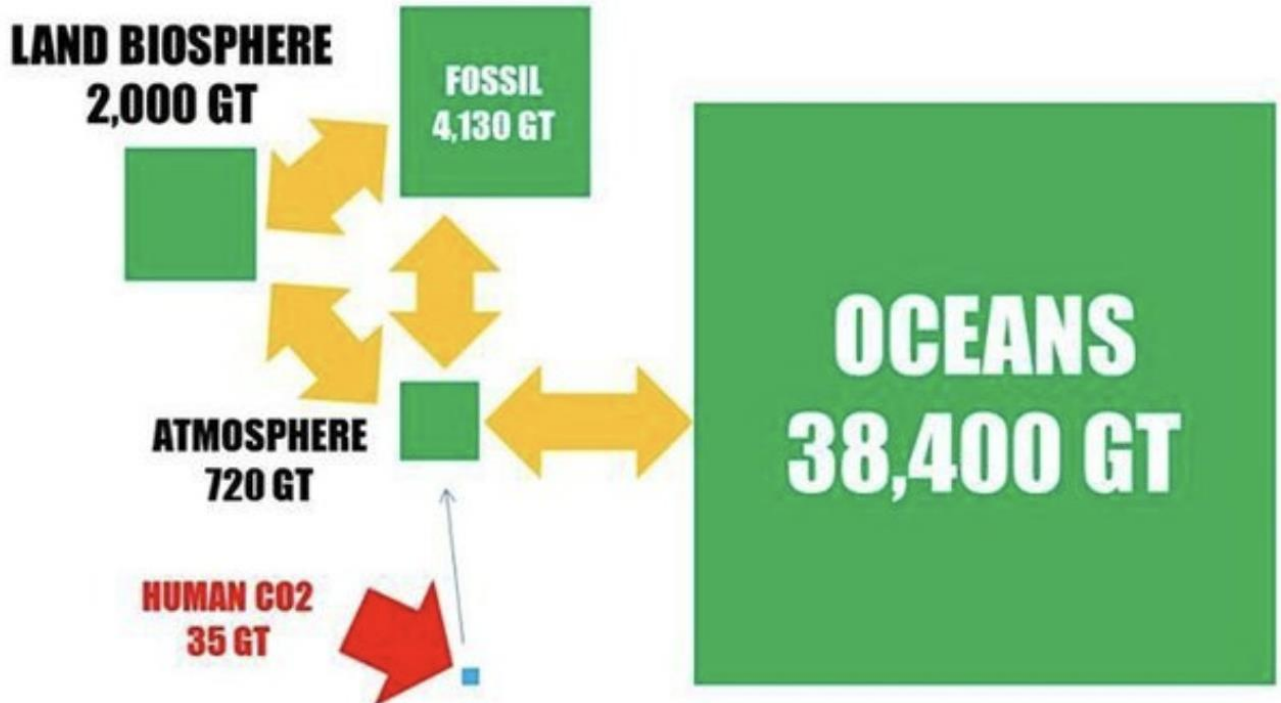
**The increase of CO<sup>2</sup> in the atmosphere from about 320 ppm (0.032%) to 420 ppm (0.042%) has contributed in raising the efficiency of our crops and trees by about 300%. Worldwide famine is avoided! Further, CO<sup>2</sup> does not warm up the Earth, it cools it slightly (increased vegetation). CO<sup>2</sup> is beneficial to life! It is the basis of life. CO<sup>2</sup> is not a contributing to global warming. CO<sup>2</sup> is no danger. Life on Earth has recovered greatly because of our releasing CO<sup>2</sup> into the atmosphere (even if it is only a tiny fraction!).**

**Note: The farming region around West Wyalong, central New South Wales, Australia, was reporting regularly wheat crop yields at 10 bags per acre in the 1960s whereas now in the 2020s the yields are regularly 28 bags per acre! This being equivalent to a very substantial increase. I, John, grew up in this farming district.**

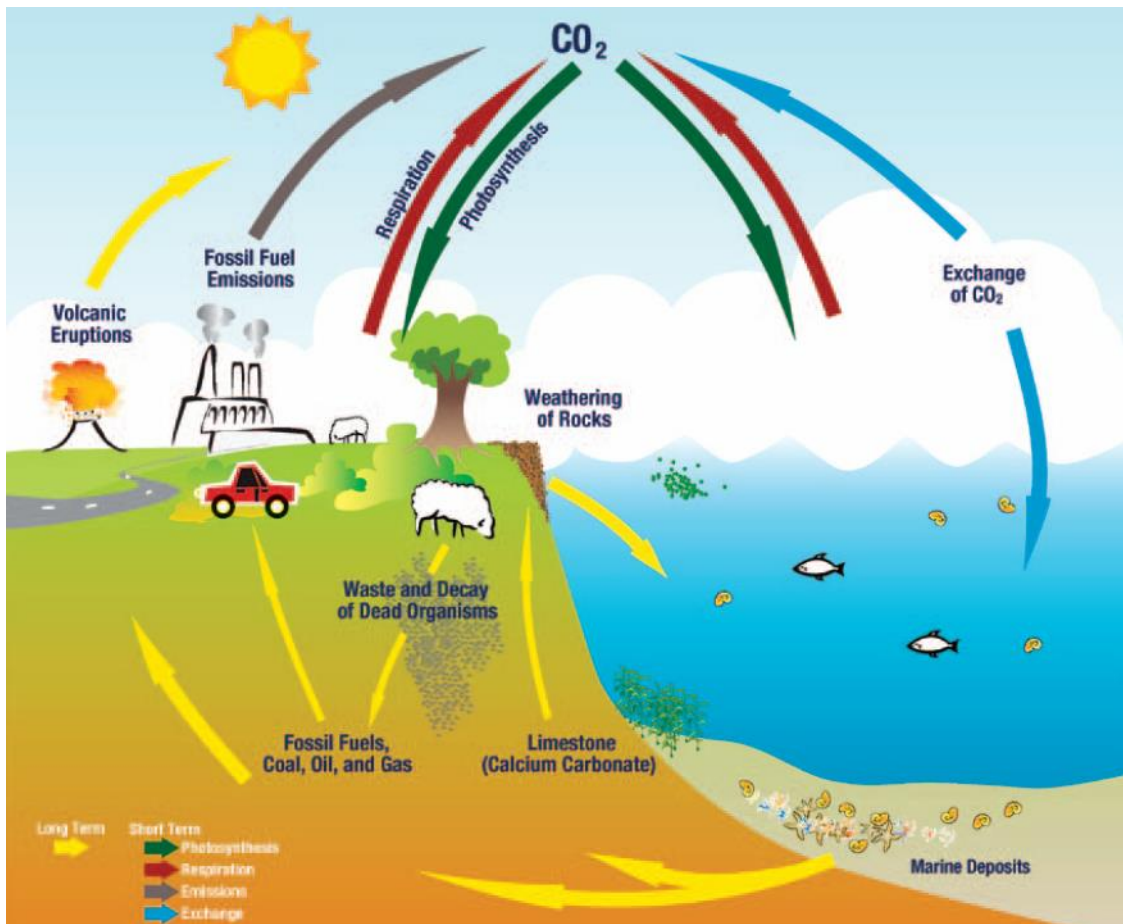


# EARTH'S CARBON CYCLE

GT = GIGATONS OF CARBON



To consider that humanity's carbon footprint is driving climate change is absurd.



## How do human CO<sup>2</sup> emissions compare to natural CO<sup>2</sup> emissions?

<https://skepticalscience.com/human-co2-smaller-than-natural-emissions.htm>

### What the science says...

The natural cycle adds and removes CO<sup>2</sup> to keep a balance; humans add extra CO<sup>2</sup> without removing any.

Human CO<sup>2</sup> is a tiny % of CO<sup>2</sup> emissions

“The oceans contain 37,400 billion tons (GT) of suspended carbon, land biomass has 2,000-3,000 GT. The atmosphere contains 720 billion tons of CO<sup>2</sup> and humans contribute only 6 GT additional load on this balance. The oceans, land and atmosphere exchange CO<sup>2</sup> continuously so the additional load by humans is incredibly small. A small shift in the balance between oceans and air would cause a CO<sup>2</sup> much more severe rise than anything we could produce.” (Jeff Id)

A gigaton is 1,000,000,000 tonnes. Carbon dioxide generated by human activity amounts to only about four percent of yearly atmospheric uptake or loss of carbon dioxide, but the result is that the concentration of carbon dioxide in the atmosphere has been growing, on average, by four-tenths of one percent each year for the last 40 years.

Before the industrial revolution, the CO<sup>2</sup> content in the air remained quite steady for thousands of years. Natural CO<sup>2</sup> is not static, however. It is generated by natural processes, and absorbed by others.

As you can see in Figure 1, natural land and ocean carbon remains roughly in balance and have done so for a long time – and we know this because we can measure historic levels of CO<sup>2</sup> in the atmosphere both directly (in ice cores) and indirectly (through proxies).

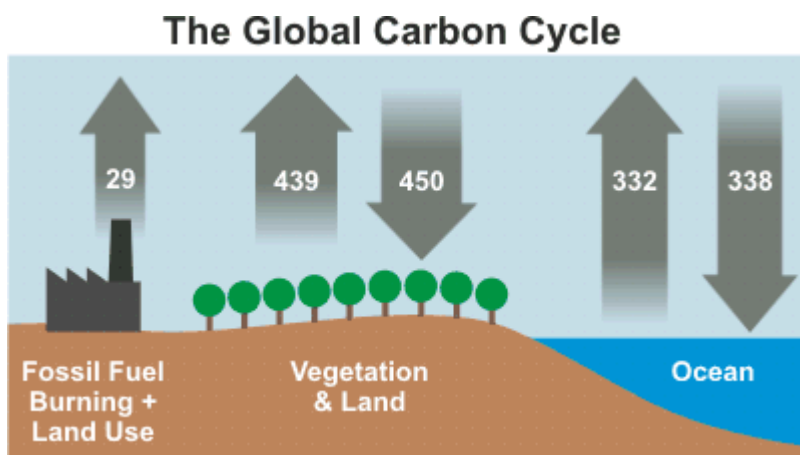


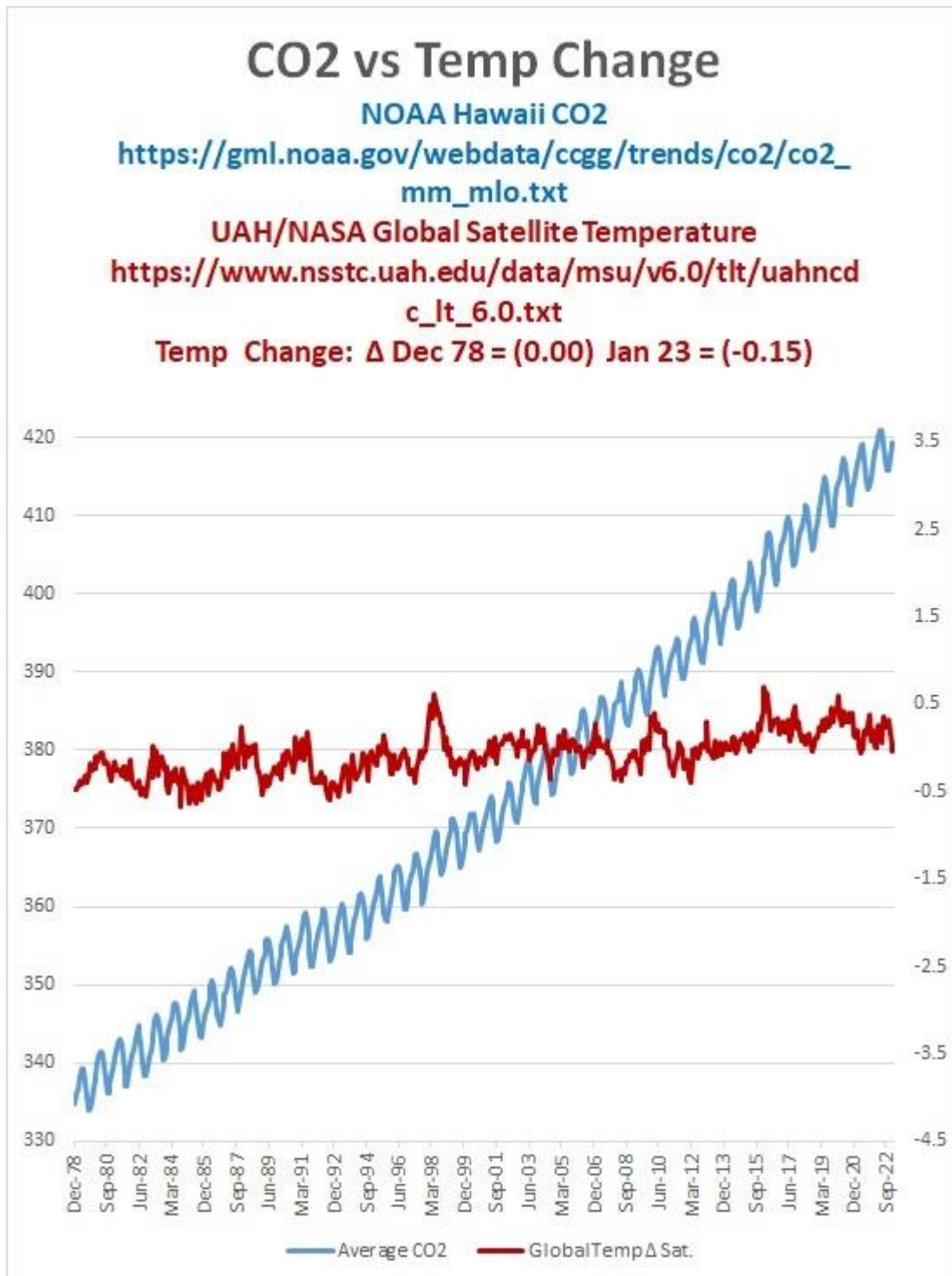
Figure 1: Global carbon cycle. Numbers represent flux of carbon dioxide in gigatons

(Source: Figure 7.3, IPCC\_AR4).

But consider what happens when more CO<sup>2</sup> is released from outside of the natural carbon cycle – by burning fossil fuels. Although our output of 29 gigatons of CO<sup>2</sup> is tiny compared to the 750 gigatons moving through the carbon cycle each year, it adds up because the land and ocean cannot absorb all of the extra CO<sup>2</sup>. About 60% of this additional CO<sup>2</sup> is absorbed. The rest remains in the atmosphere, and as a consequence, atmospheric CO<sup>2</sup> is at its highest level in 15 to 20 million years (Tripathi et al. 2009). (A natural change of 100ppm normally takes 5,000 to 20,000 years. The recent increase of 100ppm has taken just 120 years). [Paragraph updated July 2022, to correct information on % of additional CO<sup>2</sup> that is absorbed.]

Human CO<sup>2</sup> emissions upset the natural balance of the carbon cycle. Man-made CO<sup>2</sup> in the atmosphere has increased by a third since the pre-industrial era, creating an artificial forcing of global temperatures which is warming the planet. While fossil-fuel derived CO<sup>2</sup> is a very small component of the global carbon cycle, the extra CO<sup>2</sup> is cumulative because the natural carbon exchange cannot absorb all the additional CO<sup>2</sup>.

**The level of atmospheric CO<sup>2</sup> is building up, and it is said that the additional CO<sup>2</sup> is being produced by burning fossil fuels, and that build up is accelerating.**



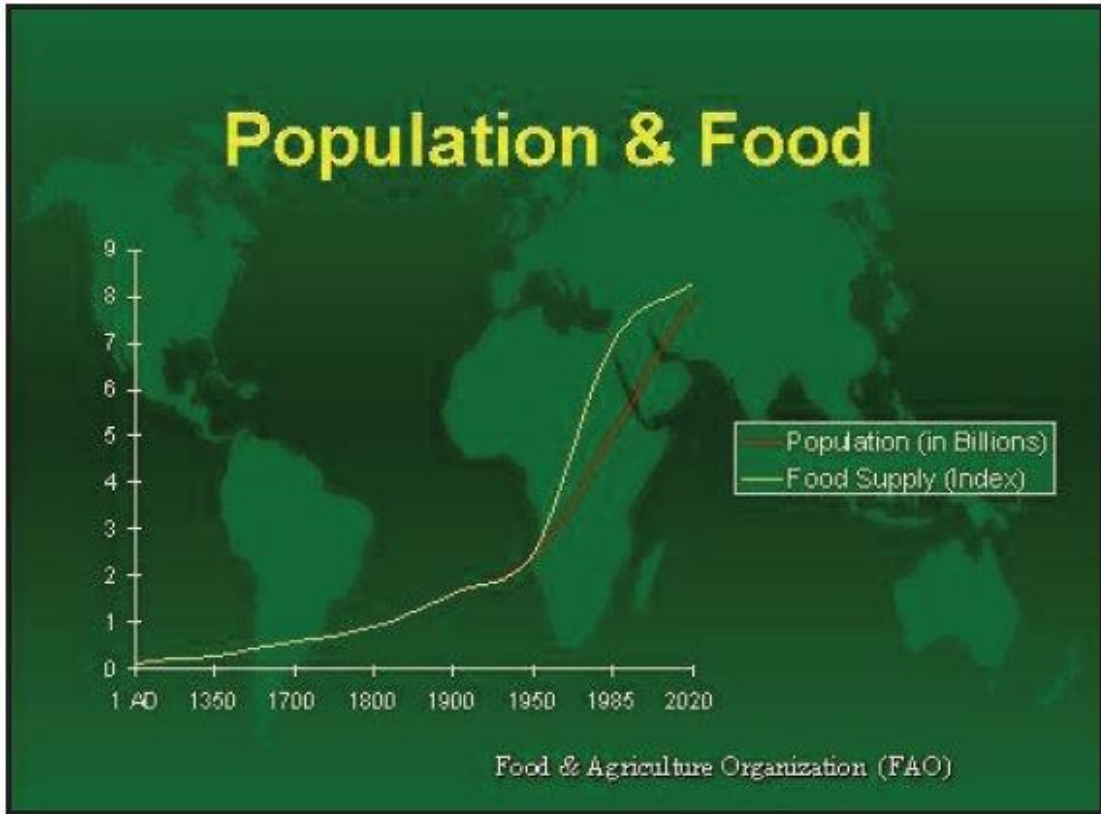
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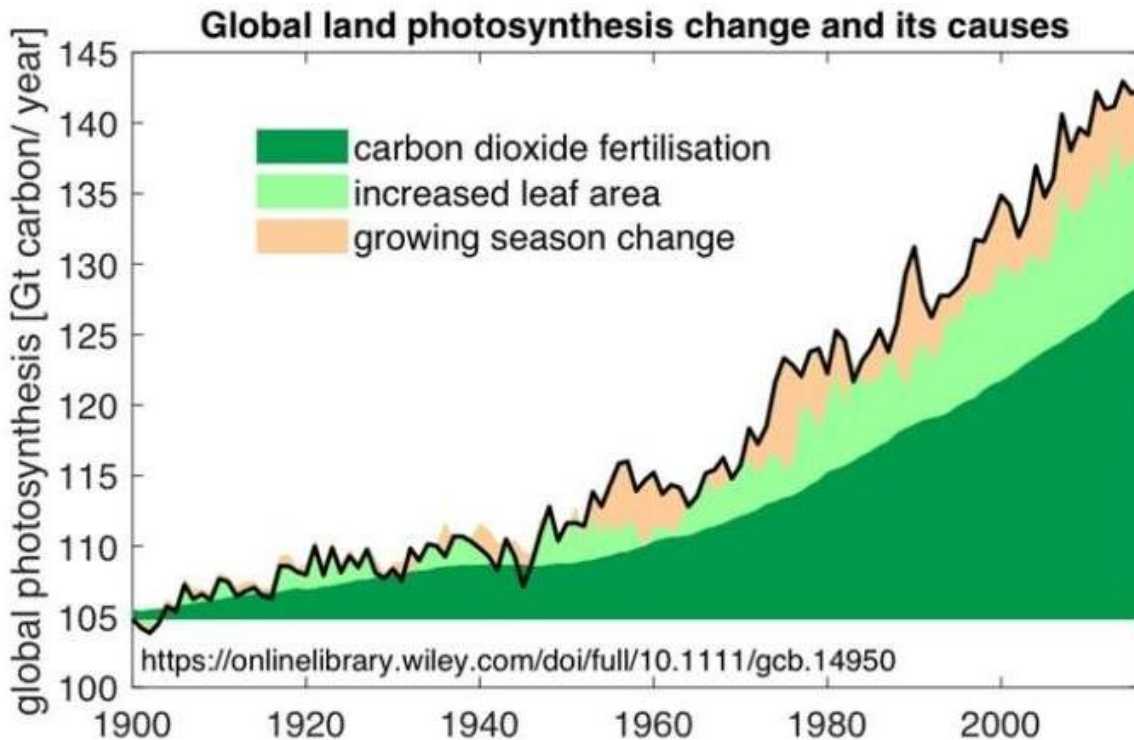
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Terigi Ciccone Engineer/Scientist/Artist/EX-Sierra/Author on climate change 18 August 2023  
 Here's what NASA has to say about it. The earth has greened about 40% in the last 35 years. Greened means more plants are covering the earth. The plants grow faster, bigger, and bushier providing more food and fodder for all of the earth's creatures. The dark green tells us that about 25% of this increased greening is because of the increased atmospheric CO<sup>2</sup>. CO<sup>2</sup> is effectively plant fertilizer. The light green show an increase of about 10% in leaf coverage. This is fodder for many animals on Earth, and it helps cool the planet by providing shade and transpiration cooling. The light tan colouring shows how the slightly warmer climate has extended the growing season and extended the planting coverage. For example, we are harvesting grains further north in Canada, Northern Europe, and Northern Siberia.





## What would happen if carbon dioxide (CO<sup>2</sup>) is not present in the air?

<https://www.quora.com/What-would-happen-if-carbon-dioxide-is-not-present-in-the-air>

Let's say, at this moment you remove all carbon dioxide from the air then, you remove only a very small amount of the atmospheric constituent but its effects will be enormous. Our atmosphere constitutes 0.04% of carbon dioxide which is a very small part.

So the climate of Earth depends mostly on the temperature. And when you remove carbon dioxide you remove the prime constituent that is responsible to keep the temperature of our atmosphere stable. Yes carbon dioxide is the main reason for our surrounding temperature to remain constant at 25°C. It traps the heat from sun, i.e. radiation. When we remove this member from our atmosphere completely we completely solve our issue regarding global warming but next comes the big problem and it's time to get ready for ice age.

Yes if we remove carbon dioxide our temperature drops to as low as -30°C and seriously nothing can survive in such harsh conditions. So enjoy being ice creamed by nature.

Next if we remove all carbon dioxide, plant will have nothing left for their respiration so when they stop respiration they **DIE**. And when that happens no photosynthesis which means no fruits and vegetables which then means death of animals which results to the same day we all describe as '**End of the World**' because we will have nothing to survive and we should also consider the fact that even we exhale carbon dioxide. We humans and almost all animals use a part of carbon dioxide to gain energy because carbon dioxide is the part of reaction which yields energy through metabolism. I.e. mitochondria uses carbon dioxide to produce energy in form of ATP molecules so we will lack out energy as well.



Even if we survive all this then we will be left with

1. No more carbonated drinks.
2. No more alcohol.
3. No more fluffy cakes.
4. Flat breads and normal water instead of fluffy bread and club soda.
5. Cold days and extreme cold nights (most important).
6. No way for generating more energy (because our conventional methods will use oxygen and we will have very less to spare).
7. No way to generate more oxygen.
8. And finally one day is the last day.

But I hope that day will not appear in a near possible future. At least in our generation, I can't guarantee about future because as science progresses it's getting more and more dangerous. Even their (scientist's) single mistake can create conditions what I mentioned.





Yes, our still of housing may become the igloo! And fish our only food source due to CO<sup>2</sup> in oceans!

Presently Earth is coming out of a carbon dioxide famine. For thousands of years, the level of carbon dioxide in the atmosphere has been critically low. Should we endeavour and be able to lower CO<sup>2</sup> in the atmosphere on Earth to below 0.020% then plants mostly would not be able to continue to produce seeds. Consider that scenario and envisage a supermarket! The only shelves with produce on them would be fish!

Famines bring about households having an extreme lack of food and/or other basic needs even after full employment of coping strategies. Starvation, death, destitution, and extremely critical acute malnutrition levels become evident. Areas have extreme critical levels of acute malnutrition and mortality.

A worldwide famine would unfold should CO<sup>2</sup> in the atmosphere fall below 0.020%.

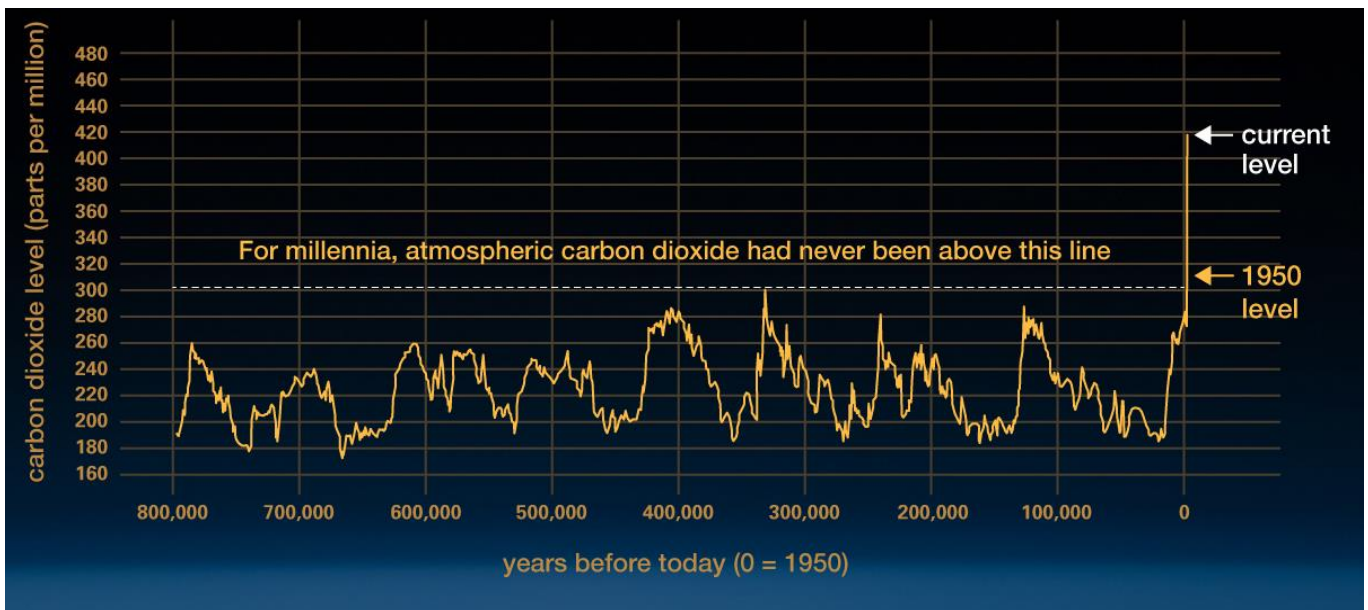
Before the Industrial Revolution started in the mid-1700s, atmospheric carbon dioxide was 280 ppm (0.028%) or less.

Carbon dioxide was as low as 180 parts per million (0.18%) during the Quaternary glaciation of the last two million years.

**However, there is no direct correlation to Earth's surface temperatures and the relative volumes of CO<sup>2</sup> in the atmosphere!**

## FREQUENT ERAS of FAMINE in the PAST

Eras when carbon dioxide levels are below 200ppm would be times of famine.



Ancient air bubbles trapped in ice enable us to step back in time and see what Earth's atmosphere, and climate, were like in the distant past. They tell us that levels of carbon dioxide (CO<sub>2</sub>) in the atmosphere are higher than they have been at any time in the past 400,000 years. During ice ages, CO<sub>2</sub> levels were around 200 parts per million (ppm), and during the warmer interglacial periods, they hovered around 280 ppm (see fluctuations in the graph). In 2013, CO<sub>2</sub> levels surpassed 400 ppm for the first time in recorded history. This recent relentless rise in CO<sub>2</sub> shows a remarkably constant relationship with fossil-fuel burning, and can be well accounted for based on the simple premise that about 60% of fossil-fuel emissions stay in the air.

CO<sub>2</sub> concentration in the atmosphere has never fallen below about 180 ppm for at least the past 650,000 years.

Humanity on Earth, as we now know it, commenced nearly 993,500 years ago. The first to have a longing for human perfection lived south of the Caspian Sea and are known as Andon and Fonta. They are also known as Aman and Amon spiritually.

It was due to a period of famine induced by very low levels of carbon dioxide in the atmosphere that the dinosaurs scattered around Earth died out. It was starvation more than any other event that resulted in the extinction of the dinosaurs. Further, the global famine at that time would have greatly diminished all species with many then also becoming extinct. The 'museum' in Jerusem, on the 1<sup>st</sup> Celestial Heaven sphere, has the records of the history of Earth that can be accessed and such events can be researched and now understood. Nature spirits were brought to Earth prior to any other life of any description being on Earth. Nature spirits later evolve into angels. Verna, a Nature Spirit, is one of the first Nature Spirits to arrive on Earth. Since their arrival, the life force of everything later forms together to evolve into a nature spirit. Human beings are an exception as they are endowed with a soul and they continue living as spirits. Yes, we may be able to access these records as we begin to live Feelings First and embrace our Feeling Healing. Avenues of communication are to slowly open for humanity.



### MUSEUM of JERUSEM – 1<sup>st</sup> Celestial Heaven

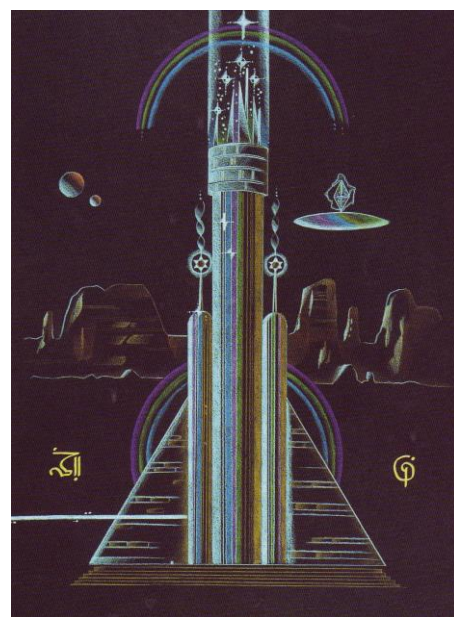
Note previously from Nanna Beth, 3<sup>rd</sup> Celestial Heaven – 20 November 2017 – relating to a ‘museum’ at Jerusem on the 1<sup>st</sup> Celestial Heaven: “And as far as concerning where The First Parents are now, they have moved on with the old guard, having been released from such duties that being The First Parents required. You can see and even in a sense ‘meet’ with them when you come into the first Celestial sphere, we have a museum sort of arrangement, it is a massive and highly complex and covers every aspect of humanity’s history on Earth and in the Mansion Worlds. And you can sort of interact with the exhibits – if I can crudely call them that. You literally walk into say the Atlantean times and explore using your mind for whatever aspect of such times you care to. You can even in a sort of holographic way meet with people from those times, speak with them in a sense, although it’s all automated, it’s not the real person who is now a spirit, although the whole experience being so real and amazing makes your mind believe it is the real person or spirit. So we can even talk to Mary and Jesus like this, which a lot of Celestials do when they first arrive, it all helping them to get to know them better and know what they were all about. It’s a massive learning centre and contains all the knowledge of humanity’s experience, so anything and everything is kept there like ‘living’ archives.” (Thus you can see all of history is recorded and can be researched and studied.)

For example: Others believe they have transcribed messages from Jesus but that is not so, that is not Jesus from Nazareth of the Bible but typically a Jesus from the Celestial Heavens who is fully versed through researching and engaging in the very amazing museum at Jerusem on the 1<sup>st</sup> Celestial Heaven. Other Celestials with names akin to the Apostles of Jesus have from time to time done the same thing.



First parents are Andon and Fonta (Aman and Amon) who lived 993,500 years ago – not Adam and Eve who came to Earth 38,000 years ago.

## Akashic Records



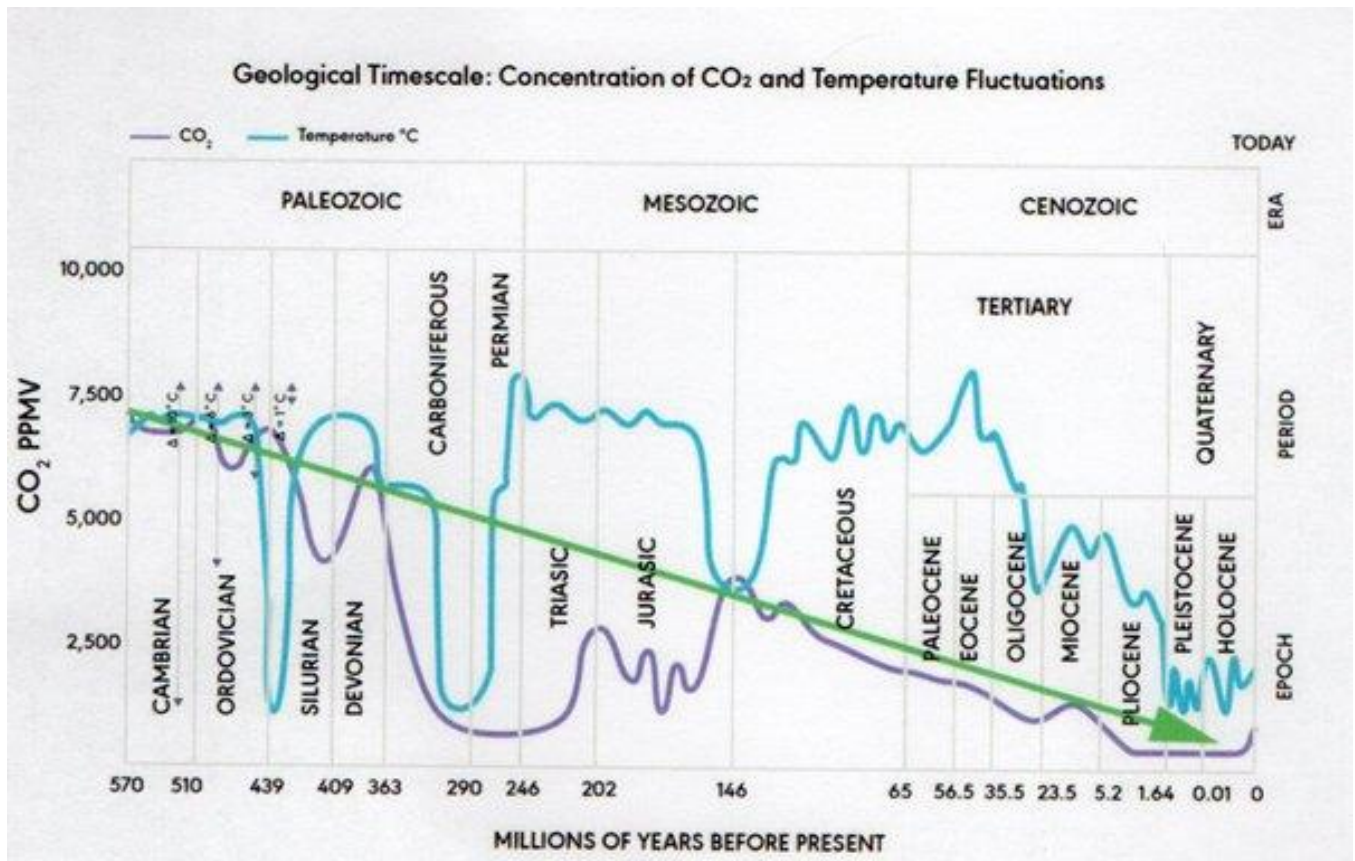
Is there a correlation between carbon dioxide levels and the global average surface air temperature (land + ocean)?

<https://www.quora.com/>

Steve Sawyer

9 August 2023

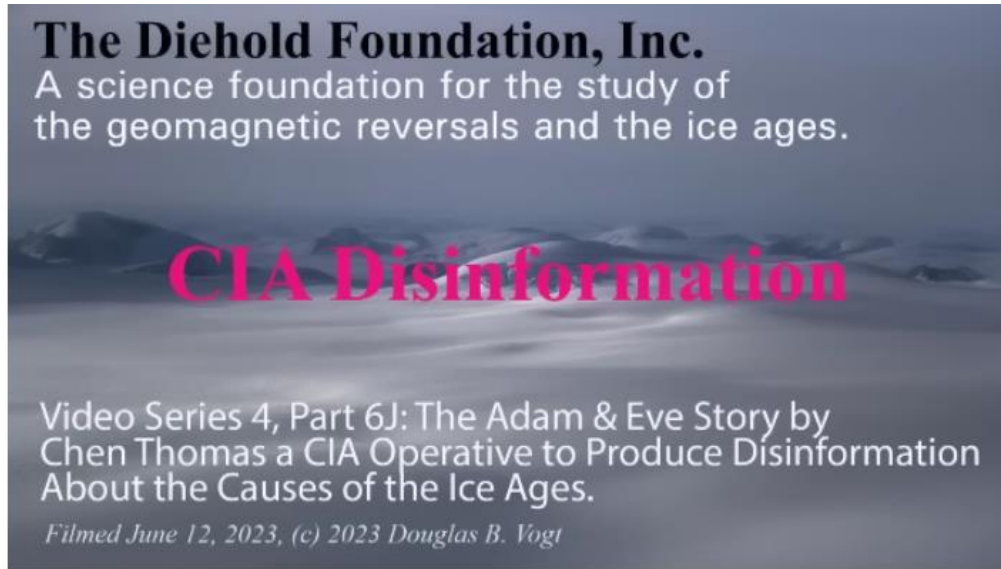
NO. Here's a long term history of Temperatures and Carbon dioxide levels.



There have never been any studies or scientific experimentation that has tied changes in CO<sub>2</sub> to changes in global temperatures. Not one. In fact, historical data shows no correlation between global temperatures and carbon dioxide, and definitely no causation. Often CO<sub>2</sub> and temperatures have gone in opposing directions, and there were many times when CO<sub>2</sub> levels were multiple times what they are today, yet temperatures were lower or no higher.



## HOW DID THIS ERRONEOUS and HARMFUL PROPAGANDA ORIGINATE?



Series 4, Part 6J, Adam and Eve Story by Chen Thomas CIA Disinformation

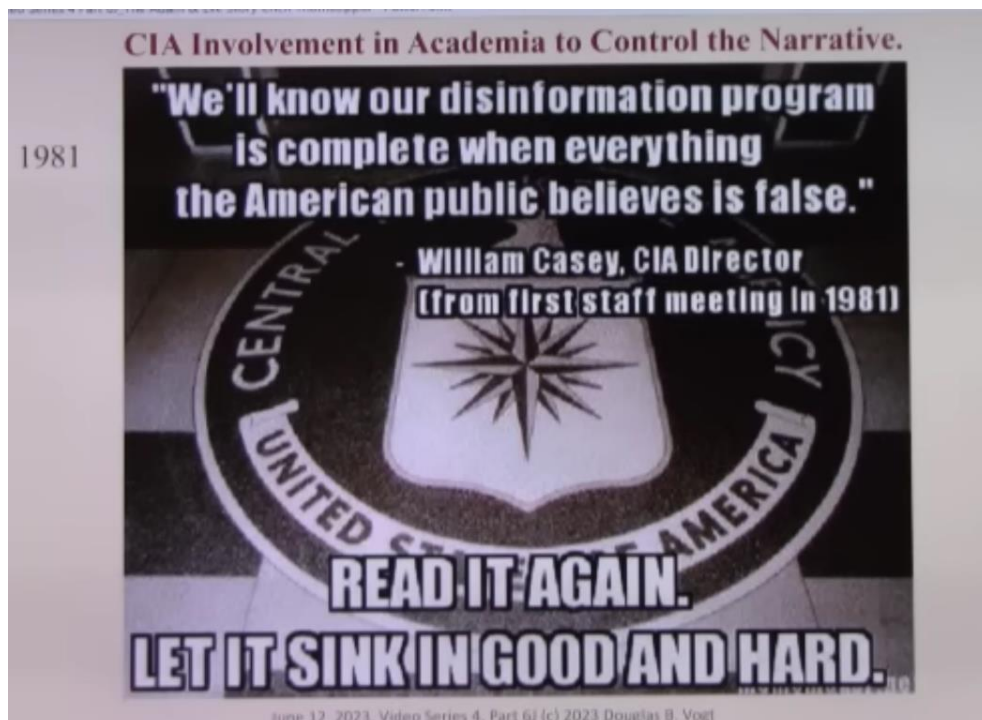
[https://www.youtube.com/watch?v=cZkq\\_bCQmfk](https://www.youtube.com/watch?v=cZkq_bCQmfk)

<https://www.youtube.com/watch?v=ajp9Xr5n6cg>

Diehold Foundation published this YouTube on 12 & 17 June 2023

<https://dieholdfoundation.com/>

The alternative reality of what is causing global warming as well as what causes cataclysms, this being introduced by Chan Thomas with the false premise of carbon dioxide (CO<sup>2</sup>) as being the driver of global warming, while he was working with the USA agency of the CIA (Central Intelligence Agency). Through an act of Congress, being the Central Intelligence Agency Act 1949, encapsulating the Education Partnership Agreement, “improvement of education in science, technology, engineering, arts and mathematics”, which enables CIA to impose its programs of disinformation, as well as their own agendas and propaganda upon the people of USA through the education system as well as the media. However, Wallace S Broecker tried to give credence to the idea that CO<sup>2</sup> is causing global warming (Journal Science 8 August 1975). Broecker is really the father of global warming.



June 12, 2023, Video Series 4, Part 6J (c) 2023 Douglas B. Vogt





*Factory packaged food is loaded with:*

**PRESERVATIVES**

**SUGAR salt fat**

**FOOD SUPPLY and NUTRITION**

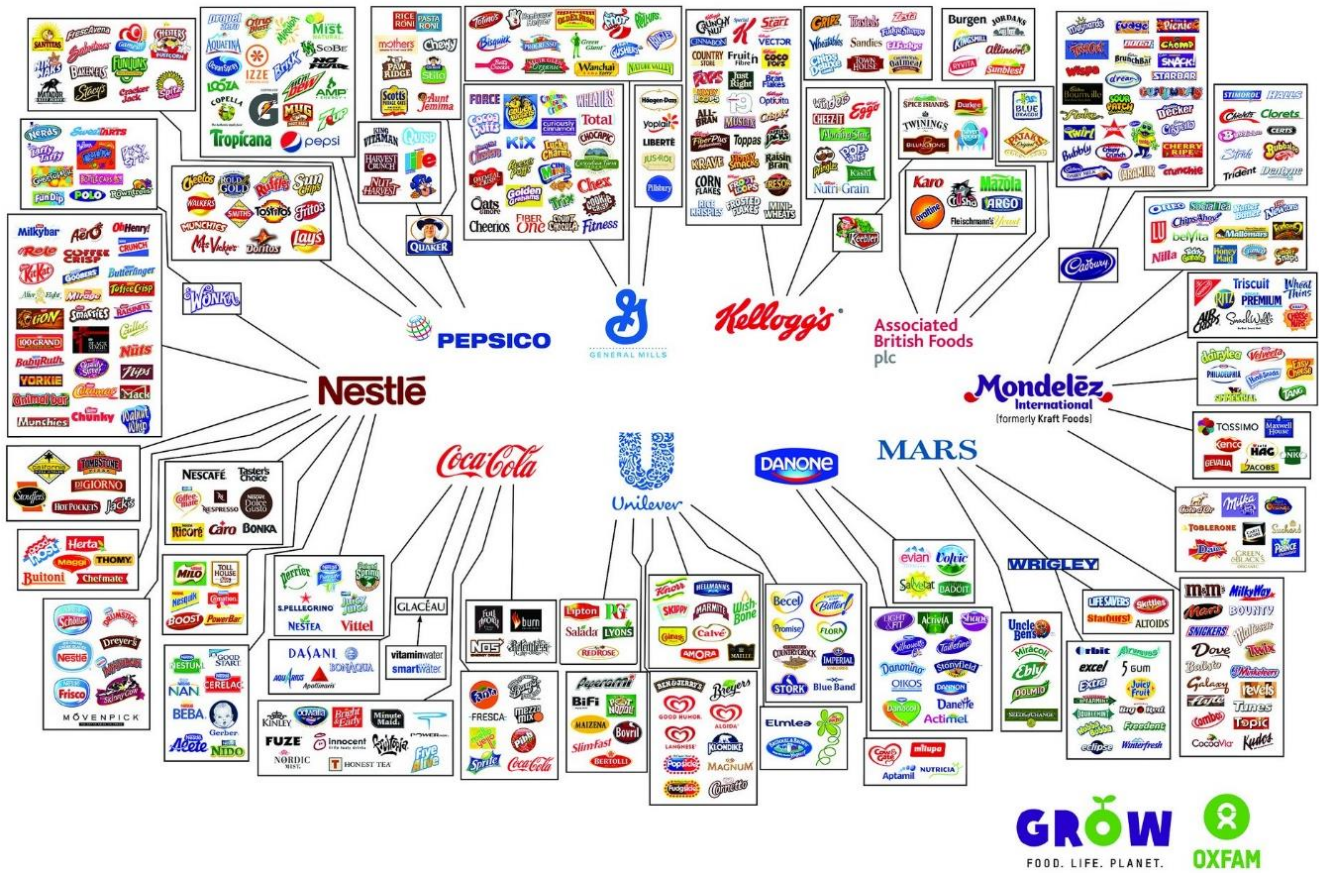
We look at the food supply coming from thousands and thousands of farmers only to find there are many choke points. Look at the ownership of grain elevators / wheat silos throughout a country. In USA the ultimate control and ownership leads back to the Rockefellers and in Europe to the Rothschilds. When you look at the thousands and thousands of different food items in supermarkets you find that they remarkably lead back to around a dozen major food manufacturing conglomerates and then with difficulty you find control and ownership is in the hands of 'The Global Food Cartel – Instrument for Starvation' being [hidden controlling cartel members](https://healthimpactnews.com/2021/unmasking-the-global-food-cartel-is-massive-starvation-and-population-reduction-their-next-move/).

<https://healthimpactnews.com/2021/unmasking-the-global-food-cartel-is-massive-starvation-and-population-reduction-their-next-move/>

MAP of CONSCIOUSNESS	MoC	calibrations
<b>Food</b>	<b>200</b>	<b>At this level and above food is life enhancing.</b>
Food, Commercial Cat	192 – 202	Below 200 is anti-life – negative.
Food, Commercial Machine-made	188 – 200	Energy dense but nutrition poor.
Black Tea	185	Refining of most foods removes nutrients.
Percolated Coffee / Cappuccino / etc	165	
Corn Flakes	85	

“Ten to 12 pivotal companies, assisted by another 3 dozen, run the world’s food supply. They are the key components of the Anglo-Dutch-Swiss-American cartel, which is grouped around the 2 families (Rothschilds and Rockefellers).”

Again, we each can use kinesiology muscle testing and Dr David Hawkins’ Map of Consciousness scale to determine the energy level of factory processed foods, as he did:



If the food comes in factory packaging, it is expensive and of little nutritional value typically. Fresh from the market is best but better still is the food grown in our home back yards!

# FRESH is BEST!

As we review the following energy calibrations we note that the more numerous are the processing steps in bringing our food to our tables, the further the energy and nutritional value is depleted.

It goes something like this:

		MoC Calibration
Obtained absolutely fresh	energy level could be, say:	500
Cutting it up or grinding it	process lowers energy level by 100 therefore now	400
Cooking process	lightly stirred fried is best – baking is too long	300
So let’s put it in a container and freeze it	drop another 100 points	200

Note: The Map of Consciousness (MoC) scale is based on the common log of 10. A 1 point variation is a 10 fold variation. 10 points is 10,000,000,000 times increase or decrease in energy. The above reductions are mind boggling drops in food nutrition and energy at each step in the processing chain.

Kindly visit [www.pascashealth.com](http://www.pascashealth.com) then Library Download, scroll down to Nutrition and click on:

 [Pascas Care Energy Level of Food.pdf](#)



# Pascas Food Basket



Pascas Food Basket agenda is focused firstly upon 'Fresh is Best'. Home grown food in organic conditions being eaten while fresh, having being picked ripe and then home prepared, is the ultimate nutritional food we can have.

Nevertheless, in situations where there are shortages then it is what can be provided having the highest level of life sustaining nutrition possible.



Food Incorporated Stewardship for Hunger





Staple foods of vast varieties and with freshness we have nutritious foods for all should we apply ourselves to ensure food security for all.





# Why we Need A CO<sup>2</sup> Meter for Growing Mushrooms

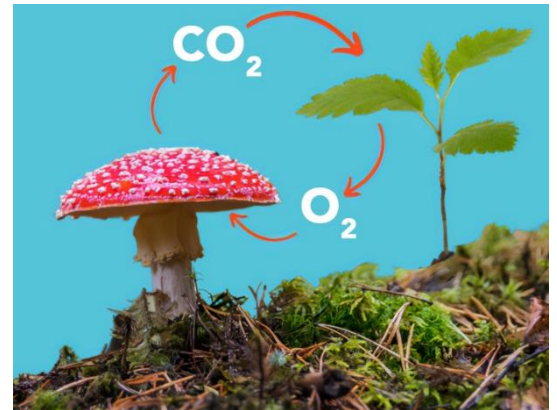
<https://atlas-scientific.com/blog/why-you-need-a-co2-meter-for-growing-mushrooms/>

6 April 2023

Mushrooms are unlike plants, therefore, they do not need CO<sup>2</sup> for photosynthesis. However, CO<sup>2</sup> is critical for your mushroom's growth to develop its fruiting body and for the mycelium to grow. Without the correct CO<sup>2</sup> level, mushrooms will not grow properly in the vegetative phase.

## How Much CO<sup>2</sup> do Mushrooms Need to Grow?

The ideal CO<sup>2</sup> level for mushroom growth is between 10,000 – 20,000 ppm (1.00% – 2.00%) during the spawning process, but no more than 1,000 ppm CO<sup>2</sup> (0.10%) is needed during the fruiting phase. Therefore, we recommend a level between 500 and 800 ppm (0.05% – 0.08%).



However, the CO<sup>2</sup> level may vary depending on the type of mushroom and the stage of growth. For example, some mushrooms may require higher CO<sup>2</sup> levels during the fruiting stage to promote the development of fruit bodies. Therefore, it is important to research the specific needs of your mushroom species and adjust the CO<sup>2</sup> levels accordingly.

The ideal CO<sup>2</sup> range (typically 800 to 1500 ppm) (0.08% – 0.15%) is optimal for mushroom growth and ensures that the

## Summary



mushrooms have enough CO<sup>2</sup> to support their development. Without adequate levels of CO<sup>2</sup>, the mushrooms may become stunted or even fail to grow altogether. Additionally, high levels of CO<sup>2</sup> can be harmful to the mushrooms and can cause them to become discoloured or deformed.

Carbon dioxide (CO<sup>2</sup>) is an essential gas for mushroom growth, but it must be maintained at the right level to achieve optimal growth and yield. Controlling CO<sup>2</sup> levels in your mushroom grow room can be achieved through ventilation, air exchange, and the use of a CO<sup>2</sup> controller or sensor. Using a CO<sup>2</sup> meter for growing mushrooms can help you achieve consistent CO<sup>2</sup> levels and optimise your mushroom farming. With the right tools and knowledge, you can grow healthy and delicious mushrooms all year round.



# Supplemental carbon dioxide in greenhouses

<https://www.ontario.ca/page/supplemental-carbon-dioxide-greenhouses#:~:text=The%20level%20to%20which%20the,1%2C300%20ppm%20under%20ideal%20circumstances.>

The benefits of carbon dioxide supplementation on plant growth and production within the greenhouse environment have been well understood for many years.

Carbon dioxide (CO<sup>2</sup>) is an essential component of photosynthesis (also called carbon assimilation). Photosynthesis is a chemical process that uses light energy to convert CO<sup>2</sup> and water into sugars in green plants. These sugars are then used for growth within the plant, through respiration. The difference between the rate of photosynthesis and the rate of respiration is the basis for dry-matter accumulation (growth) in the plant. In greenhouse production the aim of all growers is to increase dry-matter content and economically optimise crop yield. CO<sup>2</sup> increases productivity through improved plant growth and vigour. Some ways in which productivity is increased by CO<sup>2</sup> include earlier flowering, higher fruit yields, reduced bud abortion in roses, improved stem strength and flower size. Growers should regard CO<sup>2</sup> as a nutrient.

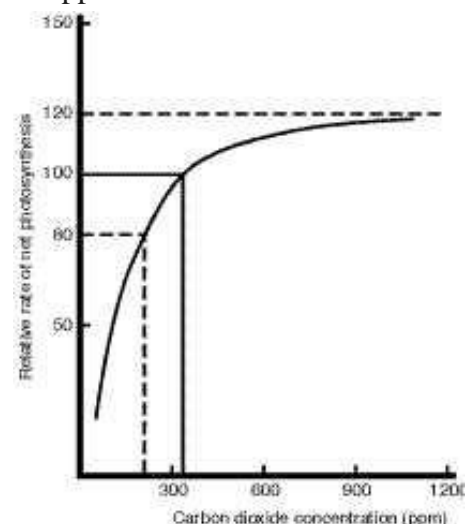
For the majority of greenhouse crops, **net photosynthesis increases as CO<sup>2</sup> levels increase from 340–1,000 ppm (parts per million)**. Most crops show that for any given level of photosynthetically active radiation (PAR), **increasing the CO<sub>2</sub> level to 1,000 ppm will increase the photosynthesis by about 50% over ambient CO<sub>2</sub> levels**. For some crops the economics may not warrant supplementing to 1,000 ppm CO<sub>2</sub> at low light levels. For others such as tulips, and Easter lilies, no response has been observed.

Carbon dioxide enters into the plant through the stomatal openings by the process of diffusion. Stomata are specialised cells located mainly on the underside of the leaves in the epidermal layer. The cells open and close allowing gas exchange to occur. The concentration of CO<sup>2</sup> outside the leaf strongly influences the rate of CO<sup>2</sup> uptake by the plant. The higher the CO<sup>2</sup> concentration outside the leaf, the greater the uptake of CO<sup>2</sup> by the plant. Light levels, leaf and ambient air temperatures, relative humidity, water stress and the CO<sup>2</sup> and oxygen (O<sub>2</sub>) concentration in the air and the leaf, are many of the key factors that determine the opening and closing of the stomata.

**Ambient CO<sub>2</sub> level in outside air is about 340 ppm by volume. All plants grow well at this level but as CO<sub>2</sub> levels are raised by 1,000 ppm photosynthesis increases proportionately resulting in more sugars and carbohydrates available for plant growth.** Any actively growing crop in a tightly clad greenhouse with little or no ventilation can readily reduce the CO<sup>2</sup> level during the day to as low as 200 ppm. The decrease in photosynthesis when CO<sup>2</sup> level drops from 340 ppm to 200 ppm is similar to the increase when the CO<sub>2</sub> levels are raised from 340 to about 1,300 ppm (Figure 1). As a rule of thumb, a drop in carbon dioxide levels below ambient has a stronger effect than supplementation above ambient.

Image

**Figure 1.** The effect of carbon dioxide on net photosynthesis. During particular times of the year in new greenhouses, and especially in double-glazed structures that have reduced air exchange rates, the carbon dioxide levels can easily drop below 340 ppm which has a significant negative effect on the crop. Ventilation during the day can raise the CO<sup>2</sup> levels closer to ambient but never back to ambient levels of 340 ppm. Supplementation of CO<sup>2</sup> is seen as the only method to overcome this deficiency and increasing the level above 340 ppm is beneficial for most crops. The level to which the CO<sup>2</sup> concentration should be raised depends on the crop, light intensity, temperature, ventilation, stage of the crop growth and the economics of the crop. **For most crops the saturation point**



**will be reached at about 1,000–1,300 ppm under ideal circumstances. A lower level (800–1,000 ppm) is recommended for raising seedlings (tomatoes, cucumbers and peppers) as well as for lettuce production.** Even lower levels (500–800 ppm) are recommended for African violets and some Gerbera varieties. Increased CO<sup>2</sup> levels will shorten the growing period (5%–10%), improve crop quality and yield, as well as, increase leaf size and leaf thickness. The increase in yield of tomato, cucumber and pepper crops is a result of increased numbers and faster flowering per plant.

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### Sources of Carbon Dioxide

Carbon dioxide can be obtained by burning carbon-based fuels such as natural gas, propane, and kerosene, or directly from tanks of pure CO<sup>2</sup>. Each source has potential advantages and disadvantages.

When natural gas, propane or kerosene is burned, not only CO<sup>2</sup> is produced, but also heat is generated that can supplement the normal heating system. However, incomplete combustion or contaminated fuels may cause plant damage. Most sources of natural gas and propane have sufficiently low levels of impurities, but notify your supplier of your intention to use the fuel for CO<sup>2</sup> supplementation. Sulphur levels in the fuel should not exceed 0.02% by weight. Combustion of fuels also generates moisture. For natural gas it is estimated that about 1.4 kg of water vapour is generated for each m<sup>3</sup> of gas burned. For propane the amount of moisture generated per kg of CO<sup>2</sup> is slightly less than it is for natural gas.

Natural gas, propane and liquid fuels are burned in specialised CO<sup>2</sup> generators located throughout the greenhouse. The size of the unit (BTU's produced) and the degree of horizontal airflow in the greenhouse determine the number and the location of these units. The most important feature of a burner should be that it burns the fuel completely. Some manufacturers make burners in which either natural gas or propane can be used, as well as units with adjustable outputs. A potential disadvantage of this system is that the heat generated by these units may have a localised effect on temperature and disease incidence (i.e. powdery mildew and Botrytis), particularly in tall growing crops.

Alternatively, a portion of the flue gas from natural gas boilers connected to hot water heating systems can be directed into the greenhouse as a means of supplementing CO<sup>2</sup> to the crop. The boiler must be equipped with a flue gas condenser specifically designed for this purpose.

Liquid carbon dioxide has become popular for many growers even though it is usually more expensive. The main advantages of using liquid CO<sup>2</sup> include purity of product, no concerns about crop damage, nor heat or moisture production, better control of CO<sup>2</sup> levels and the flexibility to introduce the CO<sup>2</sup> within the plant canopy at any time. Pure CO<sup>2</sup> is delivered in bulk by truck to the greenhouse. Special storage tanks rented from the supplier are required at every site. The compressed CO<sup>2</sup> is in a liquid state and must be vaporised through vaporiser units. The distribution system for liquid CO<sup>2</sup> in the greenhouse is simpler to design and install. Most growers use 18 mm black flexible polyvinyl chloride (PVC) tubing with holes punched at an appropriate spacing. For a small operation the CO<sup>2</sup> may be supplied in cylinders.

When growers still growing in soil incorporate or surface apply animal manure or other organic materials, such as straw, levels of CO<sup>2</sup> in the greenhouse will be increased during the breakdown process. The amount of CO<sup>2</sup> produced depends on the stability of the mulch and the activity of the microorganisms, which convert the organic material into CO<sup>2</sup>. Production of CO<sup>2</sup> from rotting manure will only be significant for about one month following incorporation. In some cases organic growing media such as coconut coir will increase the CO<sup>2</sup> level in the greenhouse to 1,200 ppm during the night. This is usually not a problem, as the levels will drop quite rapidly at daylight.



With sufficient levels of carbon dioxide being available in the atmosphere, then all of these are available:









And no more exporting of these:



### Ranking Of Countries That Export The Most Beef (USDA)

World		23,820,919,100	
Rank	Country	Pounds	% Of World
1	Brazil	5,597,530,180	23.50%
2	Australia	3,254,019,120	13.66%
3	United States	2,956,395,420	12.41%
4	India	2,830,732,080	11.88%
5	Argentina	1,805,583,780	7.58%
6	New Zealand	1,406,547,560	5.90%
7	Canada	1,130,970,060	4.75%
8	Uruguay	908,303,440	3.81%
9	Paraguay	817,914,020	3.43%
10	European Union	771,617,000	3.24%



And these would no long be available!

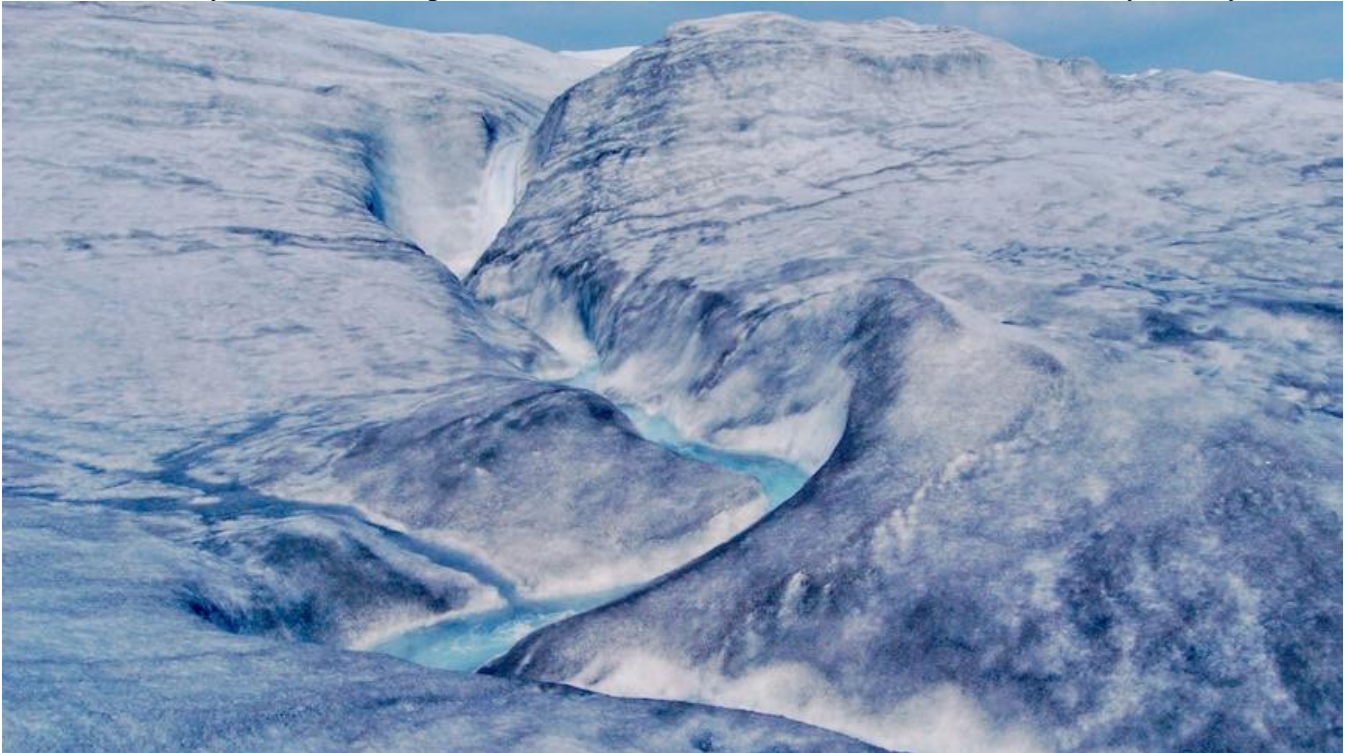


# Ice core from secret US Army base reveals dramatic historical Greenland ice-sheet melting

<https://www.abc.net.au/news/science/2023-07-21/greenland-ice-core-secret-us-army-base-reveals-dramatic-melting/102609654>

ABC Science by environment reporter [Nick Kilvert](#)

Friday 21 July 2023



The findings indicate that the Greenland ice sheet melted during a period of warming similar to today's climate. (Supplied: Paul Bierman/University of Vermont)

Back in the early 1960s, the US Army conducted a secret Cold War operation beneath Greenland's frozen tundra.

## Key points:

- The US Army planned to hide nuclear weapons in ice tunnels in north-west Greenland in the 1960s
- An ice core taken during the operation was rediscovered in 2018
- Analysis of the core shows north-west Greenland was ice free around 400,000 years ago when temperatures were similar to today

Now a chance rediscovery from that operation could rewrite the history of the north-west Greenland ice sheet, and our understanding of its stability.

Published in [Science](#) today, the findings indicate a region of north-west Greenland was completely ice free 400,000 years ago when temperatures in the region were similar to global average temperatures today.

That has huge implications for our understanding of how the Greenland ice sheet will respond to climate change, said study co-author Paul Bierman, a geologist from the University of Vermont.



"We have fossils buried under almost a mile of ice.

"This is the evidence that Greenland can vanish. It's not a model. It's not a hypothetical. We know that the ice sheet vanished and it vanished under much less extreme conditions than we're forcing the climate to right now."

## Project Iceworm and the under-ice labyrinth

In 1959 the US Army began building a network of tunnels under the ice in Greenland's remote north-west.

The tunnels were to house a military base, and form an under-ice labyrinth connected by railway tracks.



The drill, set up in trench 12 in 1961, was being used to study past climate change. (Supplied: US Army/David Atwood)

If this were an Austin Powers movie, this is the part where Dr Evil would put air quotes around the words "secret lair".

But the truth is stranger than fiction.

The US Army plan, known as Project Iceworm, was to stash nuclear weapons in the ice tunnels, which were within striking distance of the Soviet Union.

In the event of nuclear war with the Soviets, the weapons could be moved undetected under the ice via the railway, popping up to launch in a kind of nuclear Whac-A-Mole.

The staging post was

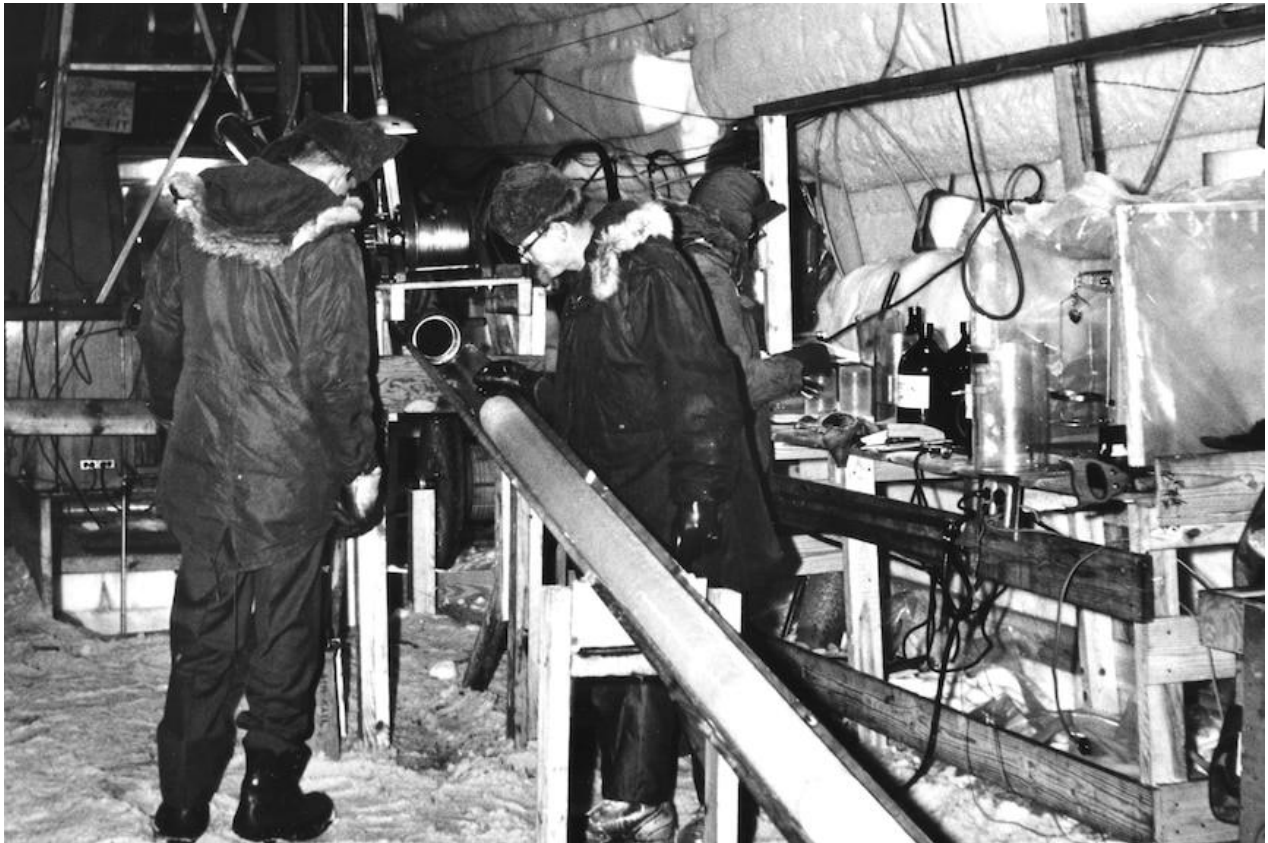
Camp Century, an under-ice base powered by a portable nuclear reactor, that the US claimed was purely an Arctic research station.



In the end, around 3 kilometres of tunnels were built — falling far short of the ambitious hundreds to thousands of kilometres slated in the plan. There was a kitchen, dormitories, cafeteria, theatre, chapel, and library, as well as the power station.

The nuclear weapons never made it, nor was permission sought from the Danish government to go ahead with the nuclear plan, declassified documents show. But some good science did actually get done.

In 1966, researchers worked an ice-core drill down through around 1,390 metres of ice, then pushed through a further three-and-a-half metres of soil and rock before bringing the sample back up to the surface.



Researchers were mostly interested in the ice from the core and didn't pay much attention to the sediment at the base. (Supplied: US Army/David Atwood)

The scientists were only really interested in the ice samples, which they planned to use to investigate historic climate change, and didn't pay much attention to the sediment and rock in the last few metres of the core.

"The military cared because, believe it or not, they were sensing evidence of warming starting in the '40s, and it was affecting their operations," Professor Bierman said.

"So the US National Science Foundation put at least US\$600,000 [AUD883,300] into the drill ... [and] the military provided the logistics."

In the 1970s, the sediment core was moved from a military freezer in the US to the University of Buffalo, then 20 years later it was shipped to Copenhagen where it was labelled, stored and largely forgotten.

But in 2018, two researchers at the University of Copenhagen rediscovered the samples, which were stored in cookie jars, some with labels reading "Camp Century sub-ice".

Within the sub-ice sediment there were remnants of leaves, twigs, moss, freshwater diatoms, seeds, and freshwater invertebrates.



A seed and moss found in the sediment, which was last exposed to sunlight just over 400,000 years ago. (Supplied: Halley Mastro/University of Vermont)

Ahead of a conference in 2019, Professor Bierman called the sample a "Rosetta Stone", which could be used to work out the palaeoclimate of Greenland.

Leading up to that conference, Professor Bierman and two researchers from his lab — glacial geomorphologist Andrew Christ and earth surface change scientist Lee Corbett — did some quick calculations to get an estimate of the age of the sediment in the core sample.

Speaking at the conference, Professor Bierman said he hoped their preliminary findings were wrong, and that if they were right, it was "big-time bad news".

They estimated the sediment had been laid down within the last million years.

## 'Big-time bad news' confirmed

Today in Science, Professor Bierman, along with 20 other researchers from the US and Europe have confirmed their original estimates, and significantly narrowed them down.

Using a technique called luminescence dating, they found the sediment was last exposed to direct sunlight around 416,000 years ago.



Researcher Jean Louis Tison cuts the frozen sediment samples under a red light.(Supplied: University of Vermont)

Until recently there was a lot of uncertainty about the historical melting of north-west Greenland, with some speculating it had remained frozen under hundreds or thousands of metres of ice for the past million years or more.

The ice sheet there would be about the last to disappear from Greenland in the event of global warming because it is located at a very high latitude and is very thick, according to Taryn Noble of the Institute for Marine and Antarctic Studies at the University of Tasmania.

"Where the study has been conducted is in a cold, northern part of Greenland where there's like this dome of ice," Dr Noble said.

"So if it was ice-free up there, it's really strong evidence that the ice sheet was definitely much, much smaller."

The new study showed the region around Camp Century had completely melted and was likely a tundra ecosystem covered in plants for as long as 16,000 years.

That was during a period of moderate warming called Marine Isotope Stage 11 (MIS11), which occurred between 426,000 and 396,000 years ago.

So what's the issue?

"MIS11 was a time that was around 1 to 1.5 degrees Celsius warmer on average than pre-industrial records," Professor Bierman said.

"We are about to blow through that 1.5°C."

Global average temperatures now are around 1.1°C above pre-industrial records and the UN predicts a 66 per cent likelihood that at least one year will exceed 1.5°C average warming by 2027.

In other words, we may have already pushed the climate beyond a state at which the north-west Greenland ice sheet completely melted at Camp Century.

Modelling by the researchers showed ice-free conditions at Camp Century contributed a minimum of 1.4 metres to sea level rise.

"We can say now that a temperature very similar to where we are with the planet today was capable of reducing the size of the Greenland ice sheet by at least the equivalent of a metre and a half of sea level, but maybe as much as five metres of sea level," Professor Bierman said.

That's the contribution from Greenland only and doesn't include other ice sheets like Antarctica.

Though previous studies have shown big changes in ice cover occurred in Greenland within the past million years, this was the first to give a precise date, said polar ice sheet researcher Richard Jones from Monash University.

"This date is quite important because you can tie it to particular climate conditions," Dr Jones said.

"Land and ocean temperatures around Greenland were similar today, but probably slightly warmer than the pre-industrial temperatures.

"So it's highlighting how much the Greenland ice sheet can melt if the climate we're experiencing today is sustained for a long period of time."

Marine Isotope Stage 11 is considered a relatively long interglacial period lasting around 30,000 years.

The warming during that period was part of a natural cycle of interglacials and atmospheric CO<sup>2</sup> levels were around 295 parts per million — similar to the CO<sup>2</sup> levels in our atmosphere prior to around 1800.



Ice sheets are expected to retreat during interglacials, but our greenhouse gas emissions are speeding things up. (AP: Felipe Dana)

We've been in an interglacial period now for around 11,000 years — a natural cycle of warming where we expect to see shrinking of ice sheets and some sea-level rise over thousands of years.

But by almost doubling atmospheric CO<sup>2</sup> in the past 200

years or so, we're speeding things up, Dr Jones said.



"The rate and magnitude of modern warming is likely to be beyond what we saw during that past warm period of MIS11.

"We can consider this past warm period to be a minimum case for what is likely to play out from human-induced warming."

## **But what about local weather?**

Ian Goodwin from the Climate Change Research Centre at UNSW and the Australian Centre for Excellence in Antarctic Science, says ice sheet melting is complicated and also comes down to localised factors that this ice core doesn't show.

"What's far more important going forward is that we don't really understand the atmospheric and ocean dynamic response to change in thermal temperature.

"In layperson's terms, we don't know what the weather's doing."

In the northern hemisphere, the jet stream meanders "like a snake", and can bring heatwaves to Europe and cold snaps to North America and vice versa, Dr Goodwin said.

"A longitudinal shift of 20 degrees for example, in the meandering stream completely changes whether or not Greenland's seeing warm air coming up from the mid-latitudes or it's actually receiving polar air.

"That is the real determinant on whether the ice sheet advances or retreats, because Greenland, as it is today, is really susceptible to summer melting."



We're yet to see the full consequences of a climate system that is 'out of equilibrium', says Dr Noble.(ABC News: Che Chorley)

Longer term though, we're going to see melting and sea-level rise due to a system that is "completely out of equilibrium", according to Dr Noble.

Systems have inertia and in general, the bigger the system the greater the inertia.

Take the example of an ice cube. Put it on a hot road and it won't turn to water immediately, but it will start to melt fairly quickly.

Then imagine a block of ice the size of a car. It will obviously take much longer to melt, but the block will also cool the road, slowing the rate overall.

What this study shows, Dr Noble says, is we've already got the conditions for the Greenland ice sheet to melt, but the time frame is the million dollar question.

"Basically, the ice sheets haven't had time to catch up with the amount of warming that's present in the atmosphere and the oceans," she said.

"And that's what I guess is hard for people to comprehend, that we've actually locked ourselves in for thousands of years of warming and sea level rise.

"Even if humans make sacrifices and societies change rapidly, there's still this inertia in the whole Earth system."

If the entire Greenland ice sheet went, enough water would be released to put most of the world's major cities underwater, she said.

The only thing that could buy us more time, Professor Bierman added, was to get greenhouse gas emissions down.

"There's a fantastic paper that came out of Oregon about 10 years ago, that basically said the next hundred years of policy is going to decide the next 10,000 years of Earth's history," he said.

"Basically what it means is if we don't get our act together and not only cut carbon emissions, but bring the atmospheric levels of carbon dioxide back down, these ice sheets are in trouble."

## Study suggests rise in global photosynthesis rate due to increase in carbon dioxide has slowed

<https://phys.org/news/2023-08-global-photosynthesis-due-carbon-dioxide.html>

by Bob Yirka, Phys.org

11 August 2023

Trends in  $WUE_{eco}$  and changes in driving factor [ $C_a/VPD$ ], as well as their statistical correlations over the different regions during the periods 1982–2000 and 2001–2016. (A) the globe, (B) the Northern Hemisphere (NH), and (C) the Southern Hemisphere (SH). Credit: *Science* (2023). DOI: 10.1126/science.adf5041

A team of Earth scientists at the Chinese Academy of Agricultural Science's Grassland Research Institute, working with colleagues from several institutions in the U.S., has found evidence that the rise in photosynthesis rates around the world caused by the increase of carbon dioxide, has slowed dramatically. In their research, reported in the journal *Science*, the group measured changes in global photosynthesis rates over the past several decades.

During photosynthesis, plants convert  $CO_2$  and water into carbohydrates and release oxygen, therefore they are considered to be carbon sinks. Prior research has shown that as levels of carbon dioxide in the atmosphere rose over the past century, plants have taken advantage of the increase in the gas by speeding up photosynthesis and have been taking more carbon out of the atmosphere.

The net effect has been a brake on global warming. In this new effort, the research team found evidence that rising atmospheric  $CO_2$  has slowed the rate of increase in global photosynthesis because the atmosphere has also grown drier.

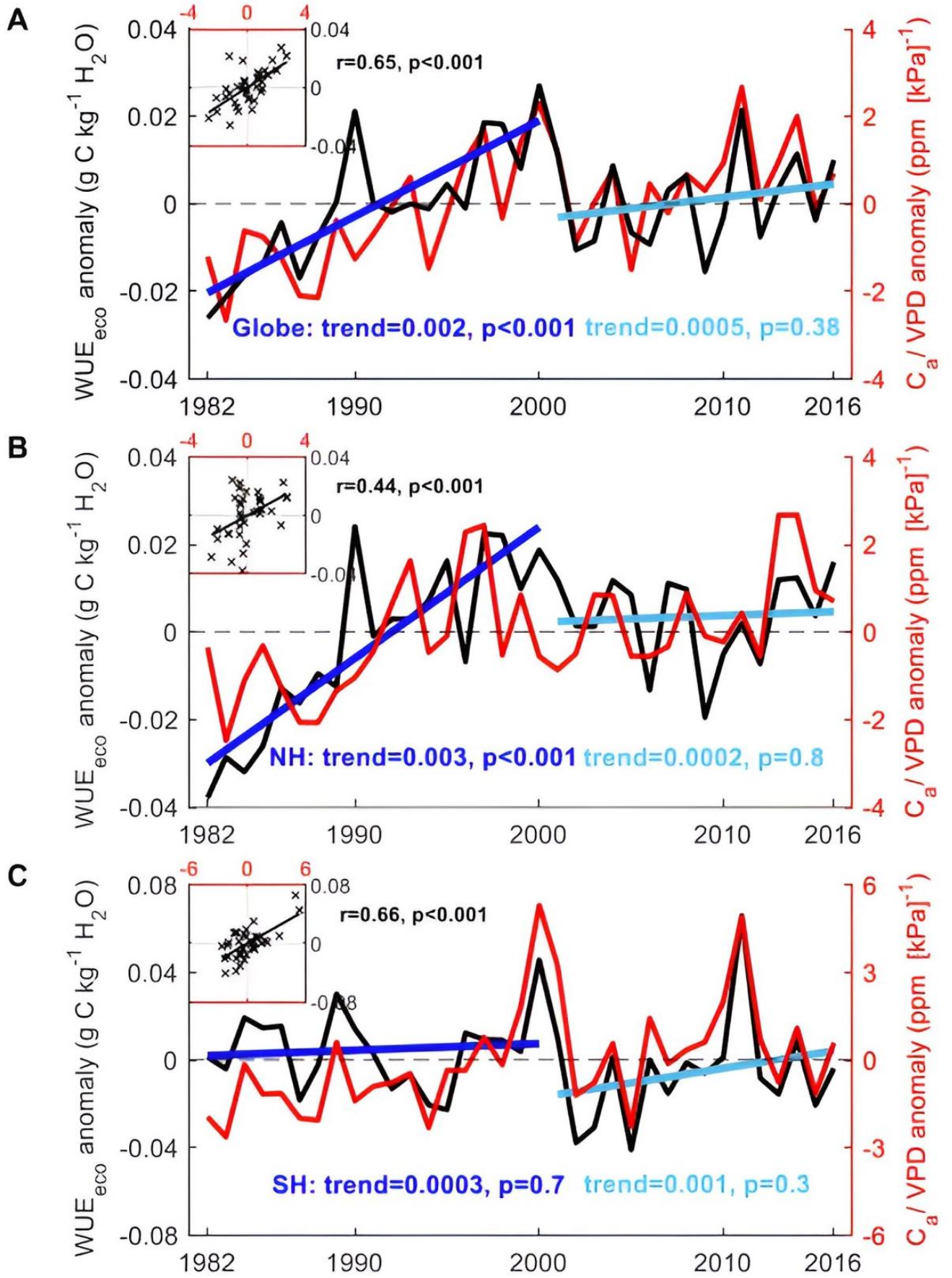
To learn more about the global rate of photosynthesis, the researchers studied data collected by ground monitors around the world during the years 1982 to 2016. Such monitors collect environmental statistics, such as the amounts of  $CO_2$  and water in the air.

The team also collected satellite images of regions covered by foliage. They then trained multiple machine-learning applications with the images to find difficult-to-see changes, such as colours of leaves that reveal rates of photosynthesis.

Next, the team created models with the resulting data to graphically illustrate changes in global synthesis rates from the year 2000 to the present. They then used the models to predict future changes.

The researchers found that as  $CO_2$  levels rose over the last century, global rates of photosynthesis rose along with them accordingly. But starting in the year 2000, things changed. The rise of photosynthesis rates began to slow, and they may stop rising altogether in the near future as the planet grows warmer and drier.





## How do oceans produce half the world's oxygen?

<https://www.quora.com/>

12 July 2023



Contrary to popular belief, it's not the rainforests that produce most of the oxygen we breathe; it's the phytoplankton in the ocean. New research explored the reason for its enormous efficiency. It turns out that some types of aquatic microbes have an extra membrane around their chloroplasts which works as a proton pump and makes them better at converting carbon dioxide into food.

Some types of phytoplankton, like coccolithophores, diatoms, or dinoflagellates, shown above, are more efficient in photosynthesis than others because they can deliver carbon dioxide into their chloroplasts faster. Therefore, they absorb this gas much quicker. These organisms evolved through symbiosis that happened by luck when a non-photosynthesizing protozoan tried to consume unicellular red algae. Instead of digesting it, the food survived and became its symbiont, feeding it with sugars produced with the energy of the Sun.

The process of absorption of food by these single-celled predators involves producing a vacuole, an organelle with a membrane, which endured after the symbiosis was established. It now improves the efficiency of photosynthesis and absorption of carbon dioxide because it still has the proton pump needed for digestion in the phospholipid bilayer around the chloroplast. This membrane is now responsible for an eighth to a quarter of all oxygen we breathe and up to a quarter of the removed carbon dioxide from the atmosphere.

Other organisms use proton pumps for diverse reasons. We have them in our stomachs, and they increase their acidity, which is important for killing potentially dangerous pathogens in our food and helps in digestion. Proton pumps also dissolve our bones when needed, and in diatoms, they play a role in forming shells made of silica. This membrane's role in increasing photosynthesis efficiency has been confirmed by using drugs that inhibited the work of proton pumps.

The increase in efficiency comes from the pump injecting hydrogen ions or protons into the area between the chloroplast and the membrane, which increases PH and makes bicarbonate ions rush to neutralise it. Enzymes then convert bicarbonate into carbon dioxide at the site conveniently where it is needed in the chloroplast.

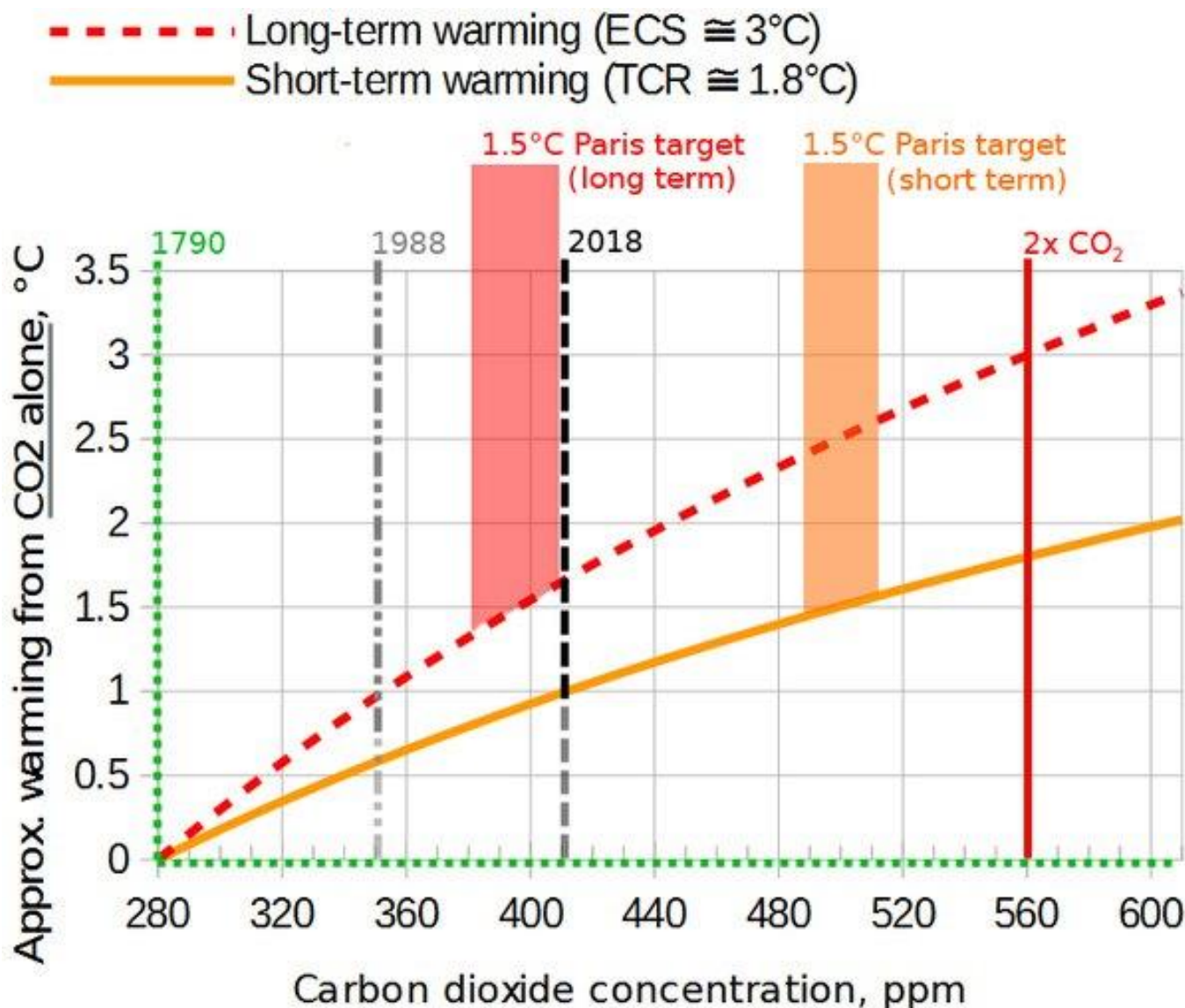
## How much will an increase of CO<sup>2</sup> in the atmosphere cause the temperature to rise?

<https://www.quora.com/>

14 August 2023

*How much will an increase of CO<sup>2</sup> in the atmosphere cause the temperature to rise?*

A doubling in the level of CO<sup>2</sup> from 280 ppm to 560 ppm is expected to cause an eventual increase in global average temperatures in the range of 2.5–4.0°C (based on numerous studies) with a best estimate of 3°C using the ECS or equilibrium climate sensitivity. See graph below. That's after the feedbacks such as the extra water vapour (also a greenhouse gas) and less albedo as the ice melts. Estimates are from IPCC AR6. In comparison, sea level rose 125 metres coming out of the last glacial period when global temperatures rose 5°C. So we need to transition away from fossil fuels as soon as we can to avoid even worse damage than we will already be causing.





## What is the difference between hard water and soft water?

<https://www.quora.com/>

13 August 2023



The terms "hard water" and "soft water" refer to the mineral content present in water, specifically the concentration of calcium and magnesium ions. The main difference between hard water and soft water lies in their mineral content and the effects they can have:

### Hard Water:

- Hard water contains a relatively high concentration of dissolved minerals, primarily calcium and magnesium ions.
- These minerals are commonly found in groundwater as water passes through limestone, chalk, or other mineral-rich geological formations.
- When hard water is heated, it can lead to the formation of mineral deposits, or "scale," on pipes, appliances, and surfaces. This scale can reduce the efficiency of water heaters and other equipment.
- Soap and detergents do not lather as effectively in hard water, leading to the need for larger amounts of cleaning agents to achieve the same results.
- Hard water can cause issues with plumbing and appliances over time due to mineral buildup.

### Soft Water:

- Soft water has a low concentration of calcium and magnesium ions.
- It is typically found in areas with less mineral-rich geological formations or where water has been treated to remove minerals.
- Soft water does not lead to the formation of scale when heated, which can improve the efficiency and lifespan of water heaters and appliances.
- Soap and detergents lather more readily in soft water, requiring smaller amounts for effective cleaning.
- Soft water is generally considered more gentle on plumbing systems and appliances.

In summary, the primary difference between hard water and soft water is the mineral content, specifically the concentration of calcium and magnesium ions. The presence of these minerals in hard water can lead to scale buildup and affect the performance of plumbing, appliances, and cleaning products. Soft water,

on the other hand, is less likely to cause scale and can provide benefits in terms of cleaning efficiency and equipment longevity.

### What influences crop yield?

Increases in temperature and carbon dioxide (CO<sup>2</sup>) can increase some crop yields in some places. But to realise these benefits, nutrient levels, soil moisture, water availability, and other conditions must also be met.

Pesticides are used worldwide and increase crop yield on average by 30% as well as improving crop quality. Modern organic (i.e., carbon-containing) pesticides have been used widely since the late 1940s, and so there is over 50 years of experience of their behaviour in the environment and their impact upon it. The four most important factors that influence crop yield are soil fertility, availability of water, climate, and diseases or pests. These factors can pose a significant risk to farms when they are not monitored and managed correctly.

To increase their crop yields, farmers must closely monitor their soil condition and quality throughout the growing season. Precision technologies employ wireless sensors that monitor soil health, such as pH levels, moisture, temperature, salinity, etc., to allow farmers to gain insights into soil fertility.

John the Typist lived in central New South Wales, Australia, during the 1960s, where wheat crop yields in the district were considered typically around 10 bags per acre. Now in the 2020s, wheat crop yields are typically reported as around 28 bags per acre. Crop yields now 280% on what they were in the 1960s.

# WHEAT BAGS AUSTRALIA





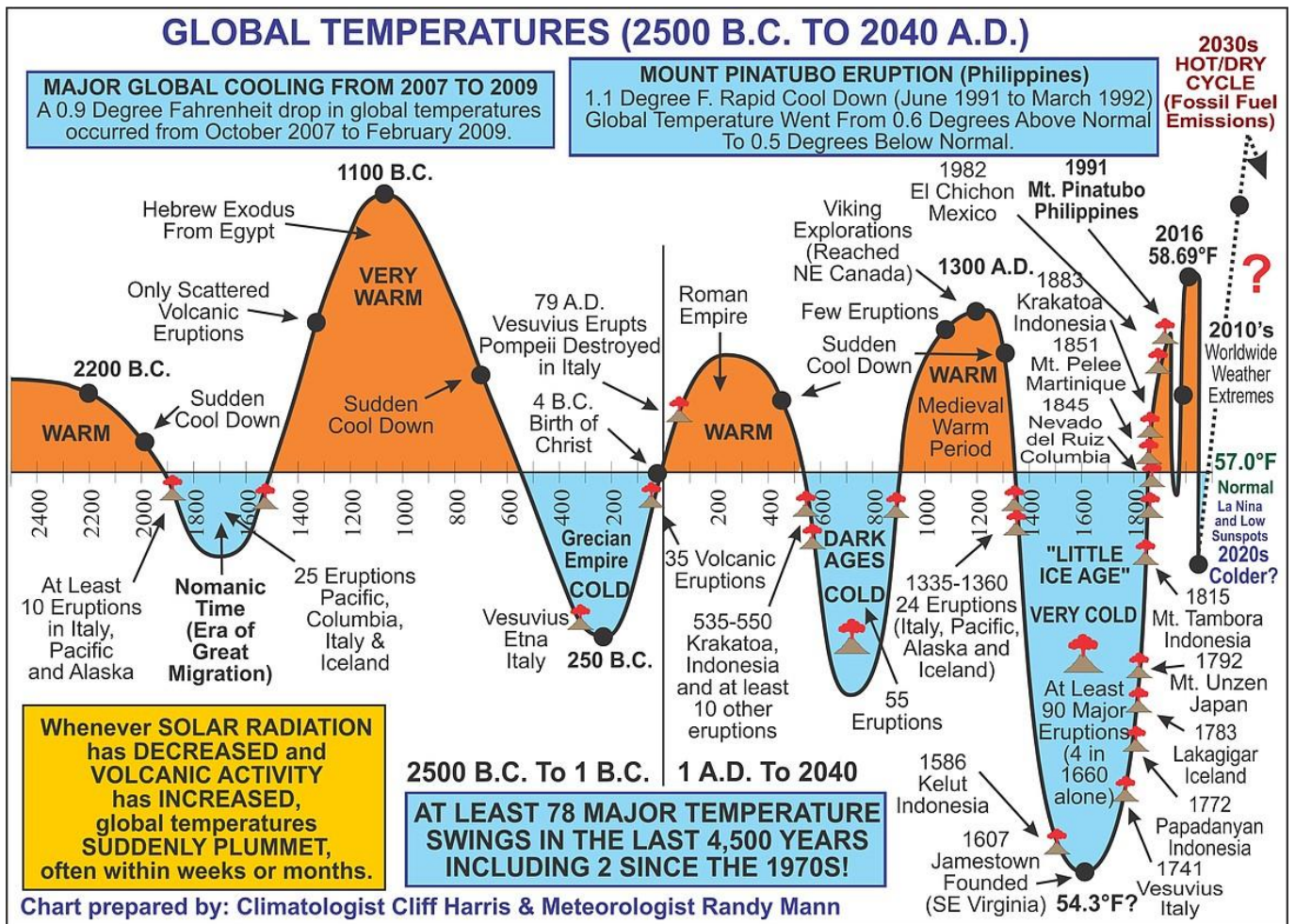
**EARTH CHANGES – ENVIRONMENTAL CHANGES**



All the people of all the populations are being told that we are damaging the atmosphere causing global warming when the heating is unfolding at and from the core of Earth. Yes, down there – not up there!

During the second half of the 20<sup>th</sup> century (1950s onwards) there have been increases, if not surges, of energy received by our Sun from the core of the Universe. The Sun has transmitted this increased energy outwards and it has been received into the core of all the planets within our local solar system. In turn this increased energy has slightly increased the internal rotation of Earth's core bringing about surface tension, warming from underneath and significant changes in the pattern of weather events, earthquakes, volcanic activity (mainly under the oceans) and changes in our environments.

Yes, we need to reduce our polluting of Earth and also find and adopt alternative energy systems as the burning of combustible fuel is depleting a very finite supply of fossil fuels. But the changes in the ocean levels is not man made. The rotation of the core is spreading the oceanic tectonic plates thus some islands are rising and some are subsiding.





## How have atmospheric CO<sup>2</sup> levels varied over time, and how does this relate to the burning of fossil fuels?

<https://www.quora.com/How-have-atmospheric-CO2-levels-varied-over-time-and-how-does-this-relate-to-the-burning-of-fossil-fuels>

Paul Noel: OK, let's start with coal. Coal is fossil trees and plants from a long time ago. Any CO<sup>2</sup> locked up in coal is when burned merely releasing CO<sup>2</sup> that was in the air long ago. It clearly is no hazard no matter what coal we burn because the CO<sup>2</sup> already was in the air and frankly based upon the coal it was one of the best times for life on Earth ever. In short the experiment of effects of CO<sup>2</sup> has already been run and it doesn't run away and it doesn't have "tipping points". Best evidence is that CO<sup>2</sup> was up near 1% of the atmosphere. We know this from the stomata (breathing holes) in the fossil plants. Plants get fewer stomata when CO<sup>2</sup> is higher. So let's see what increasing CO<sup>2</sup> does for the life on Earth.



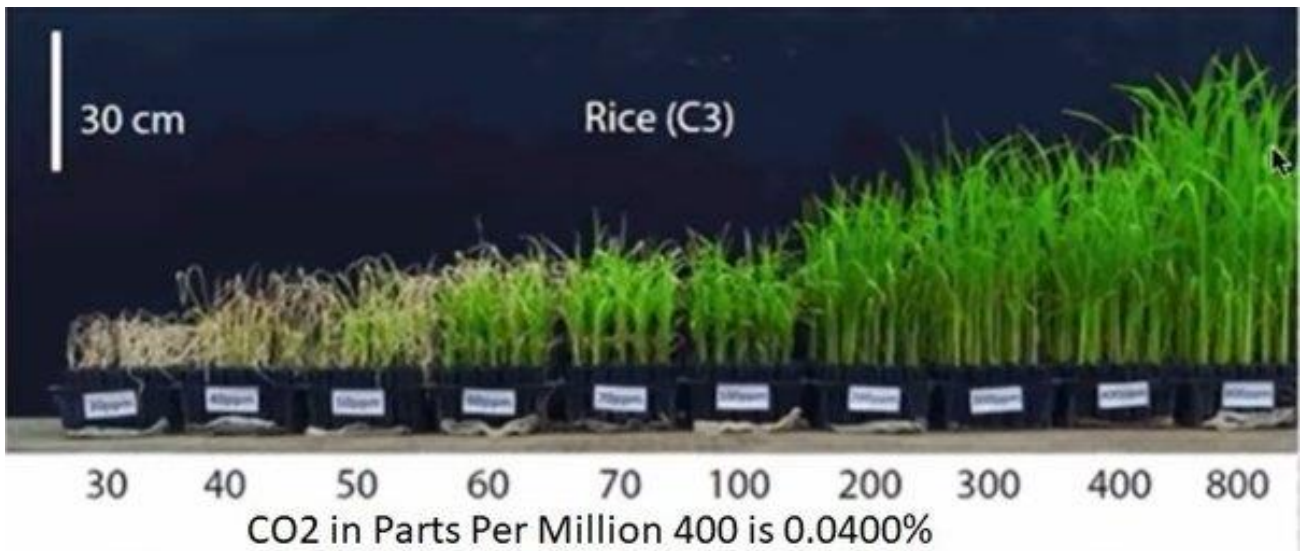
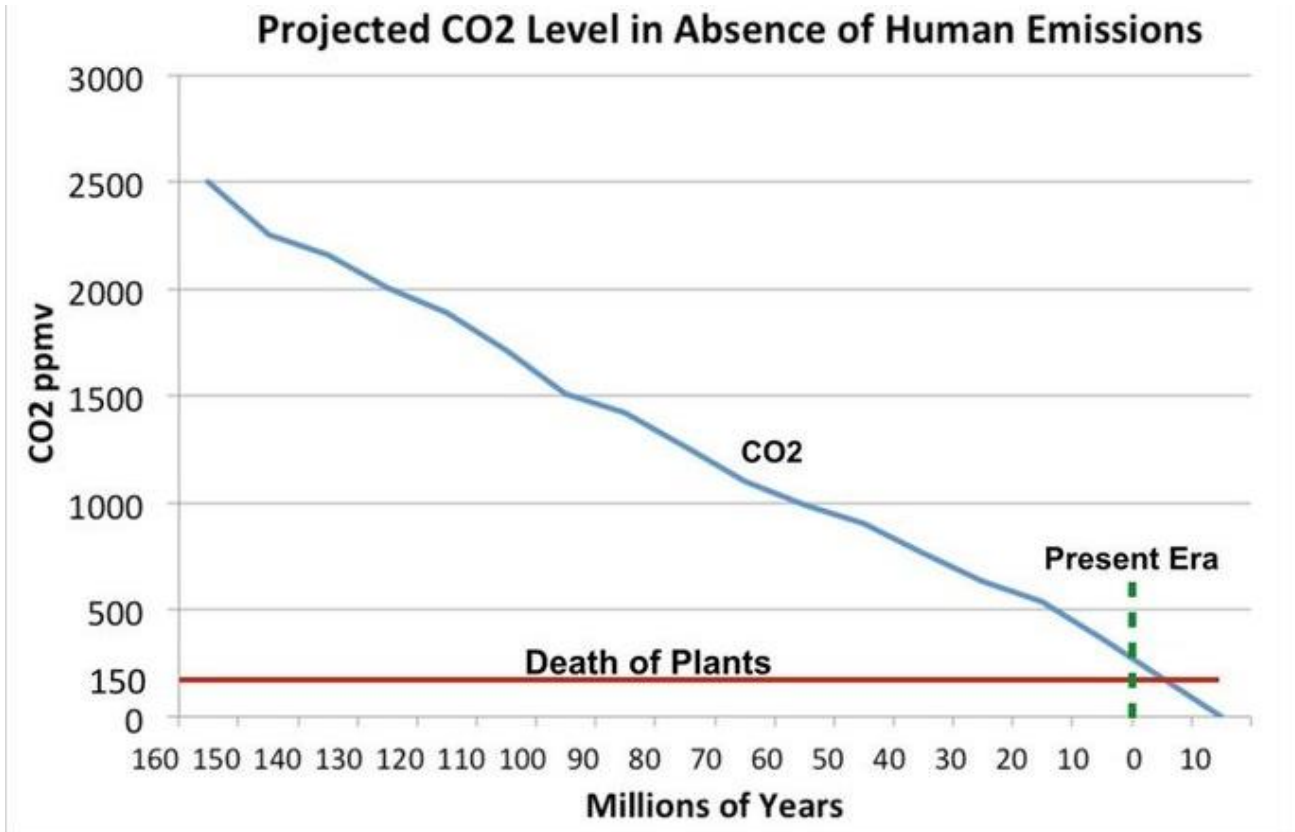
**Trees Grow Much Faster at Higher Levels of CO<sub>2</sub>**

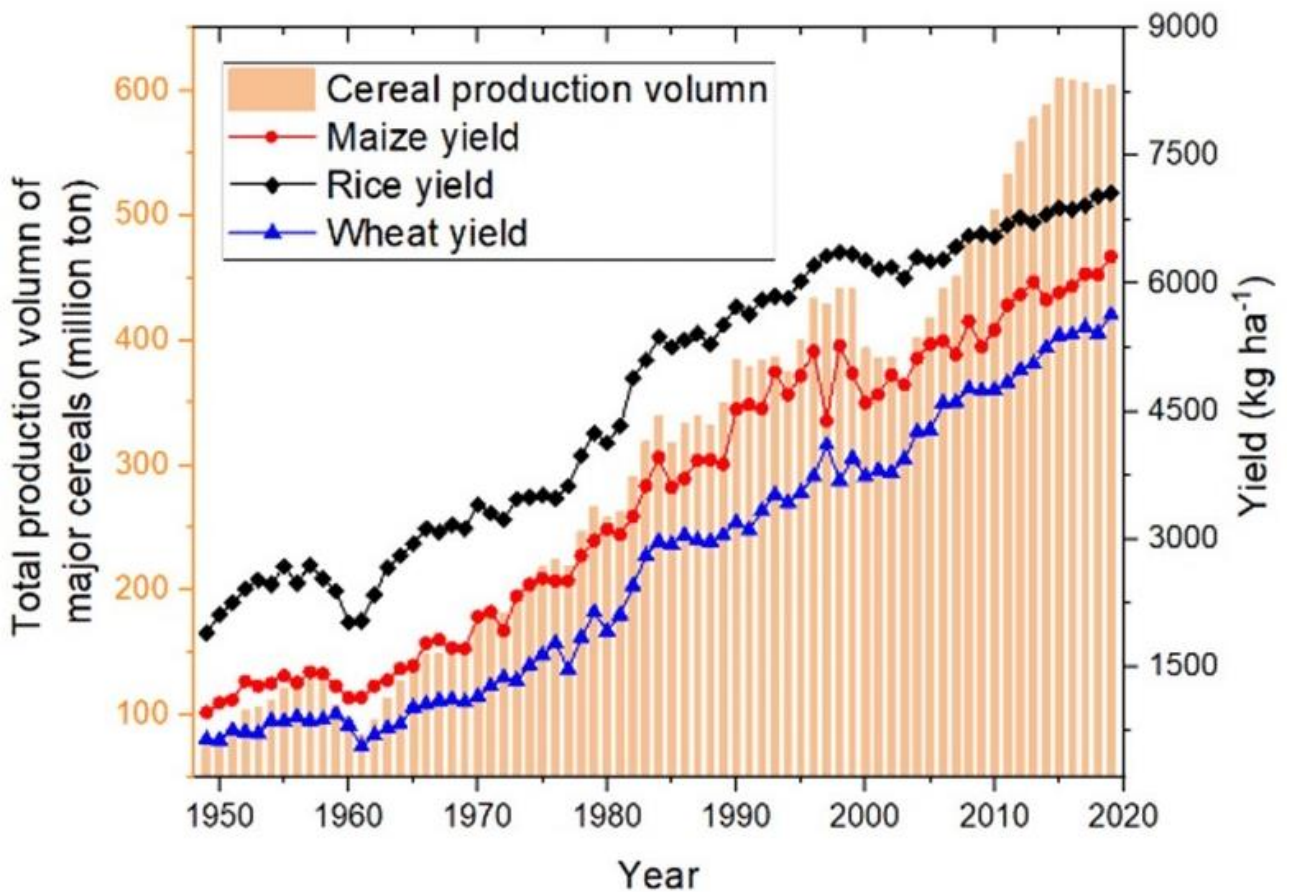
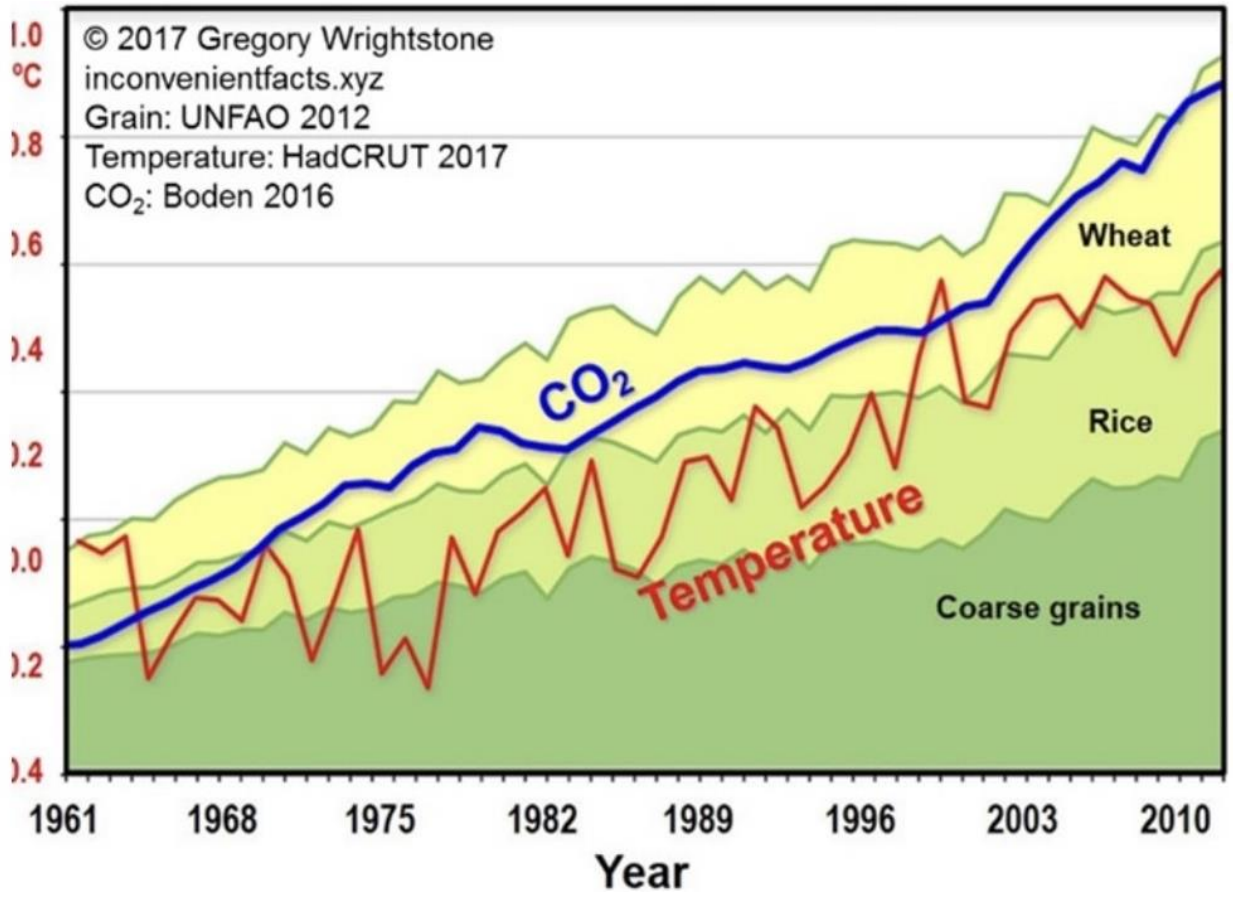
Just increasing the CO<sup>2</sup> by about 2 times the current level made the tree on the right grow nearly 8 times faster and healthier. Current (AMB sign) is

420 ppm or 0.042%. The higher level on the right is 0.087% CO<sup>2</sup>. Hardly 1% for sure! Current CO<sup>2</sup> levels are just about 4% of the high level they have been in the past. This high level did not cause any ecological emergency or a climate emergency.

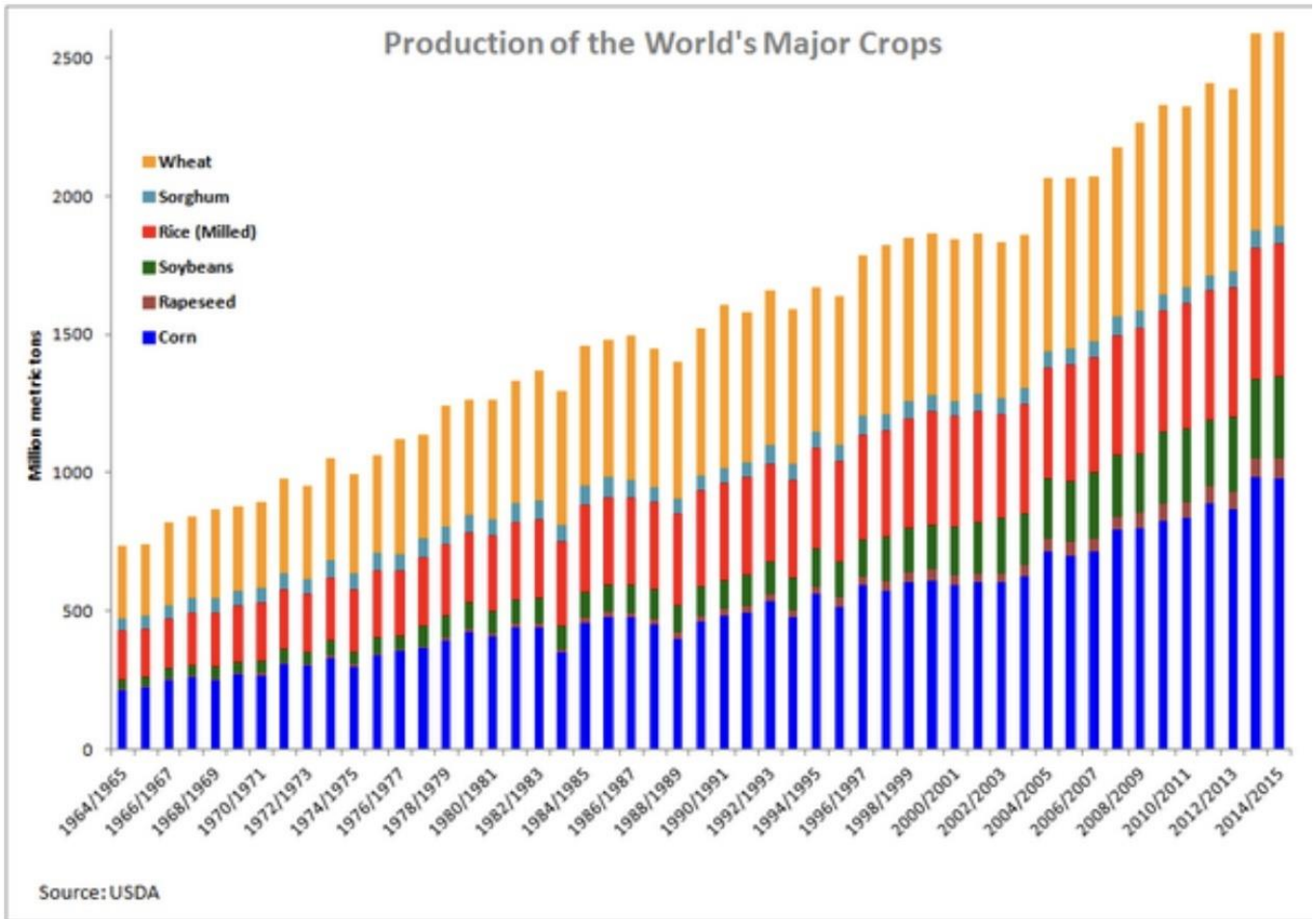
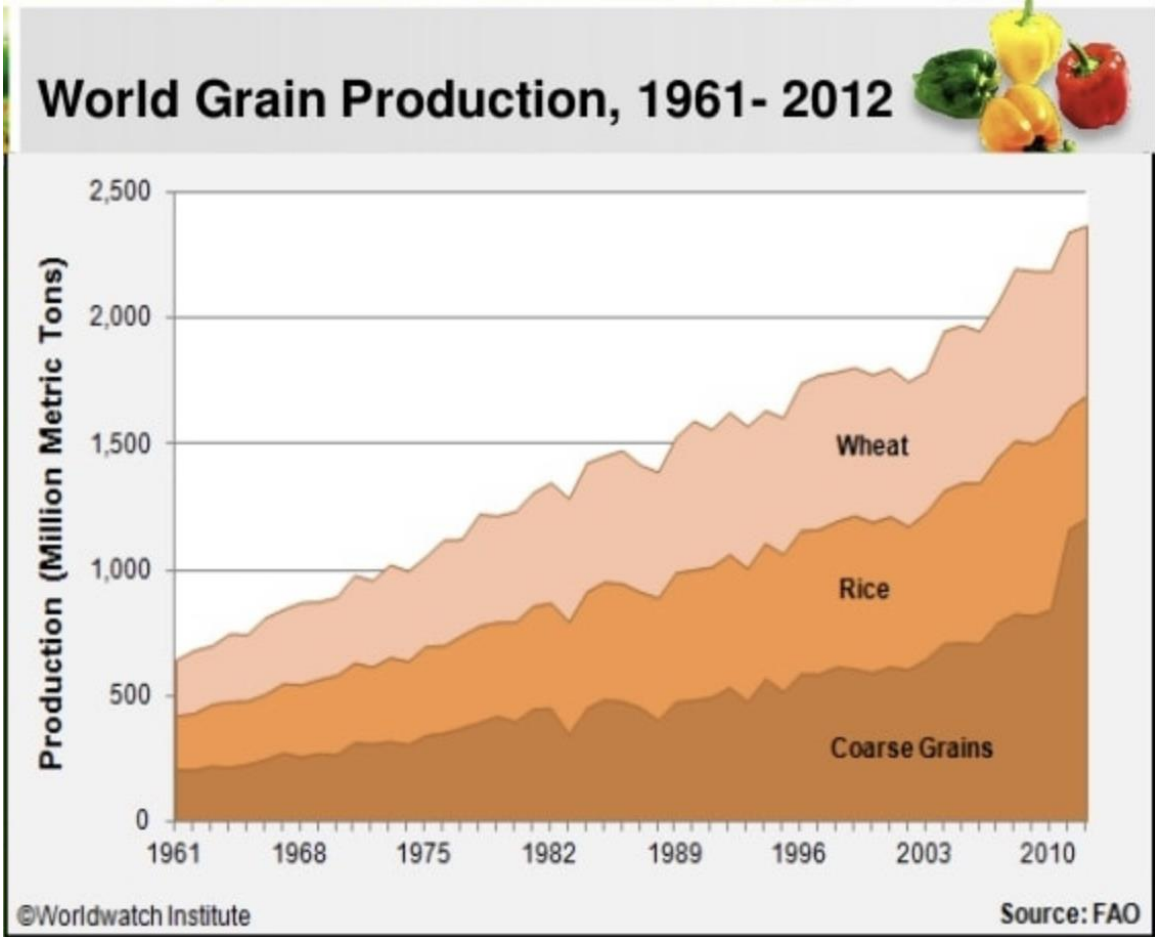
Now as to oil and natural gas. There is excellent evidence that oil and natural gas have both organic and inorganic history. The organic oil and gas is in the same place as coal. The inorganic oil and gas will come up whether or not we drill it and the choice is if we get the energy or not. I side with getting the energy. The chemical precedents methane and crude oil that are not organic are the chemical source of the atmosphere and the ocean water on Earth. So we can neither control them nor can we influence their action on this Earth. All we can do is use them.

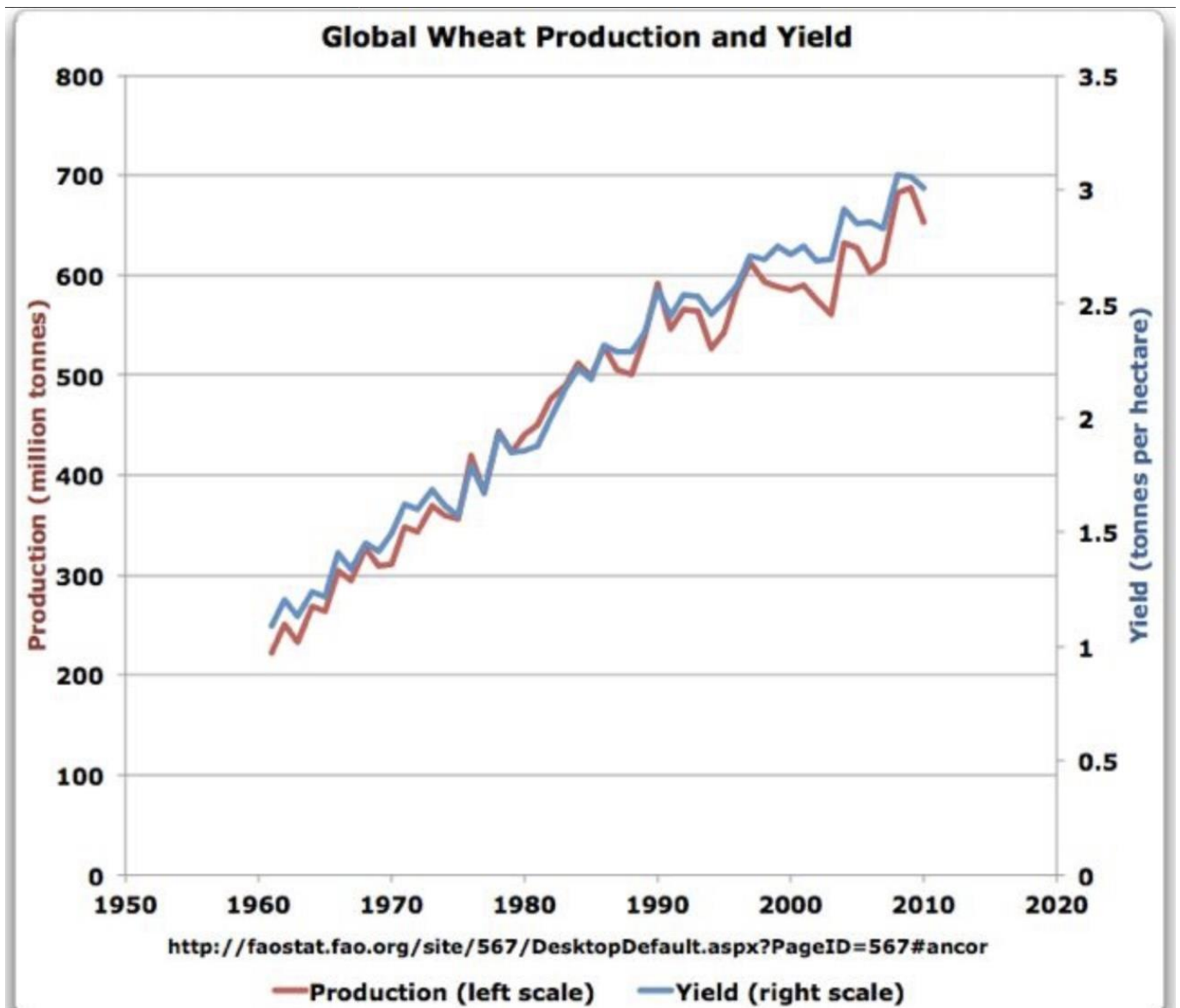
Typical Greenhouse operators (large scale) put CO<sup>2</sup> generators in their greenhouses for exactly the reason you see demonstrated in the picture. It would be amazing if the truth gets out and people see what actually is going on. Those arguing that CO<sup>2</sup> is pollution have no idea what they are talking about. They are frankly misguided with assumption riddled indoctrination. Nobody should be in the slightest concerned of CO<sup>2</sup> being released as long as the location has a good wind blowing and making sure it doesn't accumulate excessively.











## Drivers of Increasing Global Crop Production: A Decomposition Analysis

<https://thebreakthrough.org/issues/food-agriculture-environment/drivers-of-increasing-global-crop-production-a-decomposition-analysis>

24 March 2022



Since the early 1960s, global crop production has increased by over 250%. The social, economic, and environmental ramifications of this growth in output—including the loss of biodiversity and carbon—are hard to overstate. To understand what lies behind this remarkable development, in 2020, Luke Yates and Barry Brook of the University of Tasmania and I, ran an analysis that breaks down the overall increase in crop production into five components, or drivers.

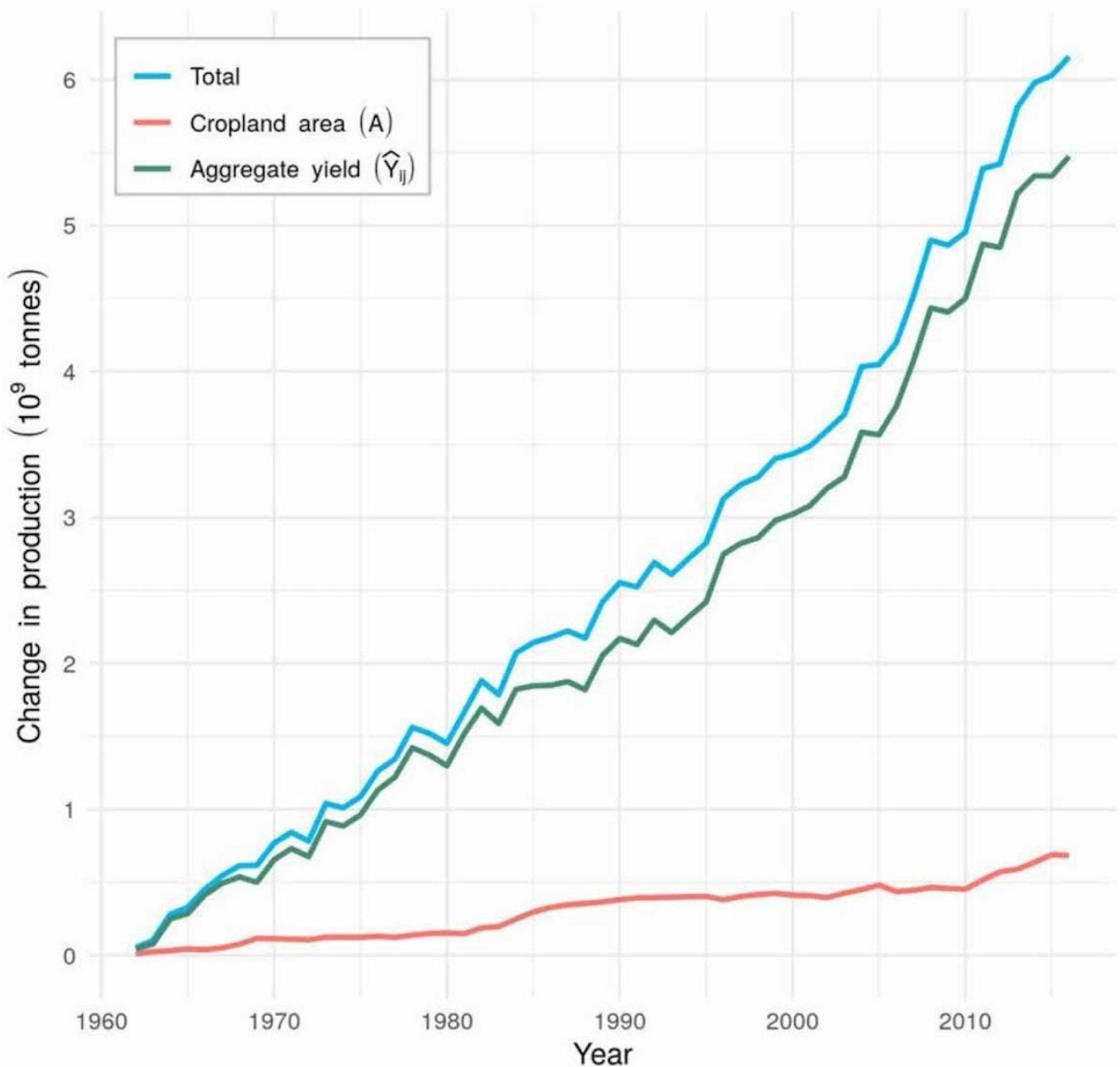
We did the breakdown, or decomposition, in two stages. In the first stage, we found that only 11% of the overall increase in crop production (including crops used for food, feed, fibre, and fuel) came from an expansion of cropland area. The bulk of the growth, 89%, came from growth in what we call aggregate yield—total crop output per unit area per year (Figure 1). Increasing yields is not without its downsides, but overall this is good news since it means that less natural habitat had to be converted to farmland. Other research (including papers by [Thomas Hertel et al](#) and [Nelson Villoria](#)) suggests that without yield improvements, several hundred million hectares of land would have been taken over by cropland.

Aggregate yield alone, however, is a blunt measure of progress in farming. Growth in aggregate yield does not necessarily imply that farm management or agricultural technology has improved. This is because there are many different ways that aggregate yield could increase over any given year, including through farmers switching from low-yielding to high-yielding crops and through crop production shifting to countries with on average higher yields.

To address this shortcoming, in the second stage of our analysis, we broke down aggregate yield into four contributing drivers, which we call pure yield, cropping intensity, country share, and crop composition (Figure 2).



**Figure 1.** Contribution of cropland area and yield growth to global crop production over time. The total increase in crop production, as well as the contributions from each factor, is cumulative.



Pure yield is defined as the output of a given crop per unit of harvested cropland area in a given location. It's as specific and narrow a definition of yield as you can get. It could, for example, be the number of bushels of soybeans produced per hectare in a given harvest in Brazil. Pure yield pinpoints the ability of farmers to leverage technology to produce as many crops as possible on as little land as possible, and it contributed 63% of the overall increase in aggregate yields, with much of this progress coming from high- and upper-middle-income countries.

The remaining 37% of aggregate yield is divided among the other three factors. The first one we looked at is cropping intensity, or the average frequency per year with which each hectare of cropland is harvested. For example, planting and harvesting two crops of rice per year would imply a cropping intensity of 2, whereas leaving a field fallow every other year would imply a cropping intensity of 0.5. Increased cropping frequency contributed 23% of the increase in aggregate yield, a finding that aligns with other research pointing to an important role of this factor in expanding crop output.

The last two factors are much more seldom considered as drivers of global aggregate yields. But they should not be ignored because in contrast to pure yield and cropping frequency, they don't necessarily have anything to do with farming practices or technology, but rather broader phenomena like diets and trade.

First, we have crop composition: the proportion of cropland dedicated to different crops in each country. Shifts in crop composition drove up aggregate yields by 19%. This means that the world overall shifted towards relatively higher-yielding crops, especially sugar cane, palm oil, corn, and soybeans. A larger share of high-yield crops means greater output per hectare, even if the pure yields of all individual crops remain the same. And the overall increase hides substantial variation across the world: many high-income countries actually saw their crop composition shift towards lower-yielding crops.

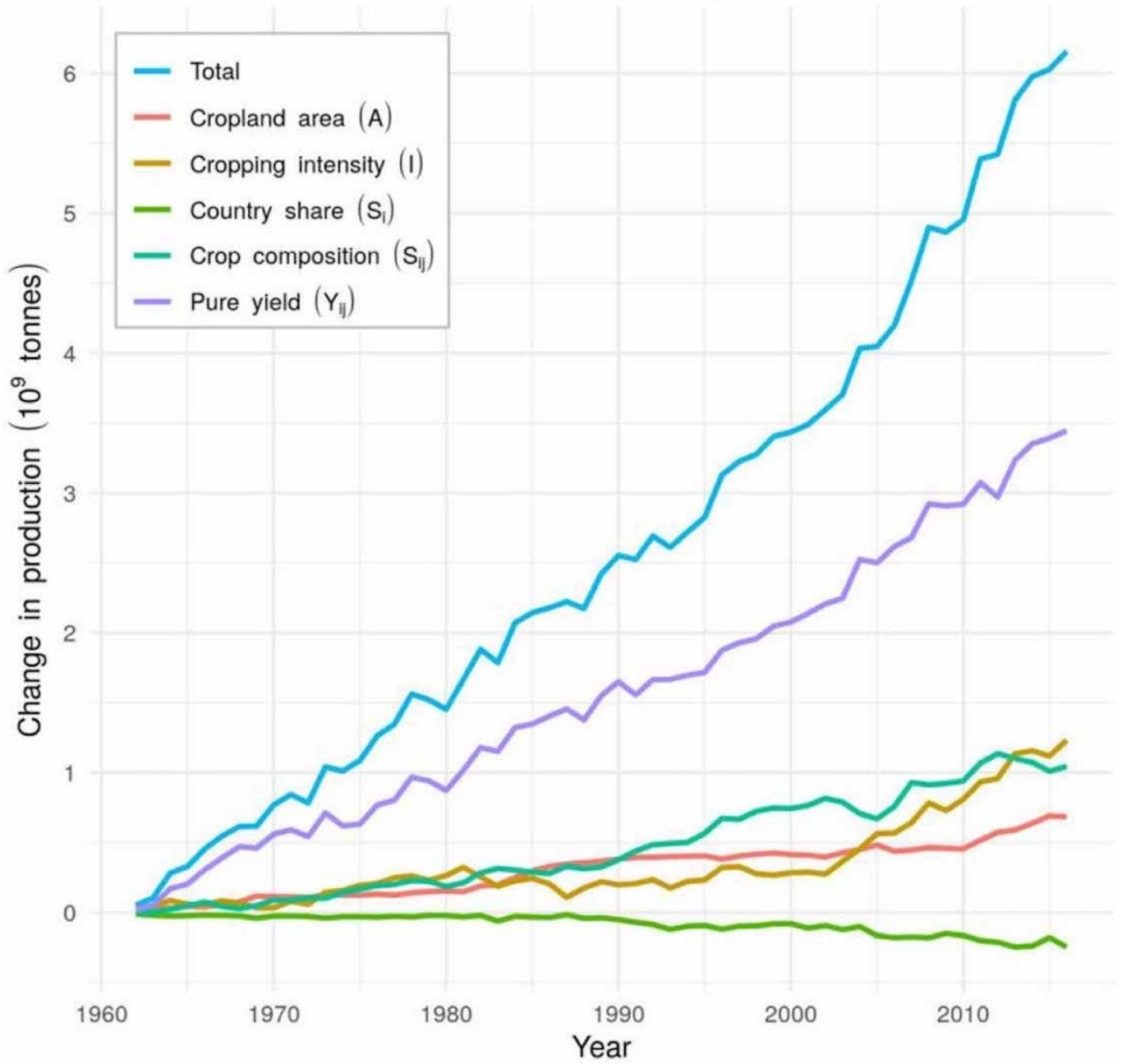
The final factor is what we call country share, which represents the geographic distribution of cropland. Between 1961 and 1985, this component had a net-zero contribution to global crop production, but after 1985, this factor *reduced* aggregate yields to such a degree that it offset 4% of the positive contributions from other factors. What this means in practice is that, in the last few decades, crop production has generally shifted to countries with lower yields. Shifting the location of crop production comes with an environmental cost since the areas in which production is growing—especially low- and middle-income countries in the tropics—often have much higher levels of biodiversity and more carbon stored in soils and forests.

Beyond explaining the factors underlying increased crop production in the past, our study also provides hints about the future. For example, it's possible that the global crop mix will shift towards lower-yielding crops, as we show it already has in high-income countries. Similarly, crop production might continue shifting toward countries with lower yields. Both of these trends could be a drag on global aggregate yields, meaning it would take more cropland expansion to meet future crop demand.

There's also evidence from other studies that some parts of the world are seeing pure yields stagnate, possibly as a result of crops getting close to their upper yield limits: what you could get under ideal environmental and management conditions. At that point, there is no currently practiced combination of agronomic techniques or inputs that could raise yields. There are probably other factors contributing to the yield stagnation, and yield limits could be raised through crop breeding or biotechnology. The stagnation is nevertheless a cause for concern especially because recent evidence points to a slowdown in overall productivity growth in global agriculture.

All in all, keeping up the historical trend of getting most of the increase in crop production from aggregate yields rather than cropland expansion is going to be challenging. The stakes are high: further encroachment of cropland onto natural habitats risks worsening carbon emissions and biodiversity losses. Heading off such a future will require a broad suite of interventions ranging from technological innovation to extension services and infrastructure.

**Figure 2.** Cumulative increase in global crop production broken down into five factors.





# Crop Yield Increase with Precision Technologies

<https://eos.com/blog/crop-yield-increase/>

28 October 2020



**EOS DATA  
ANALYTICS**

Throughout the existence of agriculture, one of the main issues of interest to farmers was the issue of increasing crop yield. What are the best ways to increase crop yield per acre? What are the factors that affect crop yield most? Recently, in view of the constant growth of the world's population, this issue is becoming more and more relevant. However, with

the emergence of new challenges for agrarians, there are also new ways and technologies appearing that are called to respond to them. This is what this article is about: what growers can do for increasing crop yield on their farmlands and what new technologies can help farmers in this matter.

## What Is Crop Yield And Why Is It Important?

Crop yield is the **measure of seeds or grains which is produced from a given land plot**. It is usually expressed in kilograms per hectare or in bushels per acre. Such an indicator as the average crop yield per acre serves as the evaluation of a farmer's agricultural output on a particular field over a specified time period. It is considered to be probably the most important measure of each farmer's performance, as it embodies the result of all the efforts and resources invested by agrarians in the development of plants on their fields. Given this, no wonder that most farmers find themselves in a constant quest called "How to increase the average crop yield per acre?".

Let's see what are the main factors that affect crop yield and what are the most efficient and up-to-date solutions and technologies that can help farmers achieve better yields on their fields.



## What are the Ways to Increase Crop Yield?

For centuries, farmers have pondered over and worked on the issue of increasing crop yields. Some of the solutions found were efficient and some were not. Today, in addition to the valuable experience of previous generations of farmers, the agriculture industry can also benefit from the achievements of modern science and technology. Let's now look at the main ways for the farmers to increase crop yields and see how previous experience and advanced technology can be effectively combined to improve agrarians' performance.

### Quality of Seeds



Agricultural productivity depends on the quality of seeds with which farmers sow their fields. Therefore, in order to increase crop yield on their farmlands, agrarians are recommended to sow only **certified seeds** that have passed all the necessary quality controls. Certified seeds may cost higher than those that do not have certification, but the result will be worth it, because the proper quality of seeds is one of the main factors that affect crop yield. Besides that, **planting only high-quality seeds represents one of the eco-friendly methods to increase crop yield**. If needed, a farmer can check the quality of particular seeds by referring to a relevant seed company and requesting it to conduct special trials on a given land plot.

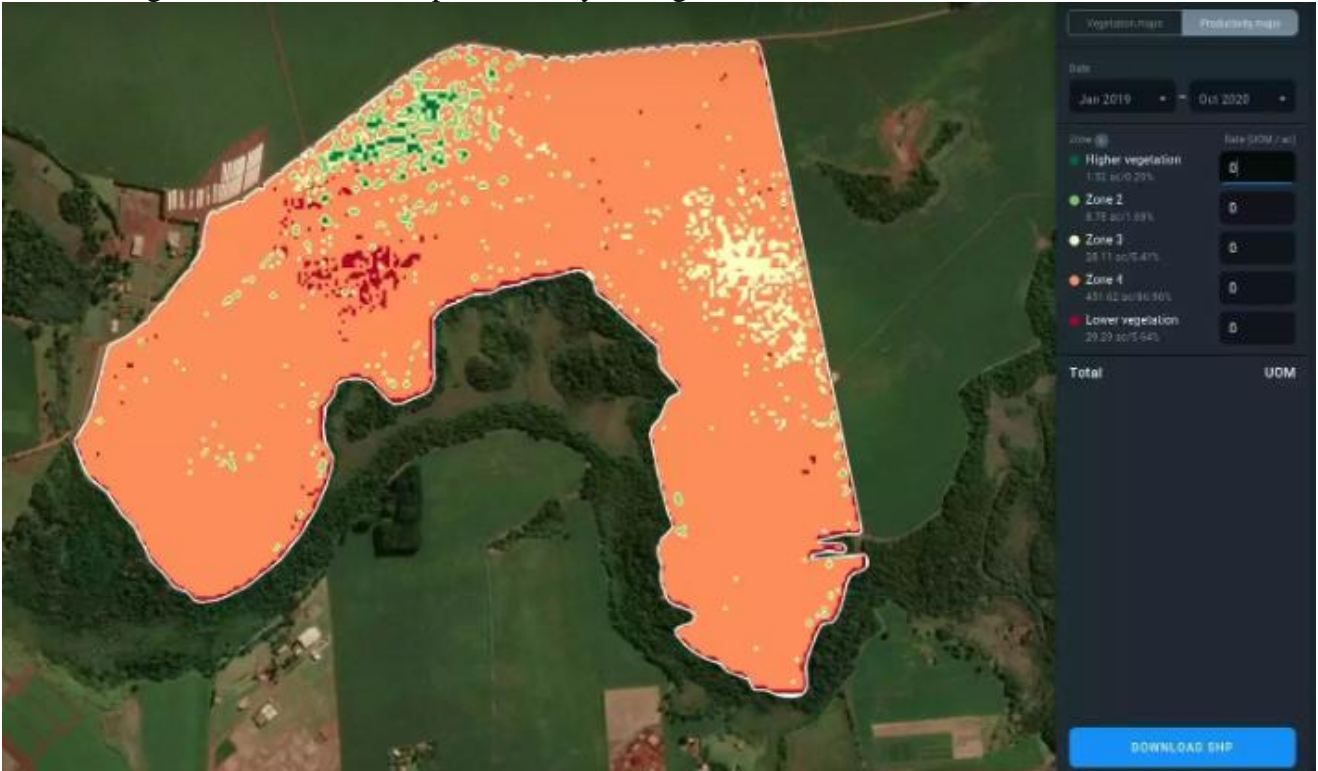
Apart from this, it is important to remember that the quality of seeds is not something that is permanent and undamageable. Seed grains need protection from the moment they are planted in the ground. Seed coating is one of the **seed treatment techniques** used to accomplish this. It is the process of *protecting seed grains with outer materials* in order to improve their characteristics (weight, size) and/or provide them with some active compounds (micronutrients, microbial inoculants, growth regulators, etc.) called to protect them against **plant diseases** and boost their growth.

### Field Productivity Zoning

Before sowing, it is important for a farmer to understand productivity of the field that is to be sowed and, if applicable, define specific areas where plants grow better. This process is called productivity zoning. In this way, a grower can **plant seeds more densely in the areas with greater productivity**, potentially getting increased crop yield, and do not waste them much in the zones with low productivity. Also, such zoning allows farmers to **properly treat the field areas with lower productivity** and take all necessary actions to increase soil fertility and its overall important characteristics to grow a particular plant.



Today's technologies allow farmers to carry out such productivity zoning of their fields faster and more efficiently than before. For this purpose many agrarians use the **EOSDA Crop Monitoring** software. With its high-precision technology and satellite-driven data, the growers can generate field productivity maps based on the historical data and, thus, clearly identify the areas with the highest and the lowest productivity on a given farmland.



## Monitoring Crops Growth

From the early stage of development through budding and up to harvesting, it is very important to monitor plant health in order to timely detect any problem that can arise on a given farmland (be it related to pest infestations, plant diseases, weeds, etc.) and that can affect the crop yield.

Regular **satellite monitoring of land plots**, for instance, allows farmers to **easily follow the growth status of plants and carry out crop yield estimation using remote sensing**. The evolution of plant health status provides key information to decide on possible interventions to the needs of crops.

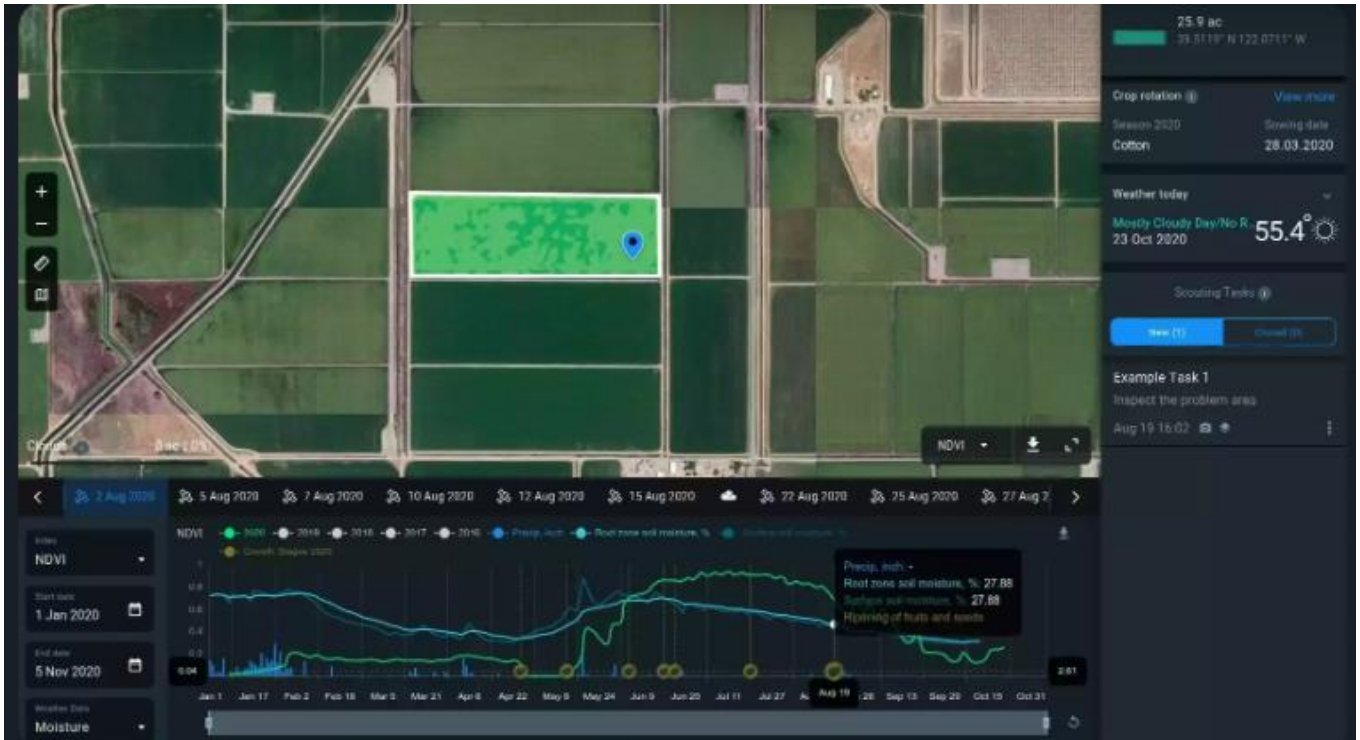
Even though satellites do not measure the stages of plant growth directly, but with spectral indices. EOSDA Crop Monitoring also provides data on daily temperatures, analyse their dynamics in time, and calculate their total sum. Based on this data, software is capable of detecting **stages of plant growth** for various types of plants and represents their correlations with other data so that the farmers could make well-weighted decisions.

Apart from this, EOSDA Crop Monitoring provides agrarians with valuable data about different vegetation indices, such as:

- **NDVI – Normalised Difference Vegetation Index** (recommended during the active stages of crop growth);
- **MSAVI – Modified Soil Adjusted Vegetation Index** (it is best to be used at the early stages of crop growth);



- **NDRE – Normalised Difference Red Edge Index** (recommended to be used together with the NDVI index);
- **ReCI – Red Edge Chlorophyll** (most relevant during early and active growth stages of crop growth).



## Accurate Weather Prediction

The average crop yield per acre on a given field is very much conditioned by weather factors. With the same quality of soil and the same species of seeds planted, the **climate conditions have a predominant influence on the development of plants and, consequently, on yields**. It is especially true when considering **how climate change affects agriculture** in separate regions and on Earth in general. To work efficiently and cooperatively with such an important but uncontrollable factor as weather, farmers have an opportunity to refer to the **newest technological solutions in agriculture** that help them obtain accurate weather prediction.

For example, the use of EOSDA Crop Monitoring software in precision farming gives agrarians a possibility to take preventive measures as to **protecting their crop yield from possible damages caused by weather extremes**. High-precision weather forecasts can help growers decide what practices they can perform. Given all this, it is worth noting that accurate weather forecasting in **precision farming** can greatly contribute to increasing crop yields on a particular farmland.

EOSDA Crop Monitoring provides farmers with weather analytics that include current and historical weather data, as well as forecasts up to two weeks ahead. Also, this software allows agrarians to detect the extreme weather states that can affect crop yields:

- cold stress

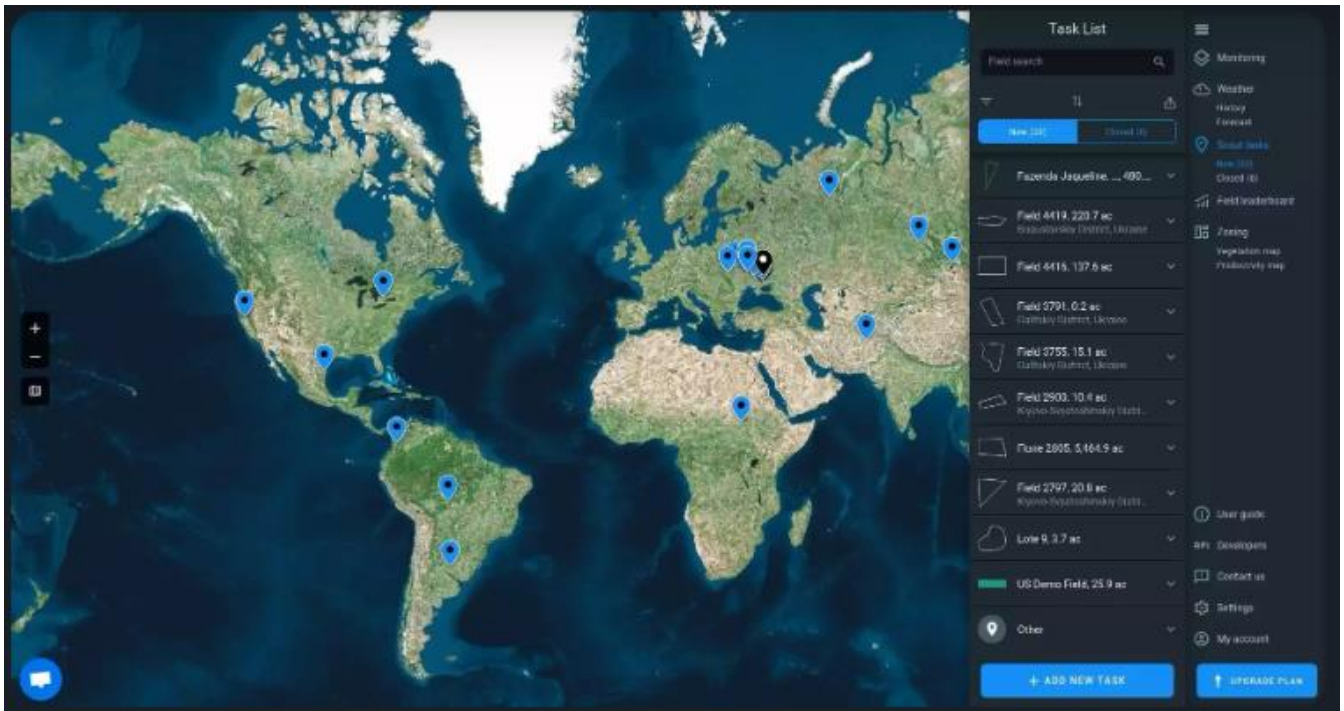


- heat stress



## Regular Scouting

Scouting is one of the important parts of agribusiness management aimed to ensure proper development of plants and increase crop yields. Often, when a grower has large fields, it is difficult and non-effective to scout acre by acre, as it is time-consuming and resource-intensive. EOSDA Crop Monitoring takes advantage here and offers convenient scouting task management. **Crop Scouting** solution is intended to **save time and replace a tedious work of human experts on fields**. All that is needed to do is to log into your Crop Scouting app, check for any problem areas on your land plot detected by a satellite, tag these areas on the map, and organise closer scouting of these specific zones.



The scouts then proceed to problem investigation on the spot, make pictures, upload them in the application, and enter necessary data in the relevant section. This way, a farmer can create multiple scouting tasks simultaneously, easily managing them and monitoring their completion. Such time-effective and highly accurate field scouting solution assists agrarians in their daily work and can help increase their yields.

### Proper Irrigation

Farmers who aim to increase an average crop yield per acre on their fields must have a streamlined irrigation system at hand. Providing the plants with the appropriate amount of water directly affects the development of plants and, consequently, the crop yields. Effective irrigation of farmlands is closely linked to weather forecasts. Today's technologies – special applications and software for farmers – provide access to hyper-local weather forecasting. It opens the door for **precision irrigation** and allows agrarians to plan in advance and organise irrigation of their fields in the most accurate and efficient manner.

### Smart Application of Fertilizers

Although fertilizers are intended to nourish the various **types of soil**, boost plant growth, and increase yields, their use should be balanced and prudent. Using too much fertilizers can negatively affect the **soil quality** and, therefore, the agricultural productivity. Within one field, different areas may have different needs for soil fertilization, which is why the best solution here is to use fertilizers selectively, depending on the need for them in different field zones. This accurate approach to field fertilization helps **keep the soil in good health, which helps increase the average crop yield per acre.**

One of the technological solutions in this context is EOSDA Crop Monitoring software. Based on satellite imagery, it has a field zoning feature which divides a farmland on 2-7 zones, identifying the areas that require more care than others. Such precision technology is often used by growers as one of the eco-friendly methods to increase crop yield.



## Crop Protection Methods

Agrarians aiming to increase crop yields must take care of their plants throughout their development and up to the end of the growing season. Depending on the problem that may arise, farmers use different substances to diminish the impact of weeds, pests or diseases on crop yield. Such substances are usually herbicides, insecticides, desiccants, plant growth regulators, fungicides, adjuvants, etc.

In general, there are various crop protection methods. Among the main ones are weed/pest management and plant disease management.

## Pest Management



**Weed control and pest management** are the biggest challenges for farmers during the growing season. A single weed, for example, can generate over 10 million weed seeds, and if they are not managed in time, it can substantially decrease the yields on a given field and create problems for years to come.

Pest infestations also require a comprehensive management approach from agrarians. As pests are highly adaptable and fast-reproducing organisms that can threaten the yield on a particular farmland, farmers must always be ready to respond to the pest infestation issue in a timely manner.

## Plant Disease Prevention and Management

Another important threat to a grower's agricultural output is represented by plant diseases. Depending on the type of plants to be grown on a field, farmers can use various plant disease prevention and management methods, like selecting disease resistant or disease tolerant varieties, treating seeds with fungicides, and applying pesticides, and other similar substances on developing plants. Agrarians should pay special attention to using these or other methods in time so that they have a maximum effect possible.

It is very important to remember that **protecting plants in a timely manner is crucial for crop yield per acre indicator** – the sooner a problem is identified, the faster and easier it will be solved and the fewer field acres will be affected.

## Soil Testing and its Quality

The quality of soil, i.e. its fertility, is one of the main factors that affect crop yields. Apart from agricultural productivity, the soil quality also influences the cost for a farmer to grow one or another plant, as some of them require certain ratios of specific elements in the soil, like mineral particles, organic matter, water, air, etc. To attain increased crop yields, farmers need to closely monitor soil conditions on their land plots. One of the best ways to maintain the soil in good health

is to practice **crop rotation**, among others. Alternating plants on a given field plot prevents soil exhaustion and breaks pest cycles, which will result in better agricultural output and, therefore, will increase the average crop yield per acre.

### Forecasting Crop Yield



Crop yield prediction is very important for global production of food. Governments all over the world use analytical data concerning **crop yields forecasting** to take grounded decisions as to their national import / export operations. Companies specialised in seed breeding need to foresee how new hybrids will perform in different climate and soil conditions to plan on further improvement of new variations of seeds. Farmers, in their turn, take

advantage of crop yield prediction to make well-weighted agribusiness decisions.

One of the latest trends in **industrial agriculture** is predicting crop yield with remote sensing satellite data, which has already been proved efficient in different corners of the globe. It is important to note, however, that the accuracy in crop yield estimation using remote sensing depends on multiple factors, such as climate conditions (weather extremes), soil health, pest infestations, etc. Besides that, an important decision-making role in agricultural risk management and crop yield prediction is played by reliable historic records on yields in a given field.

At present time, various machine learning techniques for prediction of crop yield are used all over the world. Crop yield prediction software requires big amounts of input data, yet may sometimes be not fully accurate due to possible fluctuations in weather conditions, for example.

### Smart Combination of Agricultural Efforts

Taking into account all the above, it could be said that there is no single and universal method of increasing an average crop yield per acre on a farmer's land plot. In most cases, it is a smart combination of different agricultural efforts that can vary depending on unique characteristics of a grower's field. It is yet worth noting that the EOSDA Crop Monitoring software can be of considerable help for farmers with most of such agricultural efforts, assisting them whether directly or indirectly through accurate monitoring of separate agricultural activities and substantial facilitation of their implementation.

**HIGHER CO<sup>2</sup> LEVELS are CRITICAL for FOOD PRODUCTION**

**How long do you think Earth has before all life goes extinct, due to either humans or natural causes (asteroid, global warming)?**

<https://www.quora.com/How-long-do-you-think-Earth-has-before-all-life-goes-extinct-due-to-either-humans-or-natural-causes-asteroid-global-warming>

11 June 2023

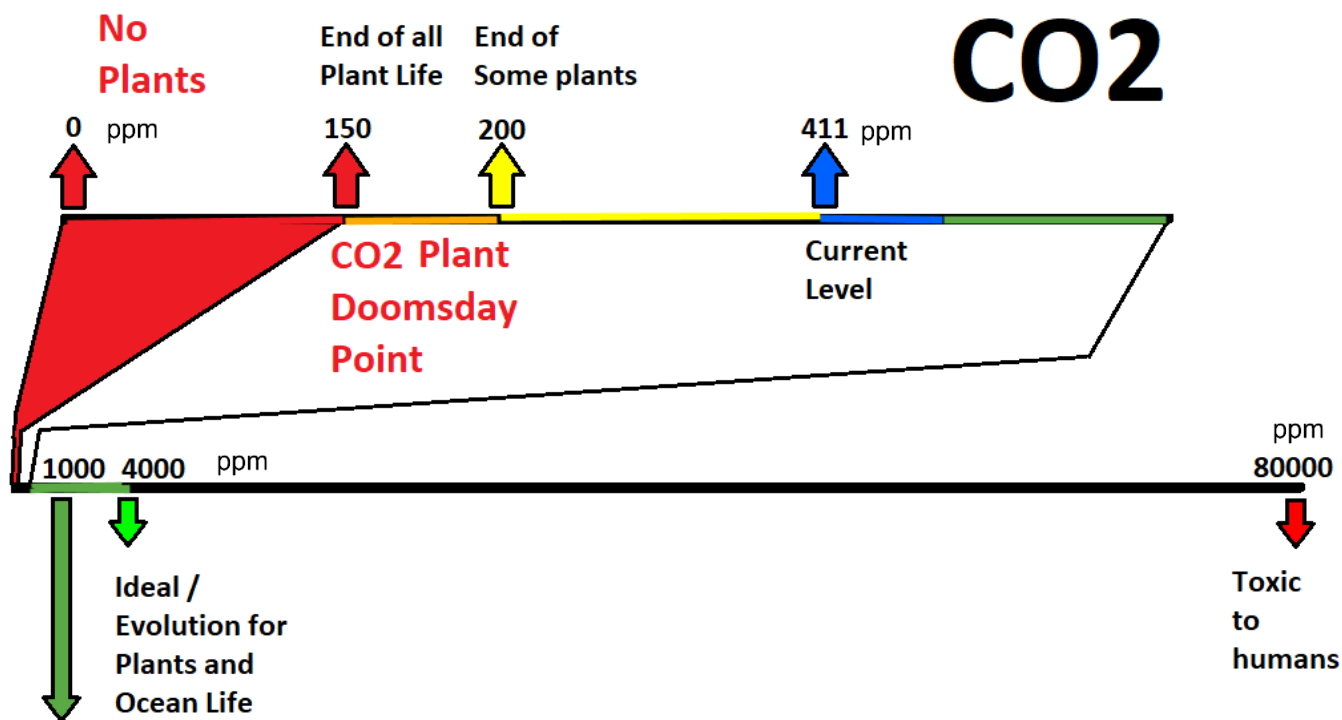
It really depends on how soon CARBON SEQUESTRATION efforts can reduce atmospheric CO<sup>2</sup> from 400ppm to 200ppm and cause a chain reaction of extinctions.

**Long term levels of CO<sup>2</sup> in the atmosphere have been typically 1% (10,000 ppm).**

**CO<sup>2</sup> levels would need to increase 25 fold to reach that level.**

**CO<sup>2</sup> levels presently are dangerously low and present worldwide famine potential!**

**CO<sub>2</sub> levels approaching 0.100% appear to be optimum for global food security!**



Farm Greenhouses

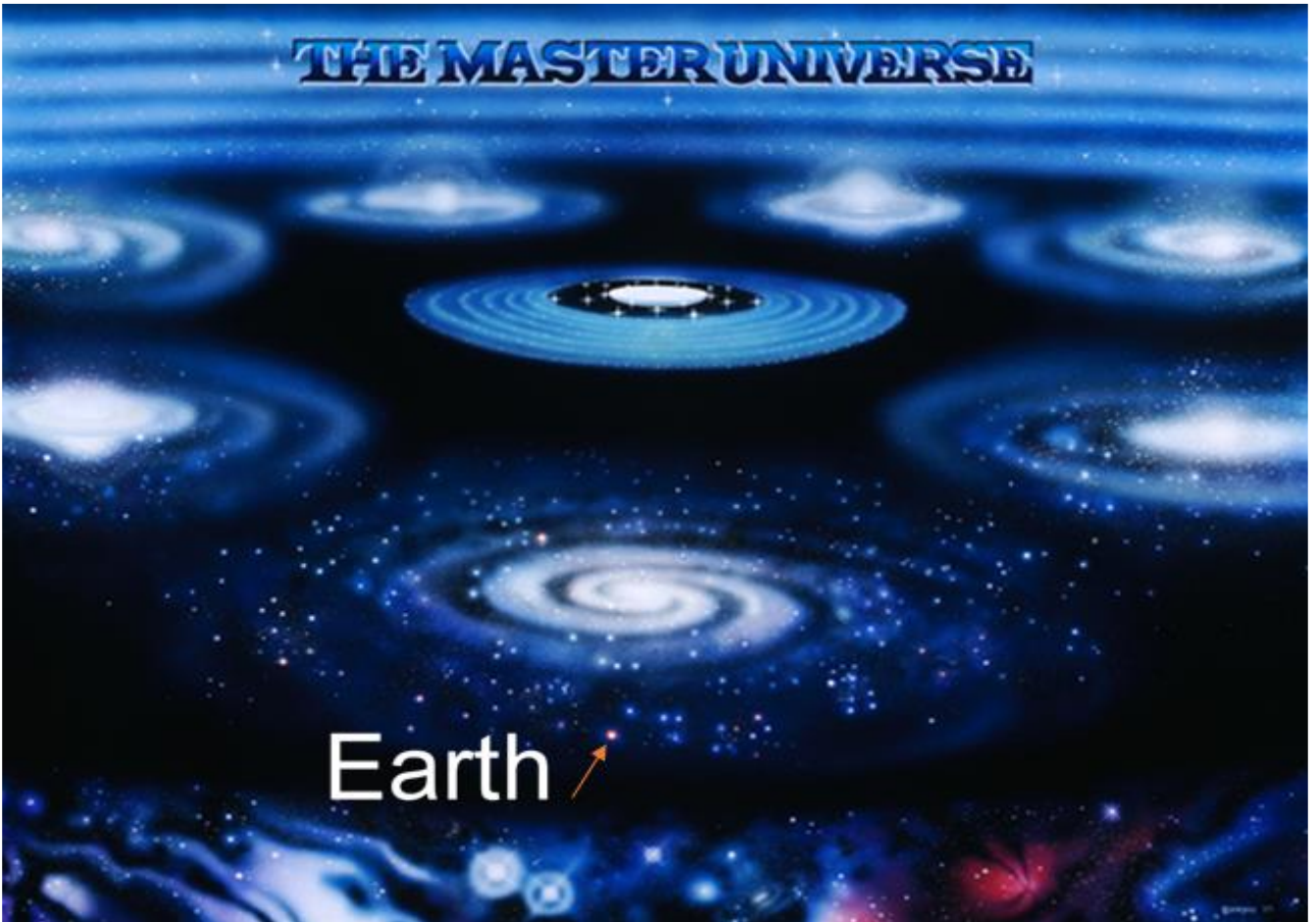
Level in a room of people

**CO<sup>2</sup> has recently increased only from 340ppm to 420ppm, a long way off 1,000ppm!**

Throughout the first quarter of the 21<sup>st</sup> century (2000 – 2025), humanity has been hell bent on its self-destruction by endeavouring to lower the atmospheric CO<sup>2</sup> levels, should they have fallen to the low levels as noted above, worldwide famine would have unfolded!

Science is confused and frequently in error due to dependence upon mind-centricity.





The central universe is stationary. There are seven super-universes rotating around the central universe. Earth is on the outer edges of one of the seven super-universes. Each star (Sun) we see in the night sky





has between zero and three inhabitable worlds within its solar system. One in three inhabitable world is inhabited.



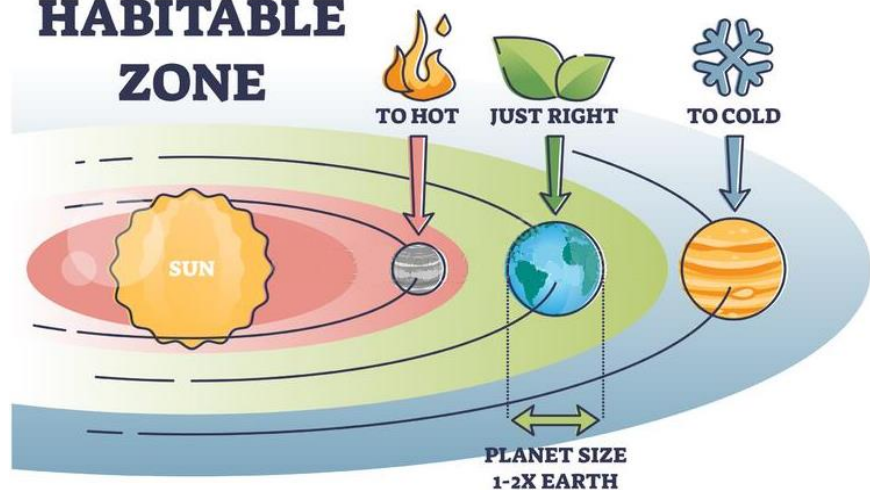
Energy is transmitted from the centre of the universe to the stars and in turn, the stars (suns) transmit energy to the core of the planets within its solar system. There are periodical cyclical surges in the volume of energy relayed. This can cause rapid climate changes, etc.

During the mid to late 20<sup>th</sup> century (1950s and onwards) the surge in energy relayed to the cores of the worlds in our solar system has brought about noticeable effects. The surge in energy received into the core of Earth has brought about a slight increase in the rotation of the core, this has increased tensions on the surface, a slight tilting and noticeable changes in Earth's weather patterns.

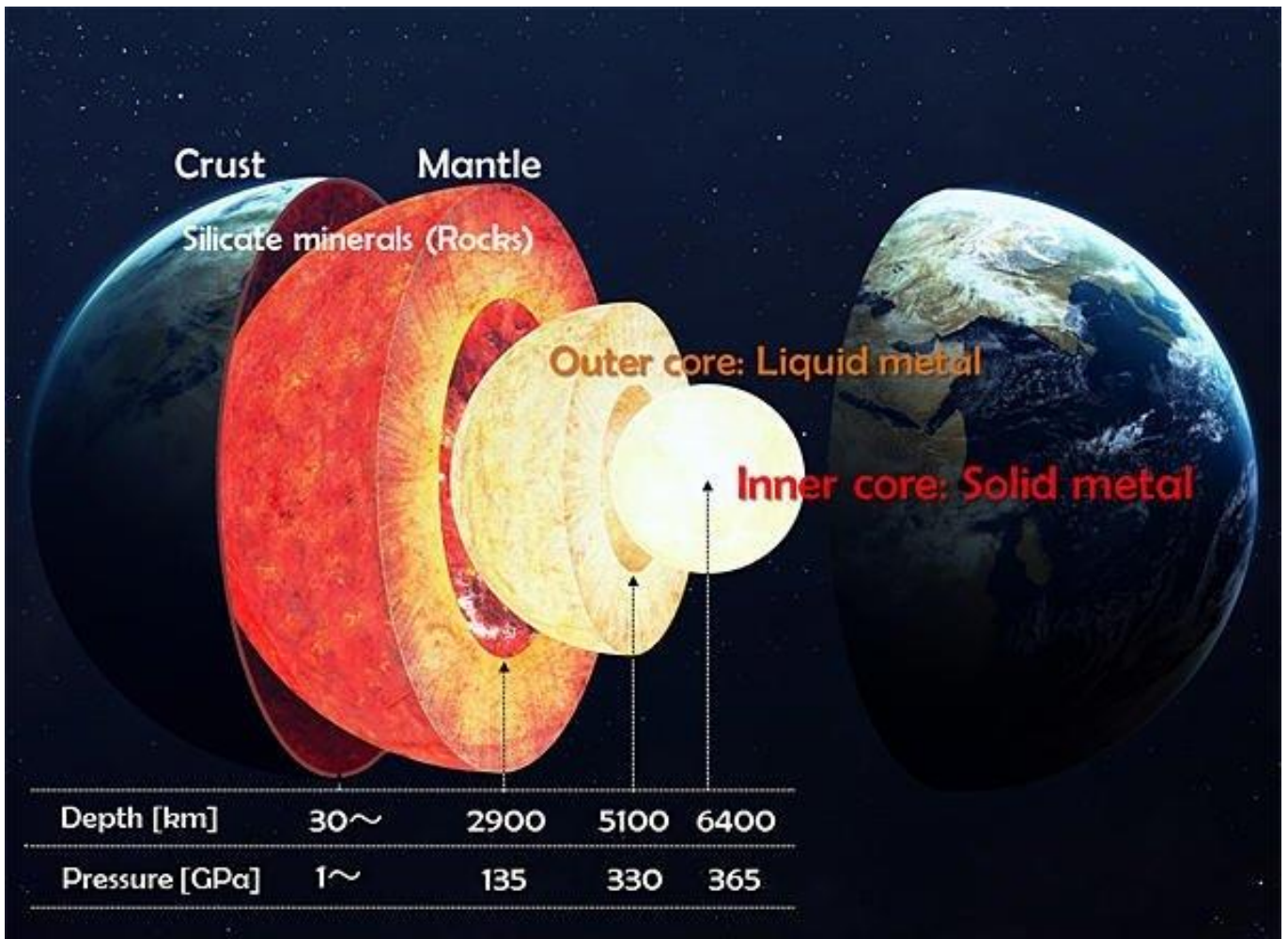
NASA has also recorded changes to the environments on the surface of our neighbouring planets throughout our solar system!



### HABITABLE ZONE







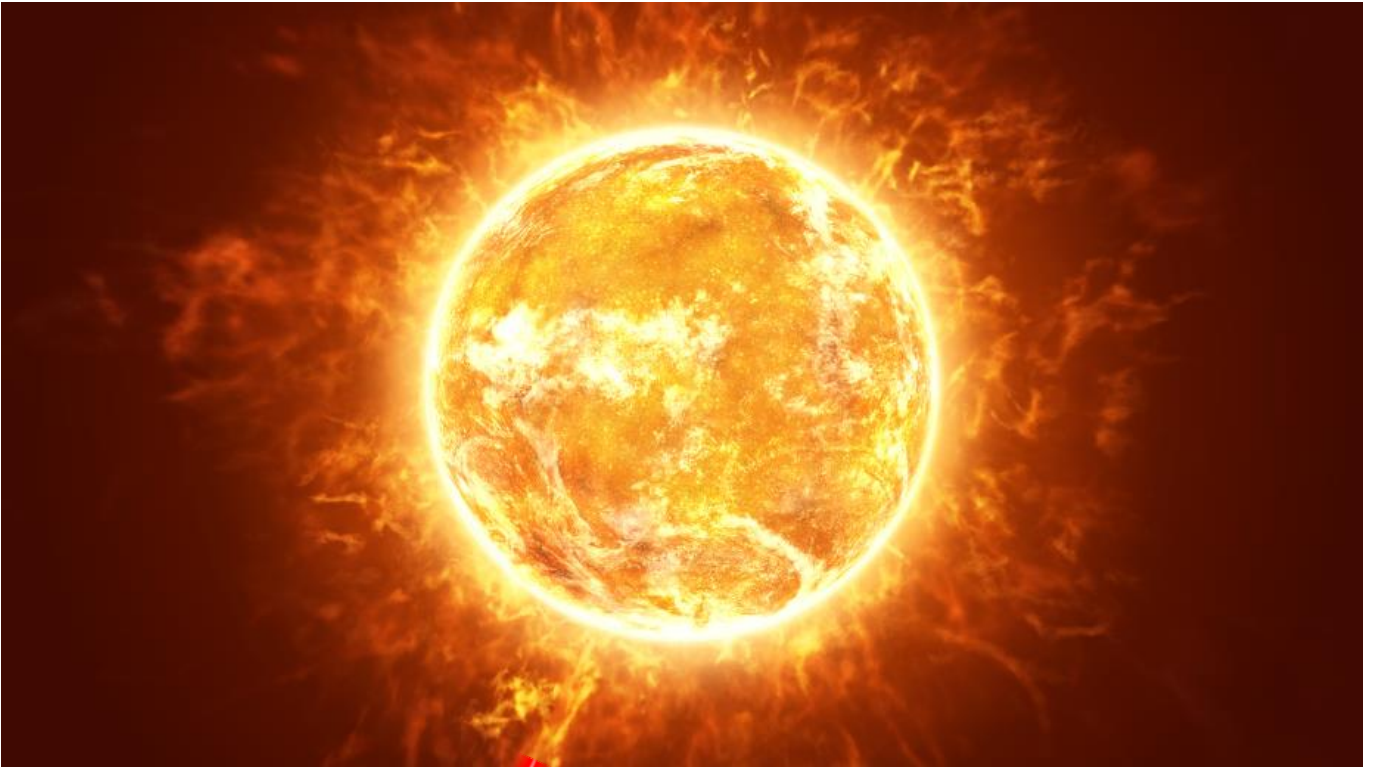
The data on climate change is that it is actually not gradual. Periodically for reasons not well understood at this time the climate abruptly changes. We are beginning to piece together the story of how this works. Science will pull this together but it will take a long time.

Typically is omitted transmission of heat by induction into the core of the Earth in any understanding of rapid weather pattern changes.

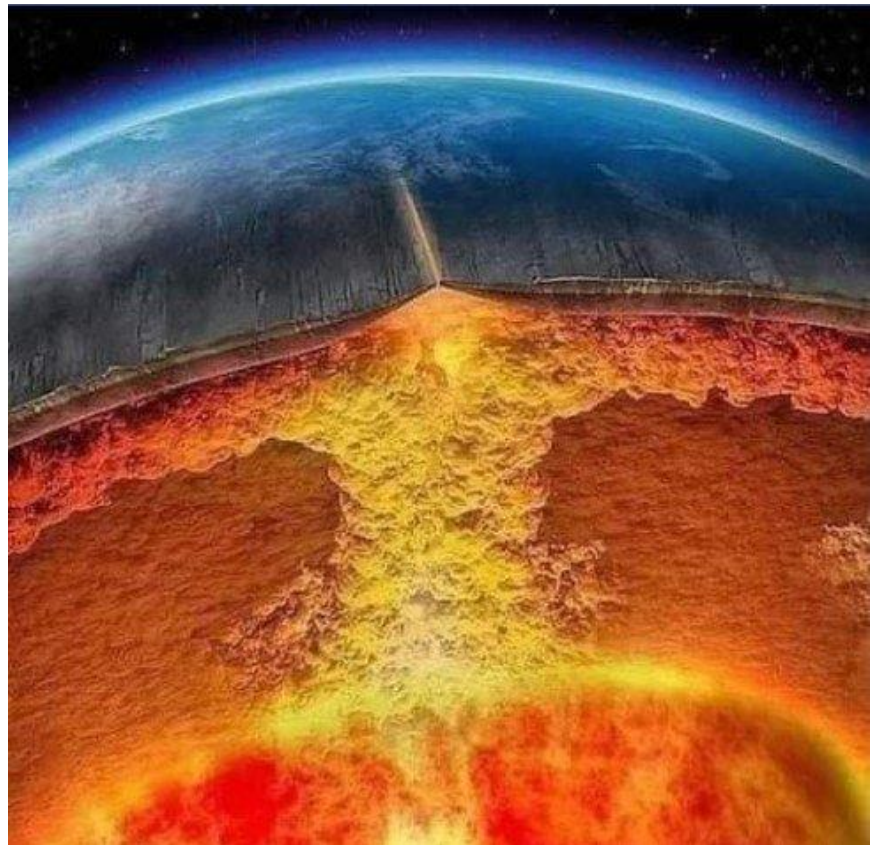
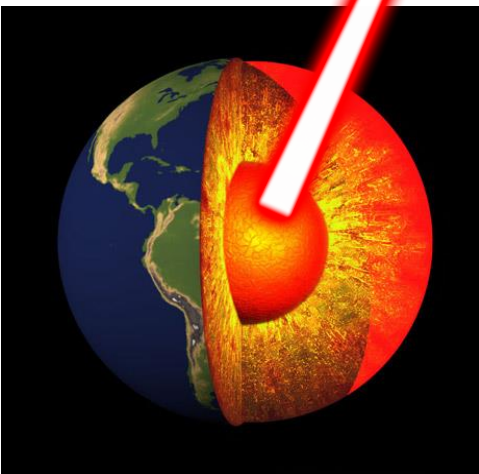
Every single day we continue to produce more CO<sup>2</sup> the world gets more and more filled with life. CO<sup>2</sup> is life. Literally there would be no life on Earth if we didn't produce CO<sup>2</sup>. Now as to CO<sup>2</sup>, our C3 photosynthesis plants are doing nearly 800% more production for the same amount of sunlight as before CO<sup>2</sup> rose. Our C4 plants are up nearly 650% as well.

The unsuspecting public worldwide are generally oblivious to the covert control over them maintained by 'hidden controllers', being faceless unknown men who have enormous wealth and global agendas centred on their gross addicted to power, control over others and further wealth accumulation. These faceless men consider that the world has a population with many people being 'surplus to their needs'. Consequently, they propagate falsities that are detrimental to people. 'Global warming due to CO<sup>2</sup>' is a grossly misleading statement of these control maniacs. Should they have been successful with their propaganda, then CO<sup>2</sup> levels may have diminished to levels that would have resulted in worldwide famines and starvation to death of billions of people and much of our natural environment.

Now that you are aware of these misleading agendas, question everything that you doubt in detail.

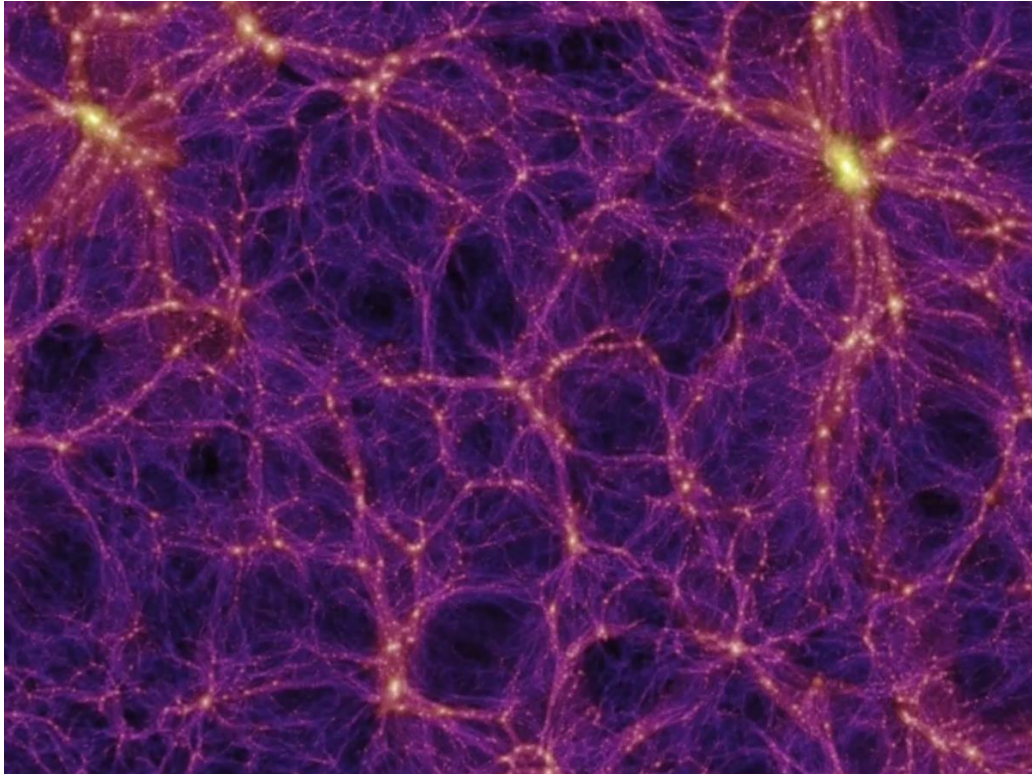


The continents of Earth float on molten lava! Tectonic plates adjust in levels according to the loads upon them. Thus, melting ice fields does not necessarily result in rising sea levels! As the core rotation may change a little due to energy load changes, temperatures on the surface may rise as well as fall as of a consequence to changes with the core.



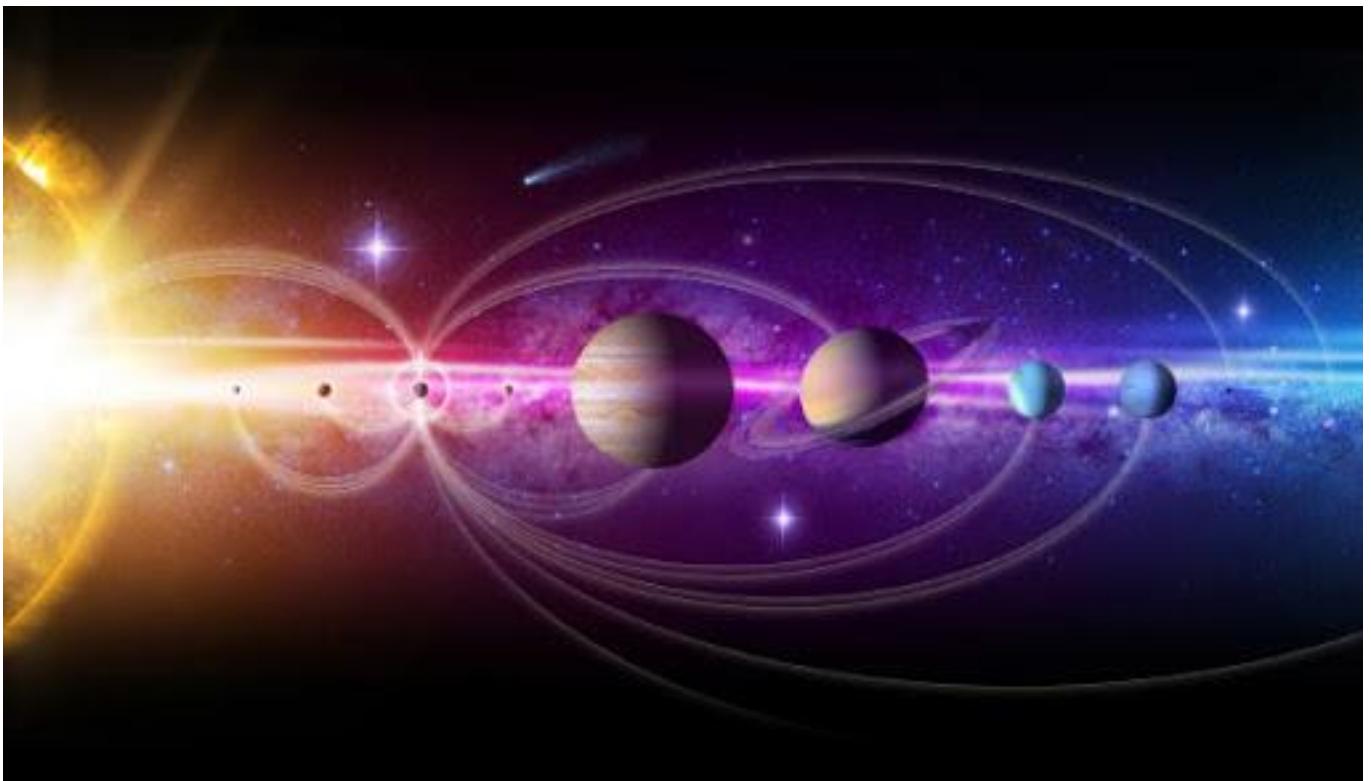


# Universe Celestial Autobahn

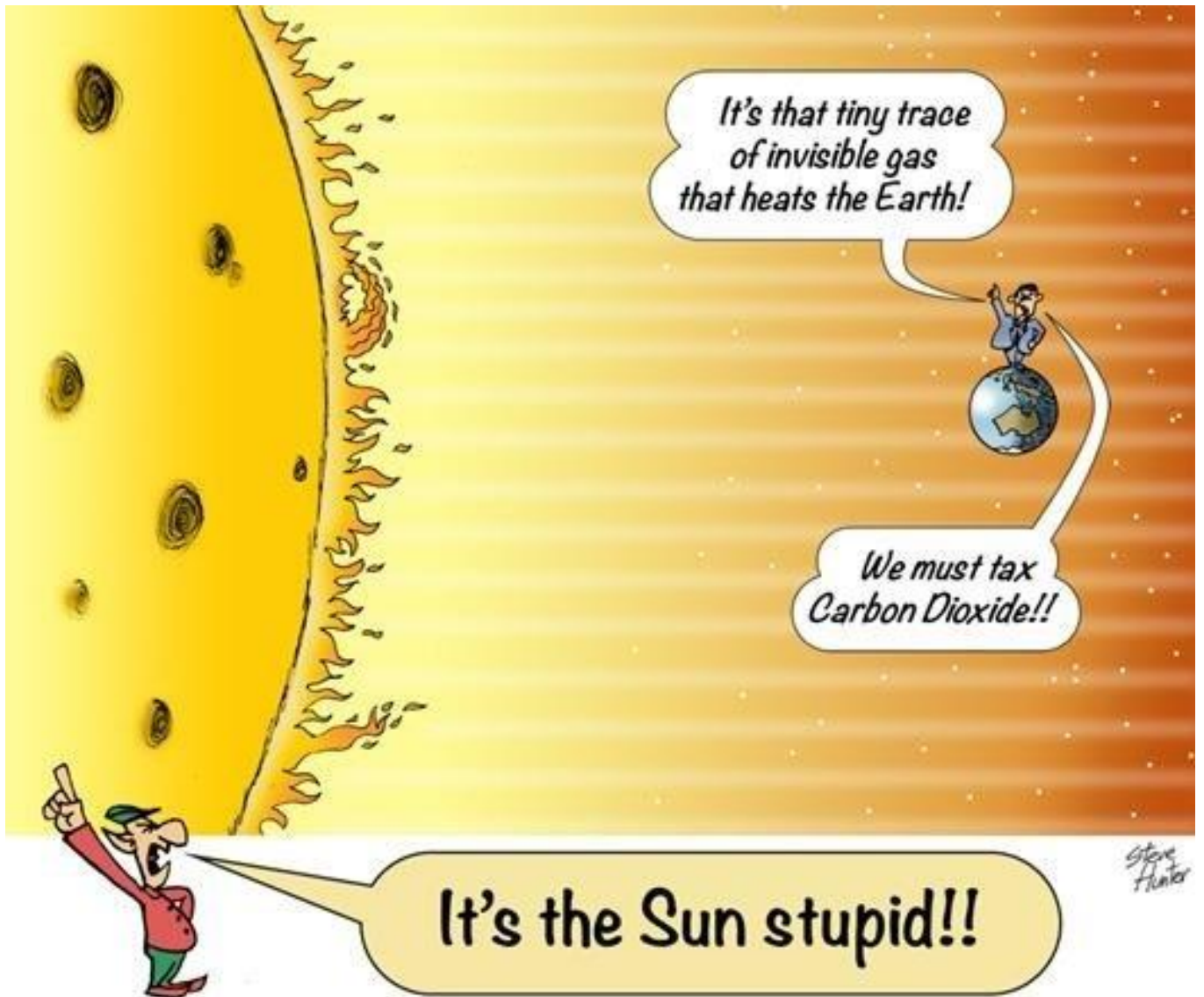


Angels, Celestials and Spirits of all descriptions utilise the energy transmission lines throughout the universes to travel along. You might even call them intergalactic super highways. These energy transmission lines are throughout every part of the universes.

# Local Celestial Autobahn



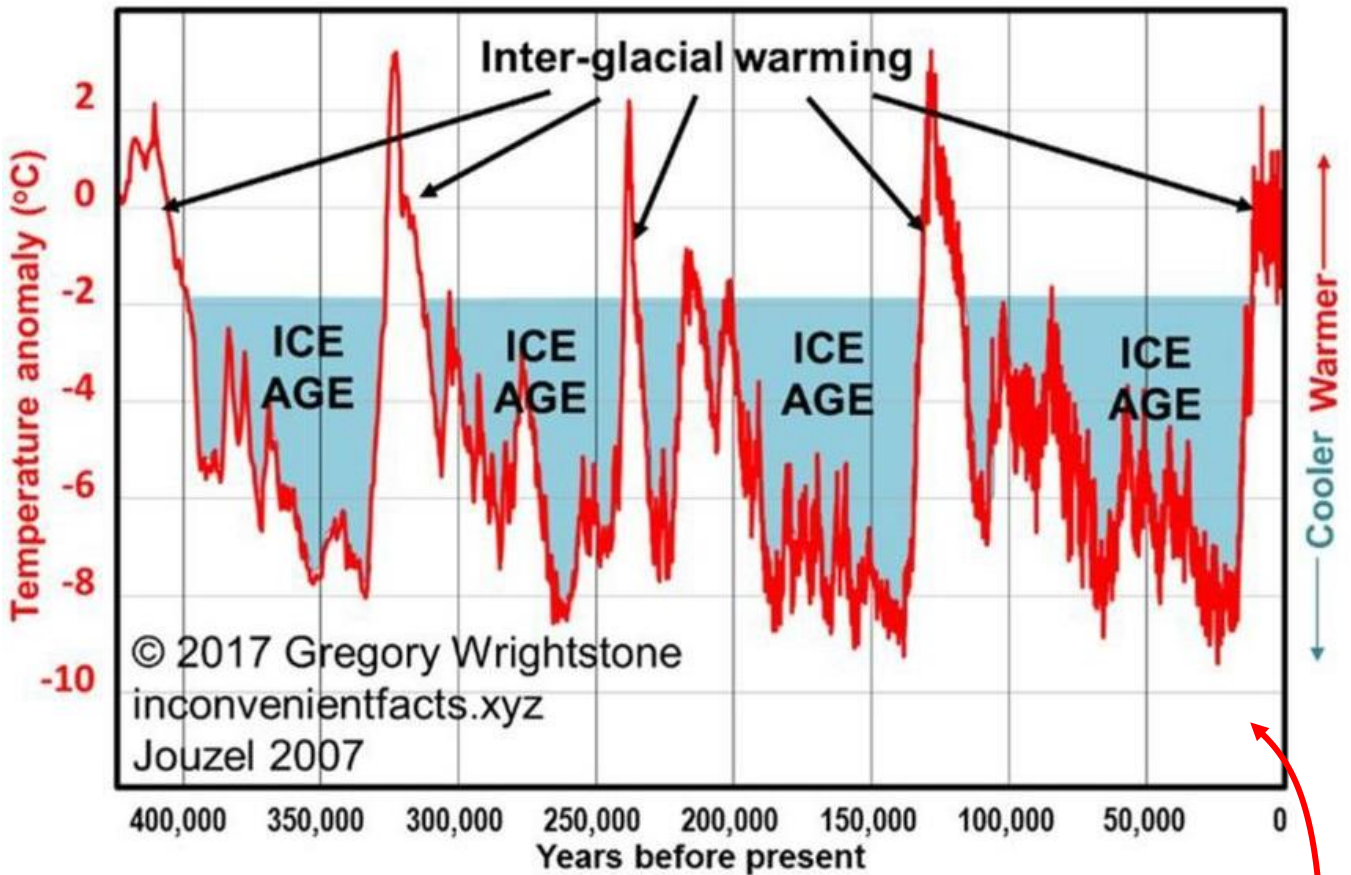




Kindly go to [www.pascashealth.com](http://www.pascashealth.com), then Library Download page, scroll a long way down to Corporate Foundation Documents, and click on to open:

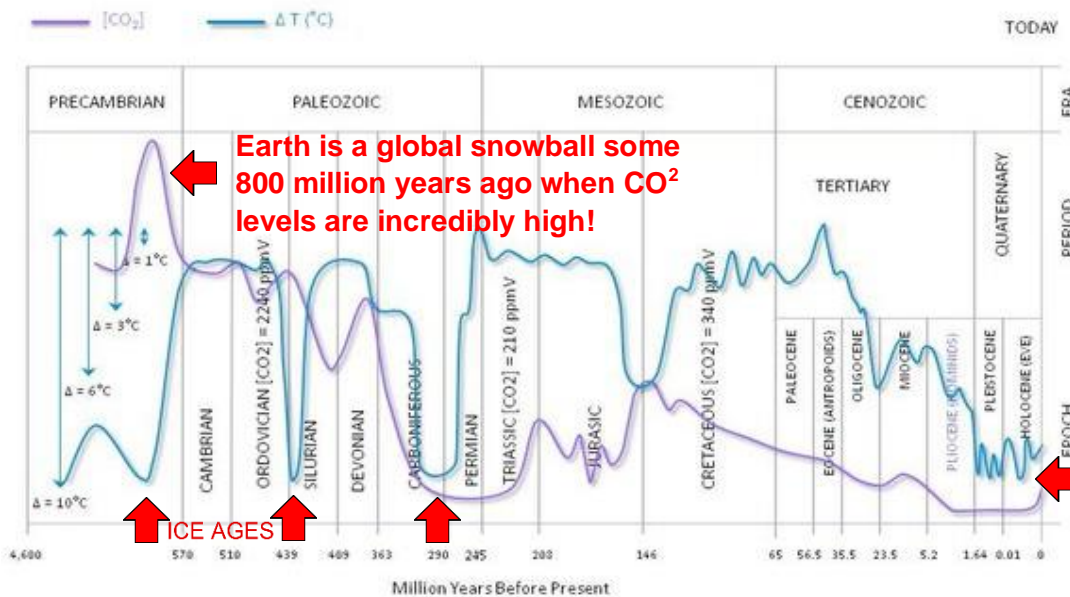
 [Pascas WorldCare Earth Changes Environmental Changes.pdf](#)

**For 400,000 years temperature rose and fell in 100,000 year cycles.**



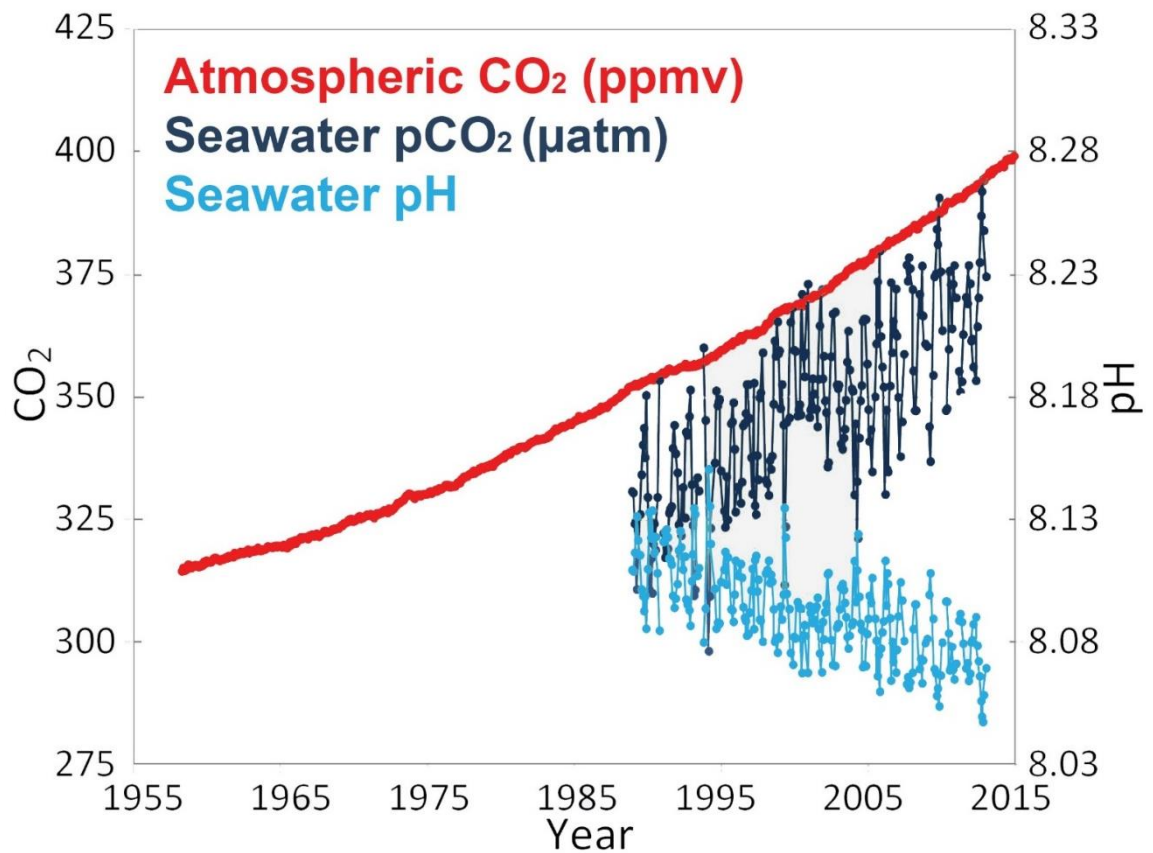
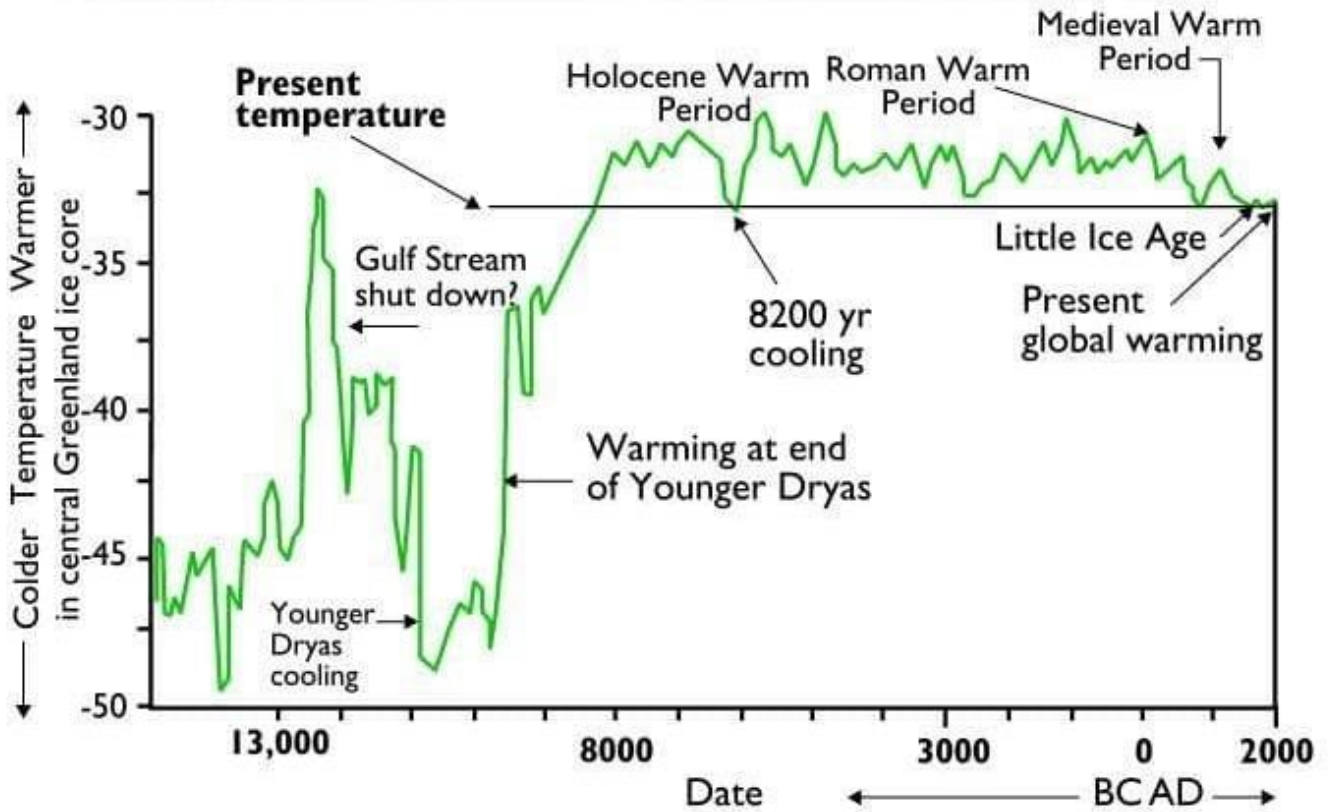
Jouzel J, et al. (2007a) EPICA Dome C Ice Core 800K Yr Deuterium Data and Temperature Estimates. IGBP PAGES/World Data Center for Paleoclimatology Data Contribution Series # 2007-091. NOAA/NCDC Paleoclimatology Program, Boulder CO, USA

Geological Timescale: Concentration of CO<sub>2</sub> and Temperature fluctuations



1- Analysis of the Temperature Oscillations in Geological Eras by Dr. C. R. Scotese © 2002. 2- Ruddiman, W. F. 2001. *Earth's Climate: past and future*. W. H. Freeman & Sons. New York, NY. 3- Mark Pagani et al. *Marked Decline in Atmospheric Carbon Dioxide Concentrations During the Paleocene*, Science; Vol. 309, No. 5734; pp. 600-603. 22 July 2005. *Conclusion and Interpretation* by Nasif Nahle ©2005, 2007. Corrected on 07 July 2008. (CO<sub>2</sub>: Ordovician Period).

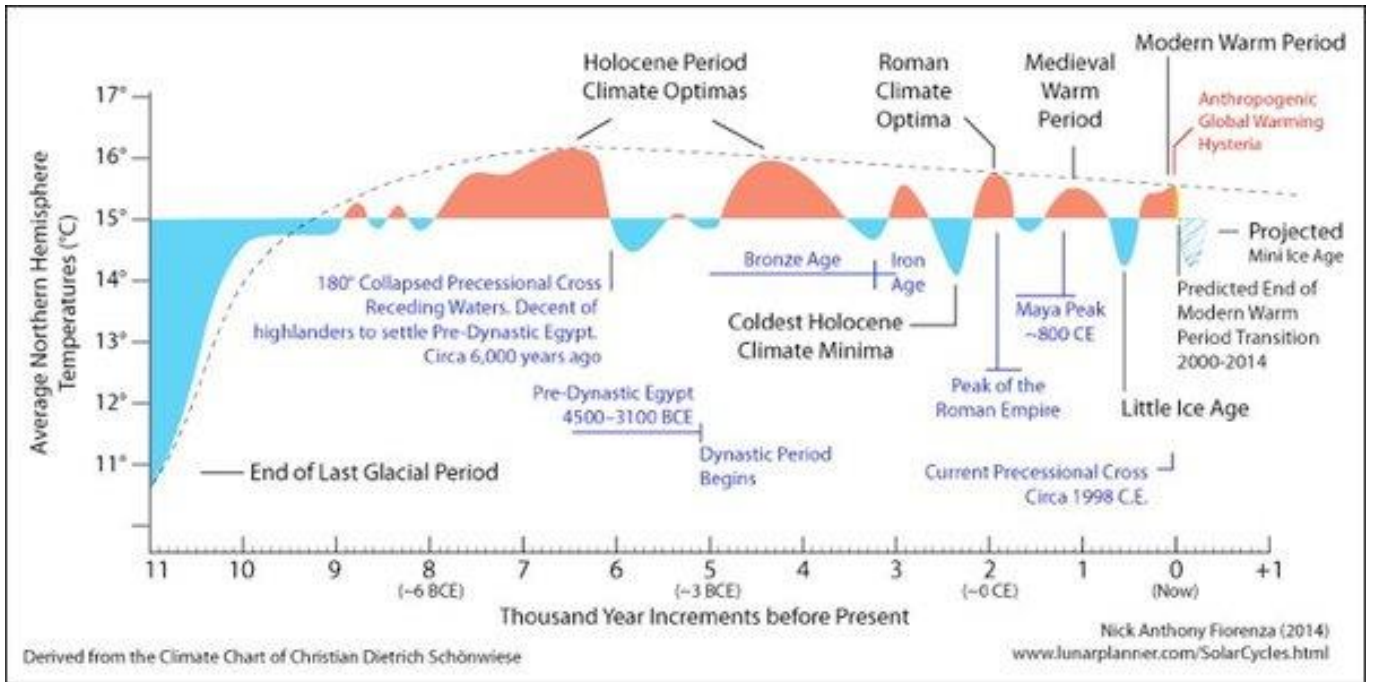
## TEMPERATURE CURVE LAST FIFTEEN THOUSAND YEARS



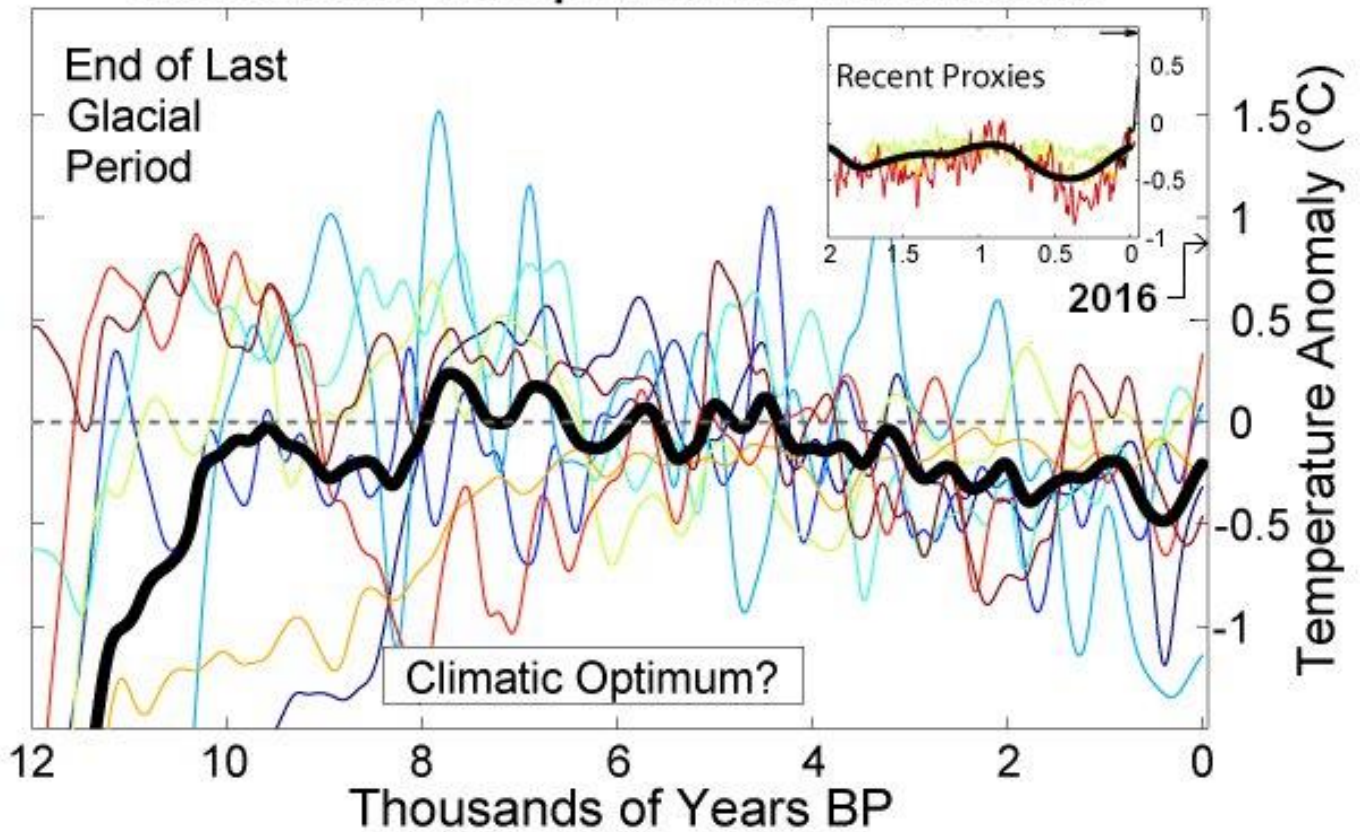
Time series of carbon dioxide and ocean pH at Mauna Loa, Hawaii



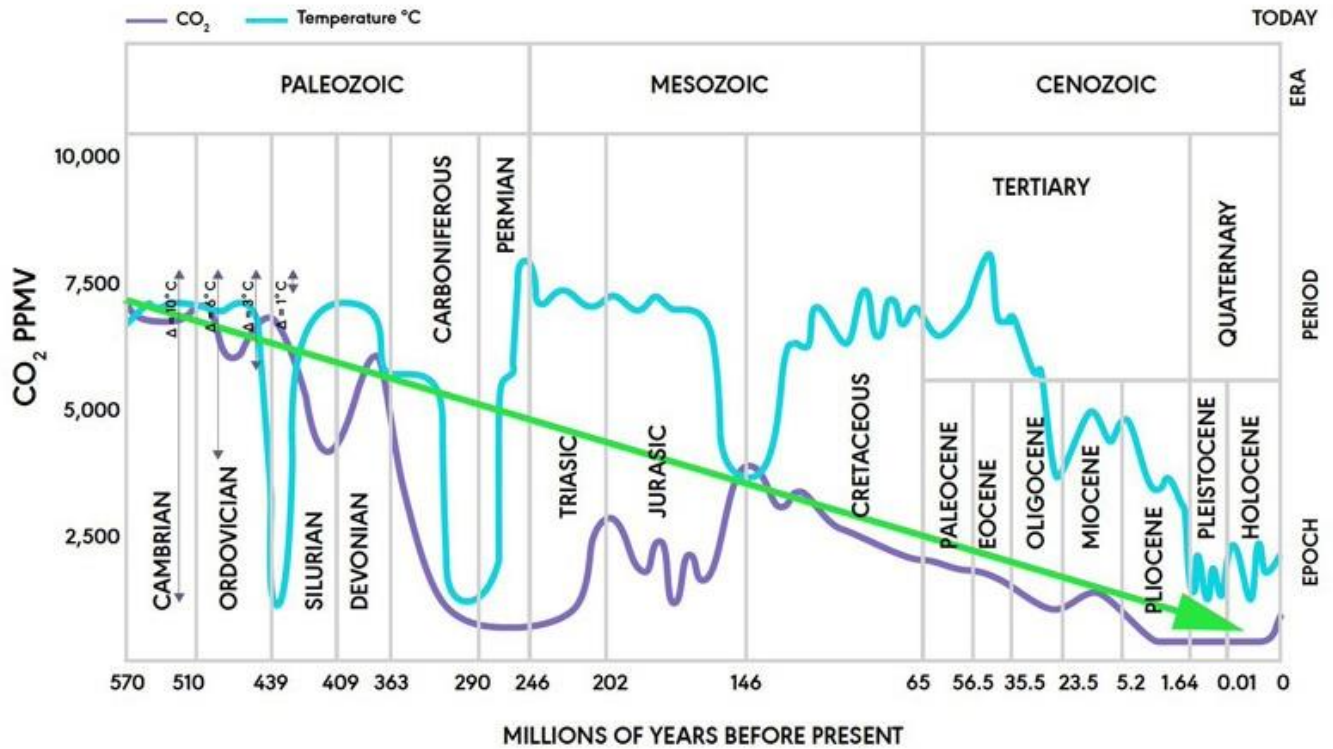
Earth pole shift events / rotation reversal unfolds cyclically between 12,000 to 13,000 years:



## Holocene Temperature Variations

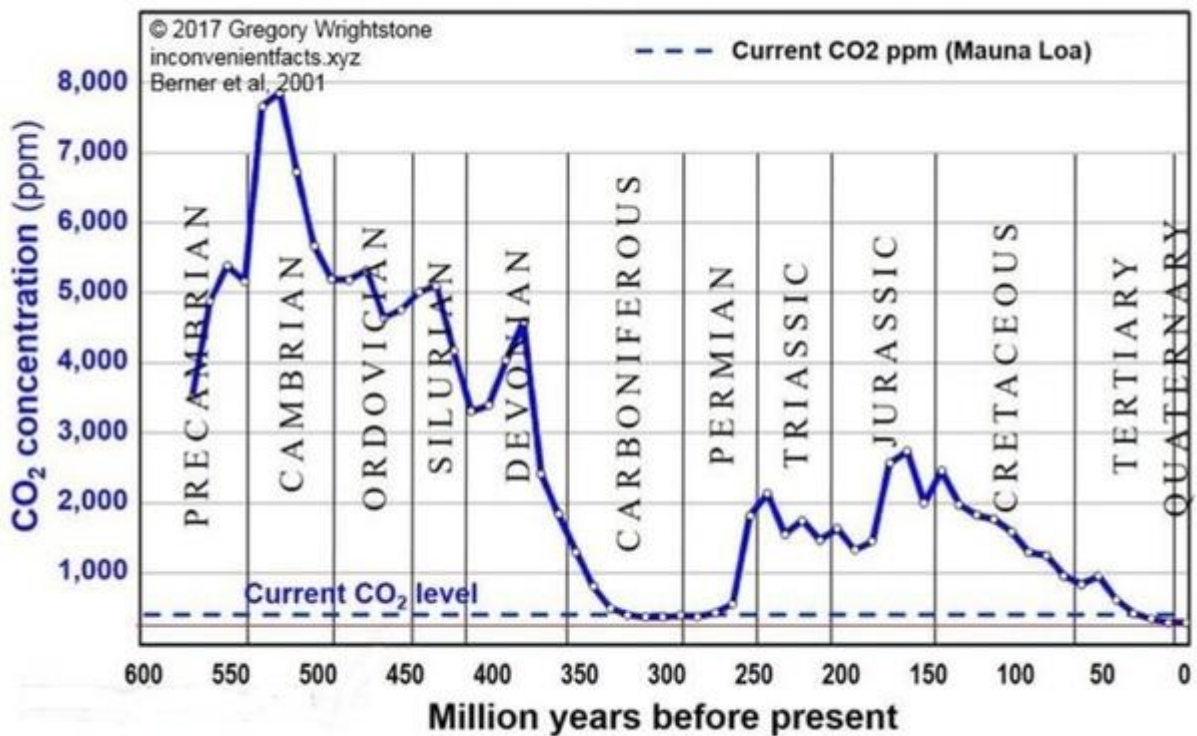


Geological Timescale: Concentration of CO<sub>2</sub> and Temperature Fluctuations



Carbon dioxide (CO<sub>2</sub>) levels were as low as 0.034% and approaching critically low levels that would have brought about a worldwide famine. Fortunately, the levels have risen to 0.042% (still very low) and crops and food production has tripled!

600 million years of CO<sub>2</sub> data reveals current CO<sub>2</sub> starvation



Berner RA, Kothavala Z (2001) GEOCARB III: A revised model of atmospheric CO<sub>2</sub> over Phanerozoic time, IGBP PAGES and World Data Center for Paleoclimatology, Data Contribution Series # 2002-051. NOAA/NGDC Paleoclimatology Program, Boulder CO, USA.

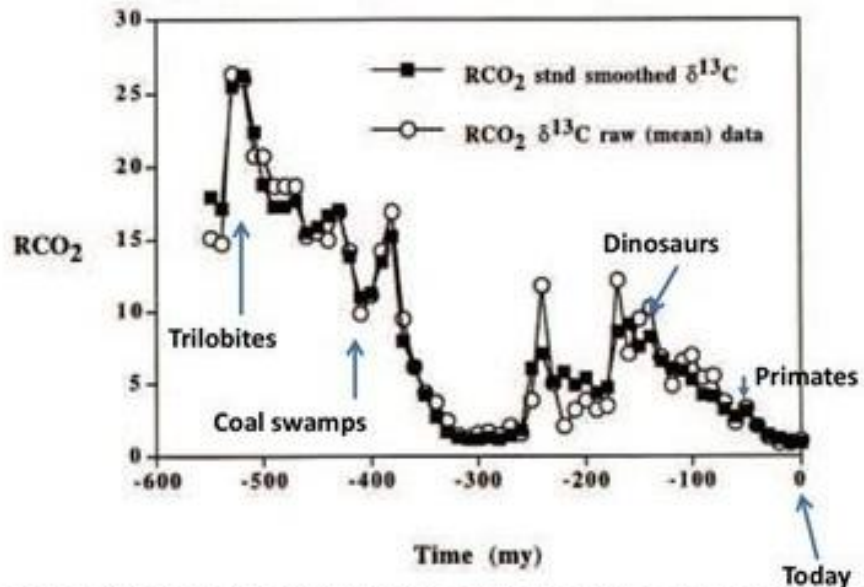


<https://www.quora.com/What-are-your-thoughts-on-the-fact-that-carbon-dioxide-levels-in-the-air-reached-the-highest-levels-they-ve-been-in-over-4-million-years-according-to-NOAA>

James Matkin

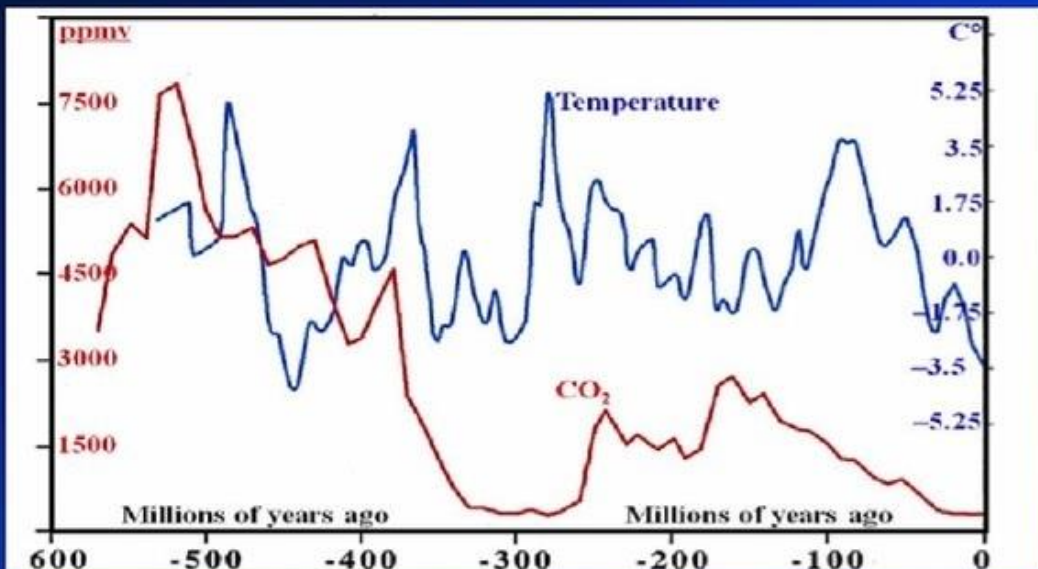
14 June 2023

The Earth has been in a CO<sub>2</sub> famine for several tens of millions of years  
RCO<sub>2</sub> = past CO<sub>2</sub>/ today's CO<sub>2</sub>



R. A. Berner and Z. Kothavala, Geocarb III: A Revised Model of Atmospheric CO<sub>2</sub> over Phanerozoic Time, American Journal of Science, V. 301, pp. 182-204 (2001)

## 600 Million Years of Temperature and Carbon Dioxide

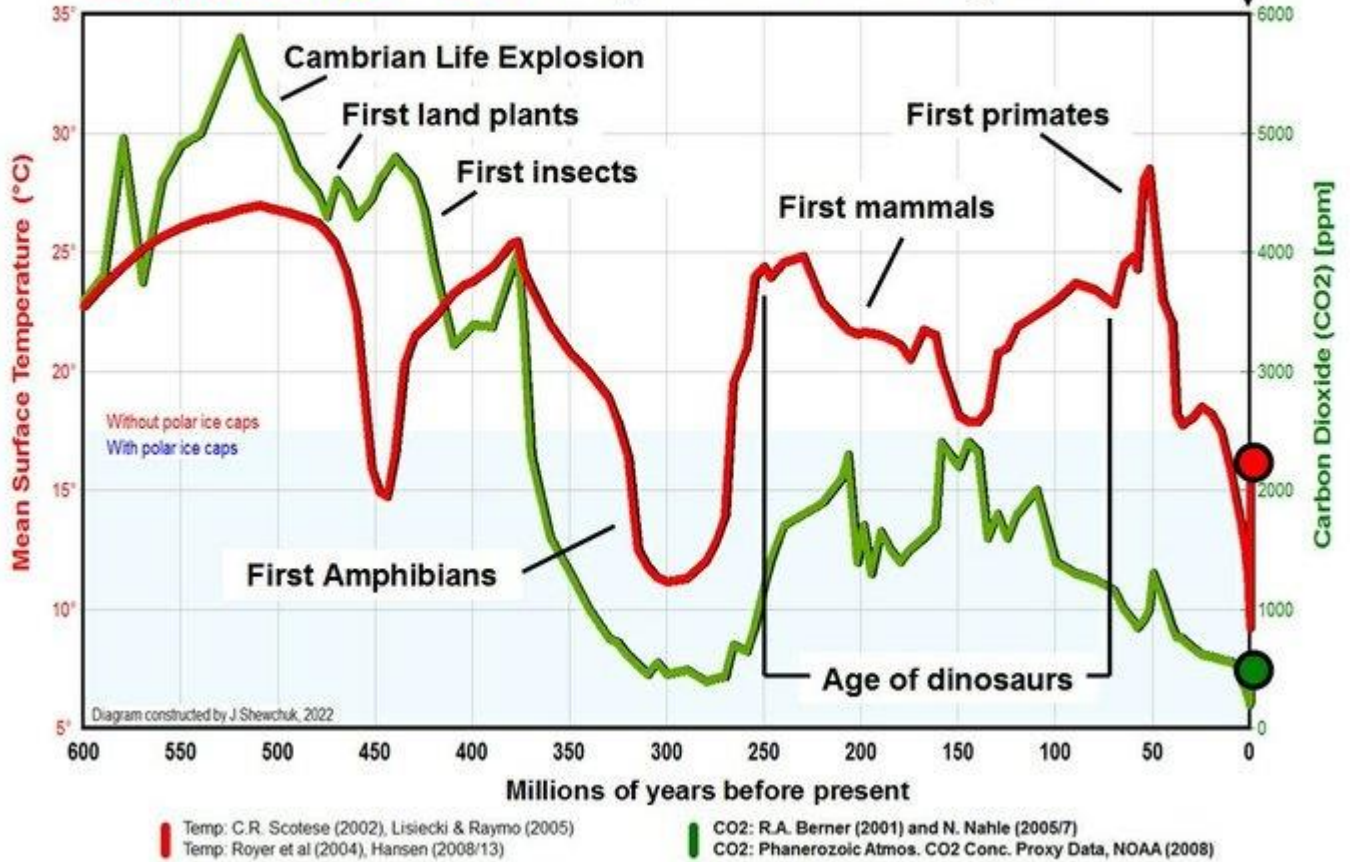


Over the last 150 million years, geological processes have taken 90% of the carbon dioxide out of the atmosphere.

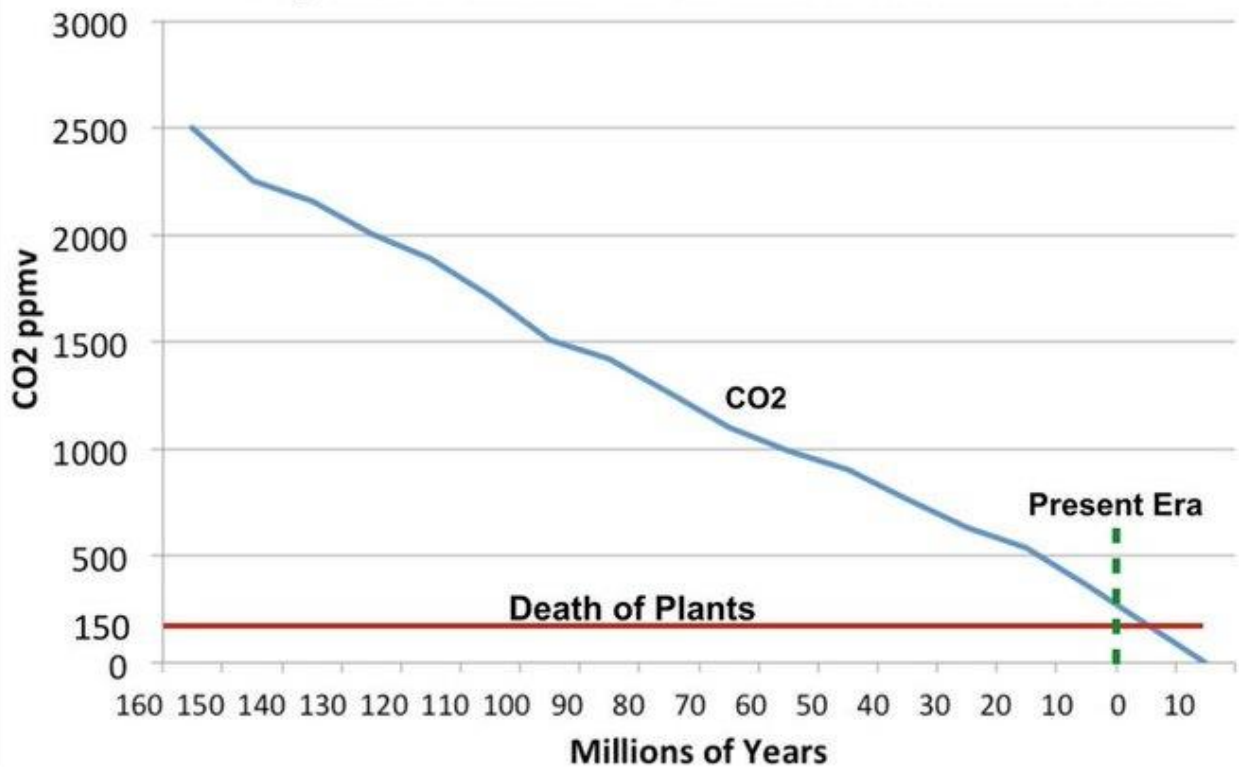


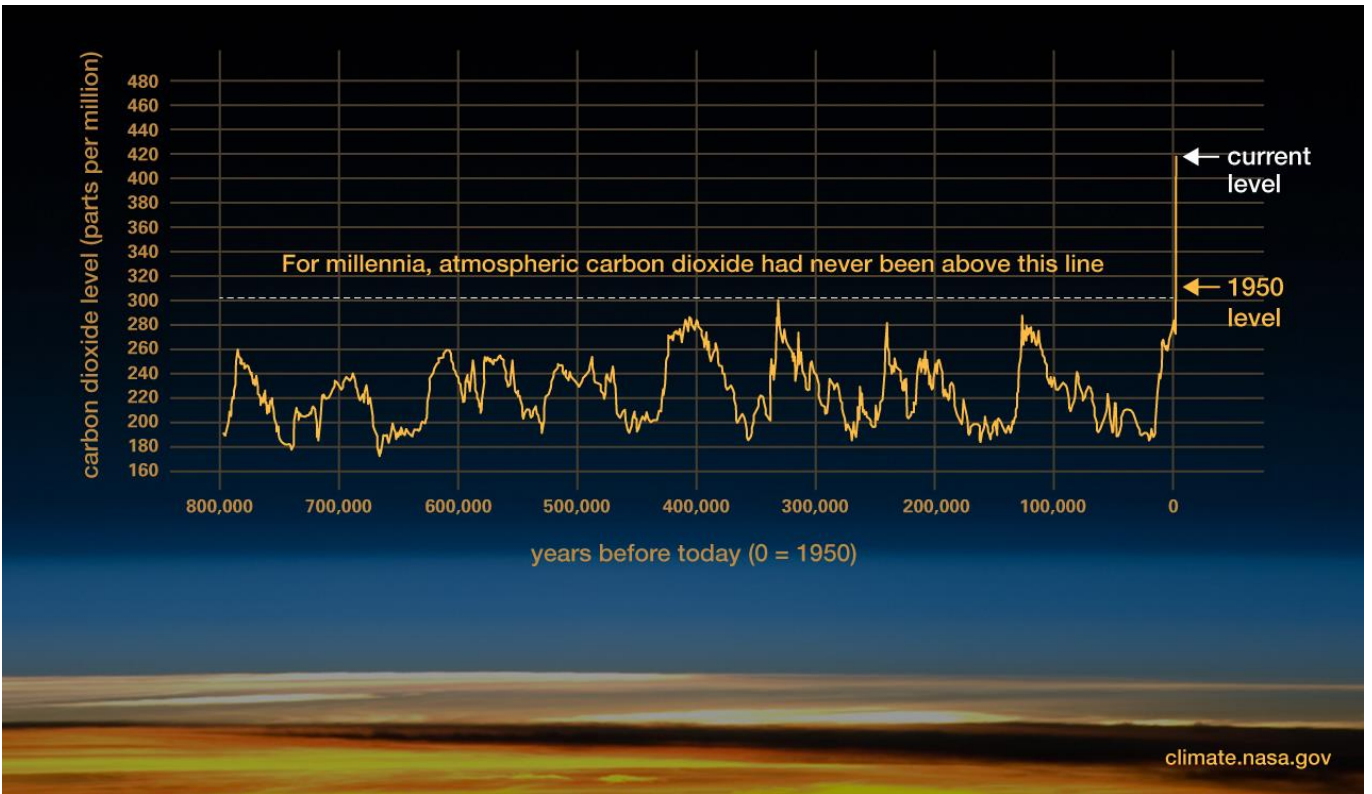
# CO2 and Climate Change

**Temperatures & CO2 for past 600 million years**



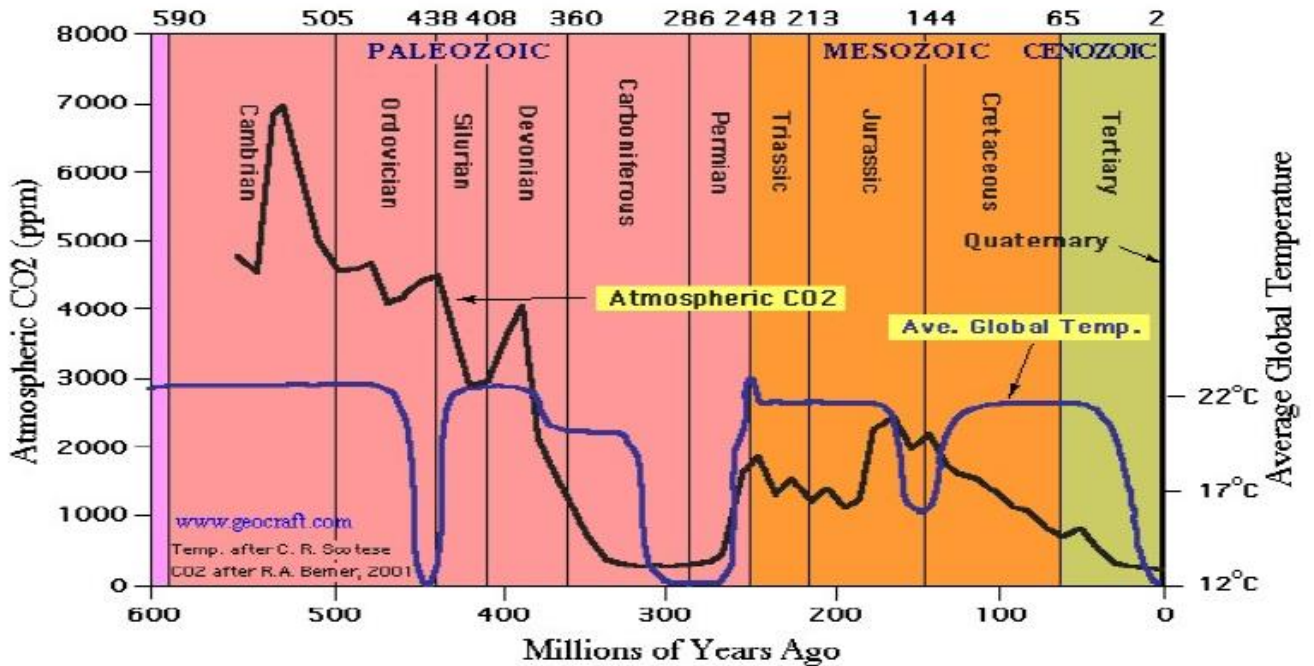
## Projected CO2 Level in Absence of Human Emissions





“At no point do temperature and CO<sup>2</sup> levels relate.”

**Global Temperature and Atmospheric CO<sub>2</sub> over 600 Million yrs - No Evidence of CO<sub>2</sub> driving temperature**



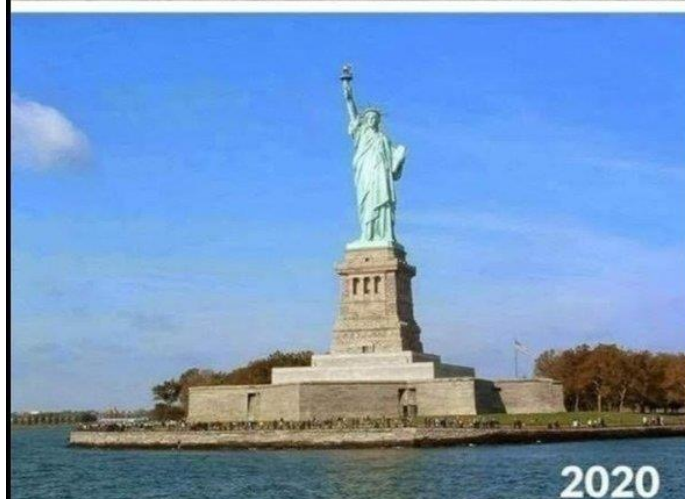
Late Carboniferous to Early Permian time (315 million years ago - 270 million years ago) is the only time period in the last 600 million years when both atmospheric CO<sub>2</sub> and temperatures were as low as they are today (Quaternary Period). At no point do temperature and CO<sub>2</sub> levels relate. *Temperature after C.R. Scotese <http://www.scotese.com/climate.htm> CO<sub>2</sub> after R.A. Berner, 2001 (GEOCARB III)*



Unprecedented climate change has caused sea level at Sydney Harbour to rise approximately 0.0 cm over the past 140 years.



**THIS IS WHAT CATASTROPHIC  
SEA-LEVEL RISE ACTUALLY  
LOOKS LIKE**

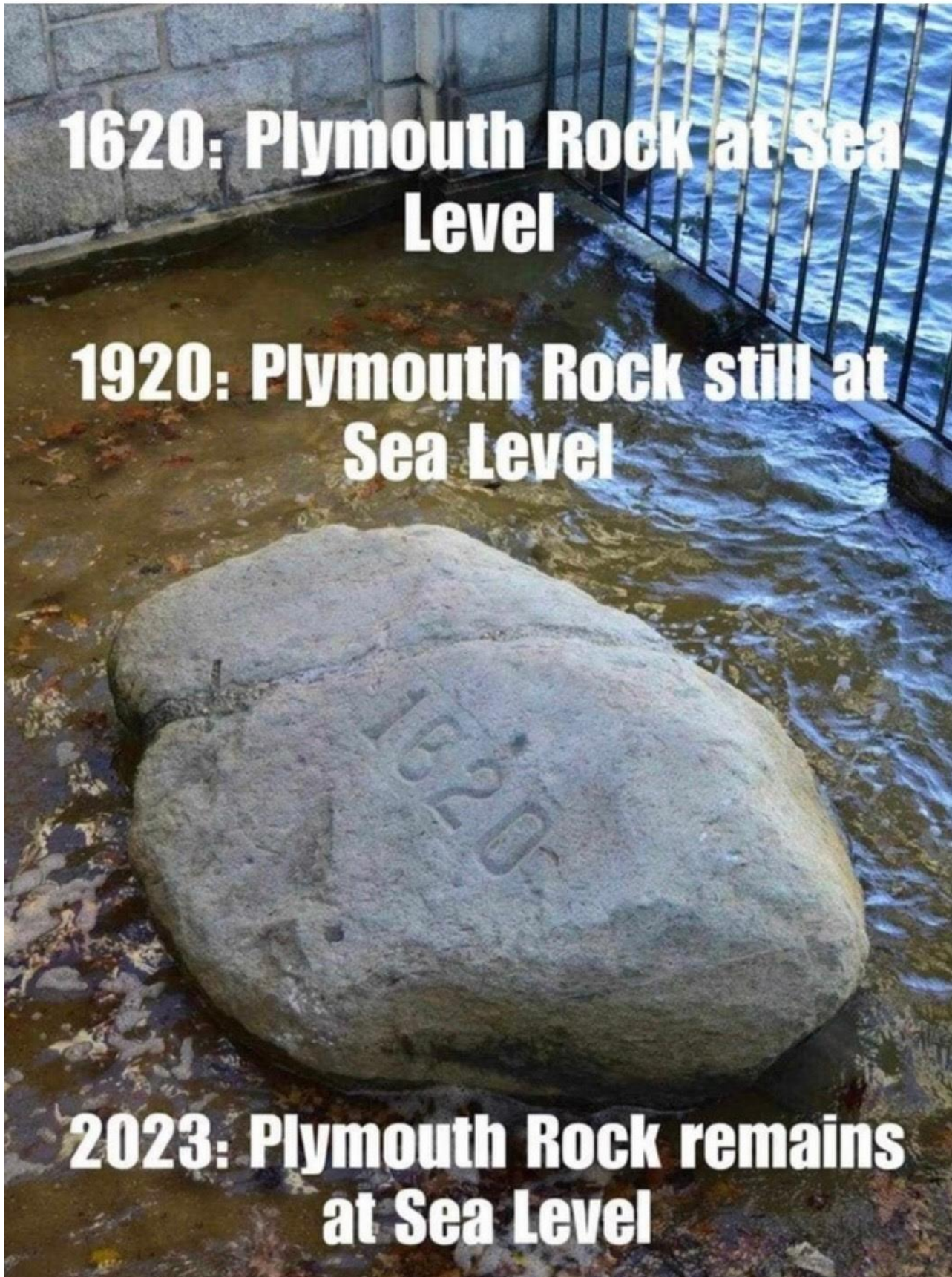






**Jon's political corner** · [Follow](#)

Posted by Lauro Andrea · 9h



## CLIMATE CHANGE is ALWAYS UNFOLDING!

While there is ice on Earth's poles then we are in an ice age.

A 1.000% level of carbon dioxide CO<sup>2</sup> in the atmosphere could be considered 'normal and acceptable' – that is what many greenhouse operators strive for. Around the 1950s, CO<sup>2</sup> levels were at around 0.034%. Should they had continued to fall, then at 0.025% plants are unable to seed and any lower we have worldwide famine! As CO<sup>2</sup> levels have fortunately recovered to 0.042% (still at 1/25 of preferred levels) global crop yields, due to multiple factors, have recovered to around 300% of the 1950s yields!

CO<sup>2</sup> is NOT a 'greenhouse' gas, it is not contributing to 'global warming'. It is actually very marginally cooling the planet due to worldwide increased vegetation.

The transfer of the weight of moving ice is not changing sea levels. The continental / tectonic plates all float on liquid magna thus they adjust up and down as weight transfers – just like when ships come into port do not move the water levels.

The Sun does it all. The Sun's projected energy is received into the CORE of Earth and since the 1950s the increased energy within the core of Earth has naturally changed weather patterns globally. This is all cyclical and it is arrogant to consider that man has influenced any of this OR can influence any direction these events are going to take.

We all have been indoctrinated with vast amounts erroneous suppressive untruths which underpin the psychic barriers to humanity's evolutionary growth which we are now to put aside and progress from. The suppressive controls imposed upon all of humanity at all levels is to be exposed and dismantled.

Kindly consider [www.pascashealth.com](http://www.pascashealth.com), Library Download page, scroll down to Pascas Care Letters and click on to open:

 [Pascas Care Letters Divide and Conquer.pdf](#)

and within Corporate Foundation Documents:

 [Pascas WorldCare Earth Changes Environmental Changes.pdf](#)

Carbon dioxide is Earth's most important greenhouse gas: a gas that absorbs and radiates heat. Unlike oxygen or nitrogen (which make up most of our atmosphere), greenhouse gases absorb heat radiating from the Earth's surface and re-release it in all directions—including back toward Earth's surface.



NOAA Climate.gov

<http://www.climate.gov> > understanding-climate > climat... ⋮

Climate Change: Atmospheric Carbon Dioxide

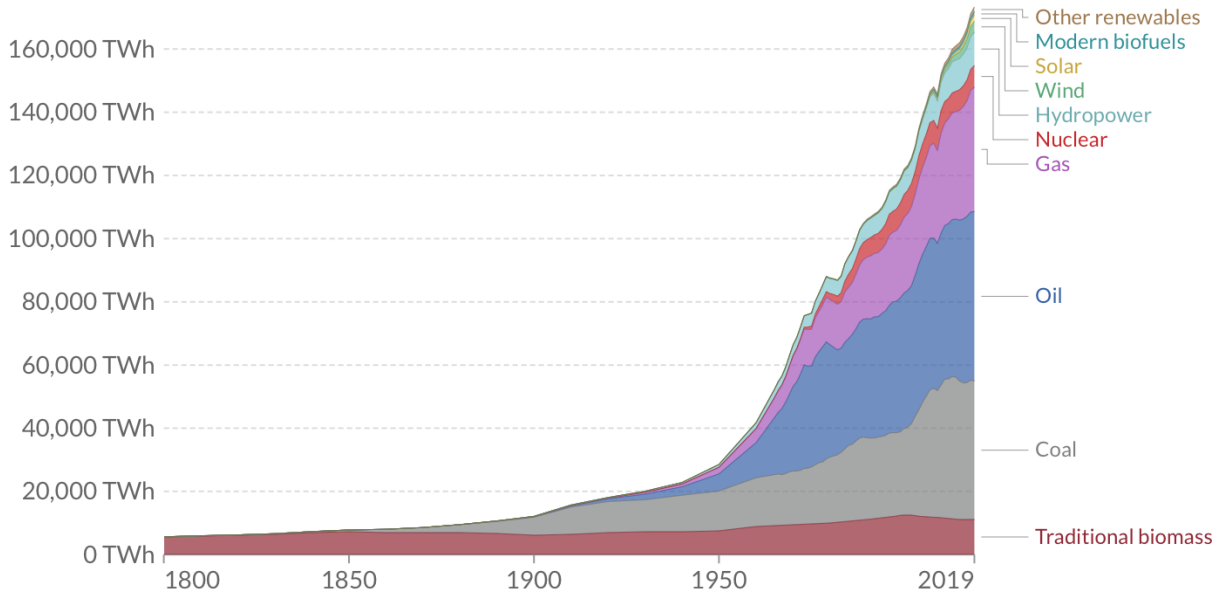
# How much energy does the world consume?

## Global primary energy consumption by source

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.



Relative



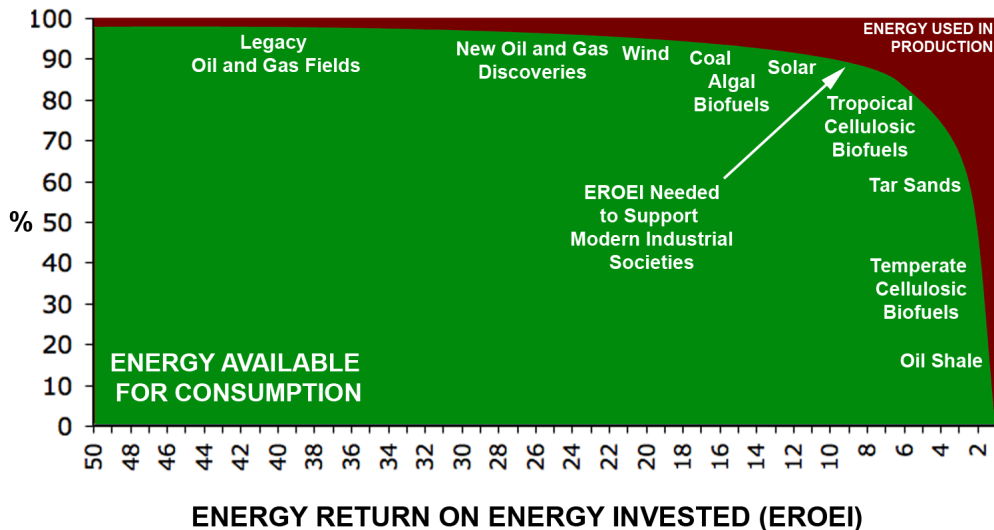
Source: Vaclav Smil (2017) & BP Statistical Review of World Energy

OurWorldInData.org/energy • CC BY

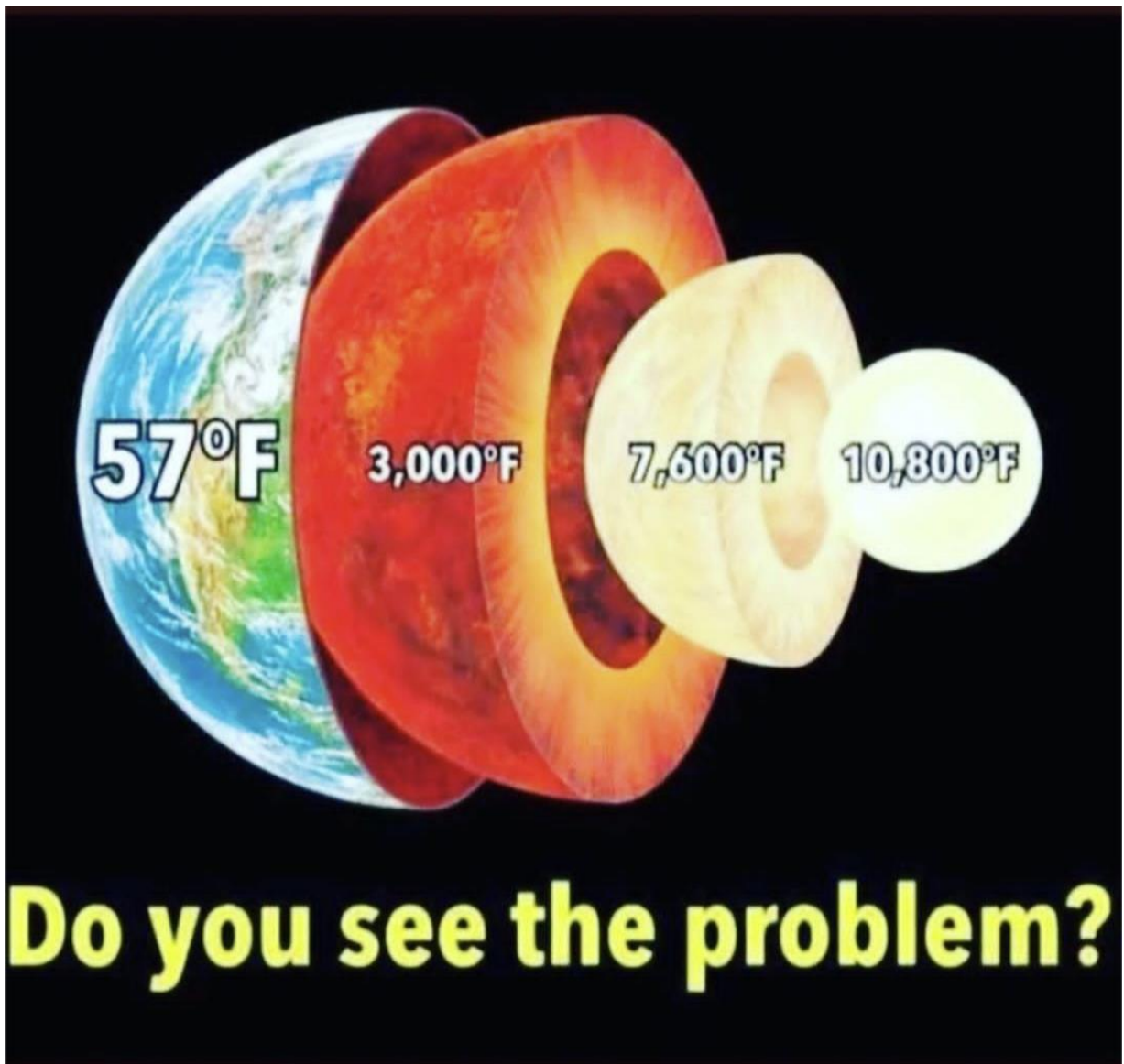


The non-renewable fossil fuel resources will not run out, they will become too expensive to extract. The picture below shows where the collapse will happen if fossil fuels are not replaced by nuclear or renewables. If the cost of extract fossil energy is too high energy wise (EROEI means how much energy you get back on one energy unit used to extract the energy). EROEI needs to be above around 7, otherwise civilisation will collapse. We are closing in on the energy cliff. All easy to extract fossil fuels are already extracted. Thus alternative energy systems will be needed and developed accordingly.

### THE NET ENERGY CLIFF







**Climate change driven by the Sun – Prof Ian Plimer – Facebook**

Climate change driven by the Sun Professor Ian Plimer (Geologist)

[https://www.youtube.com/watch?v=iEPW\\_P7GVB8](https://www.youtube.com/watch?v=iEPW_P7GVB8)

<https://www.facebook.com/trigteq/posts/1269051846521320/>



VID-20230418-WA0001.mp4

**What is amazing is:**

Few, well almost no one, has understood how low the level of CO<sup>2</sup> was in the atmosphere, so much so that the projectory potential was for a worldwide famine in about a century.

Few have recognised that the major contributor to food supply has been increasing CO<sup>2</sup> in the atmosphere enabling food production to grow ahead of worldwide population growth over the last century.

Few have recognised that CO<sup>2</sup> actually mitigates temperature rise due to the increased global vegetation.

Few understand that easy to get fossil fuels will run out before CO<sup>2</sup> becomes excessive in the atmosphere. Cost will force the entry of alternative energy systems.

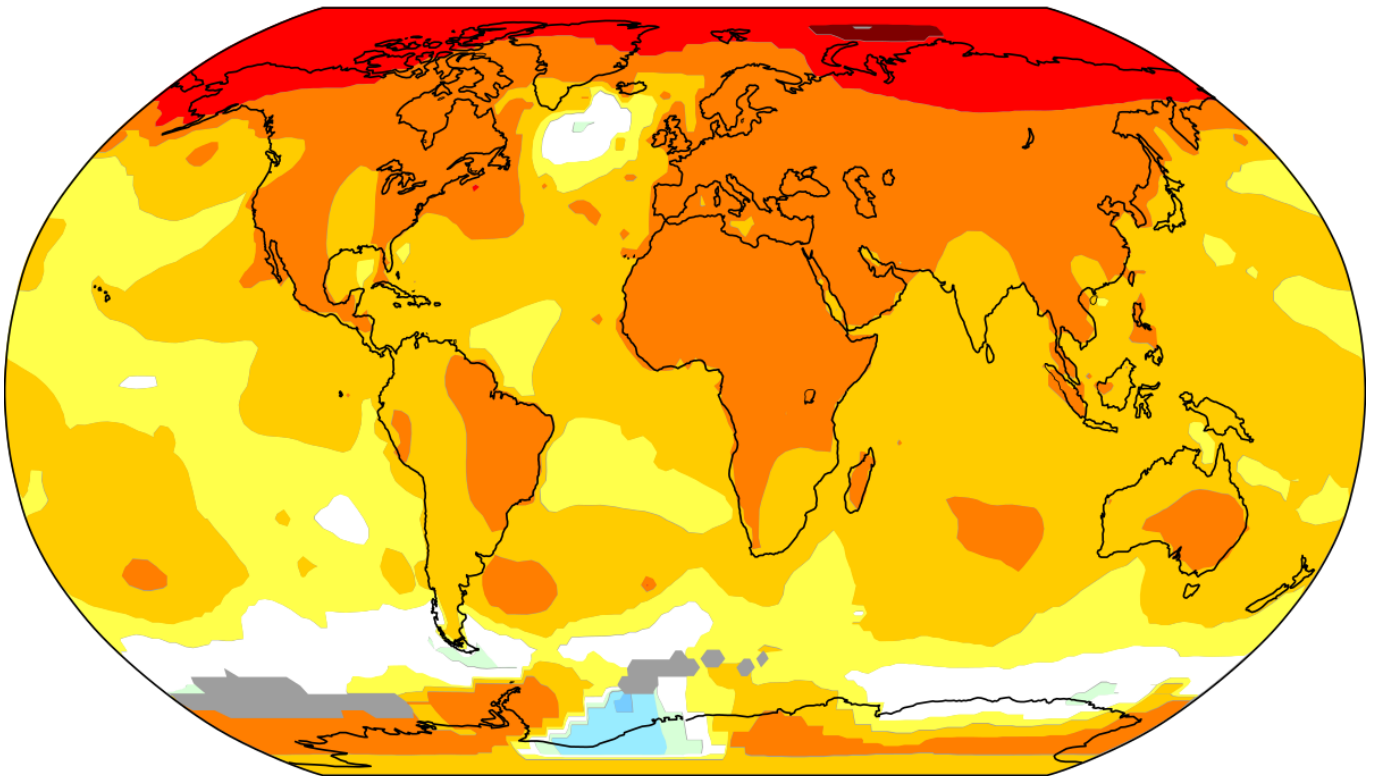
Few understand that CO<sup>2</sup> levels are still so low that they can rise multiple times before we even reach a long term normal level.

Few understand that the tectonic plates are floating on magma. Melting of ice shifts the loads – plates adjust and consequently sea levels generally are not changing.

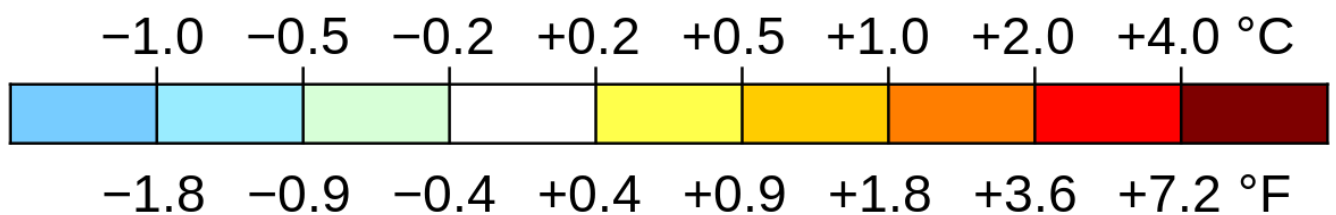
Taking points in isolation does not reveal the incredible management of our environment is actually for the benefit of humanity. We just need to let events unfold – we cannot control the environment.

Yes, the dinosaurs died out due to starvation. There have been eras when CO<sup>2</sup> levels have been lower than what is required for plants to go to seed and hence mass extinctions unfold.

## Temperature change in the last 50 years

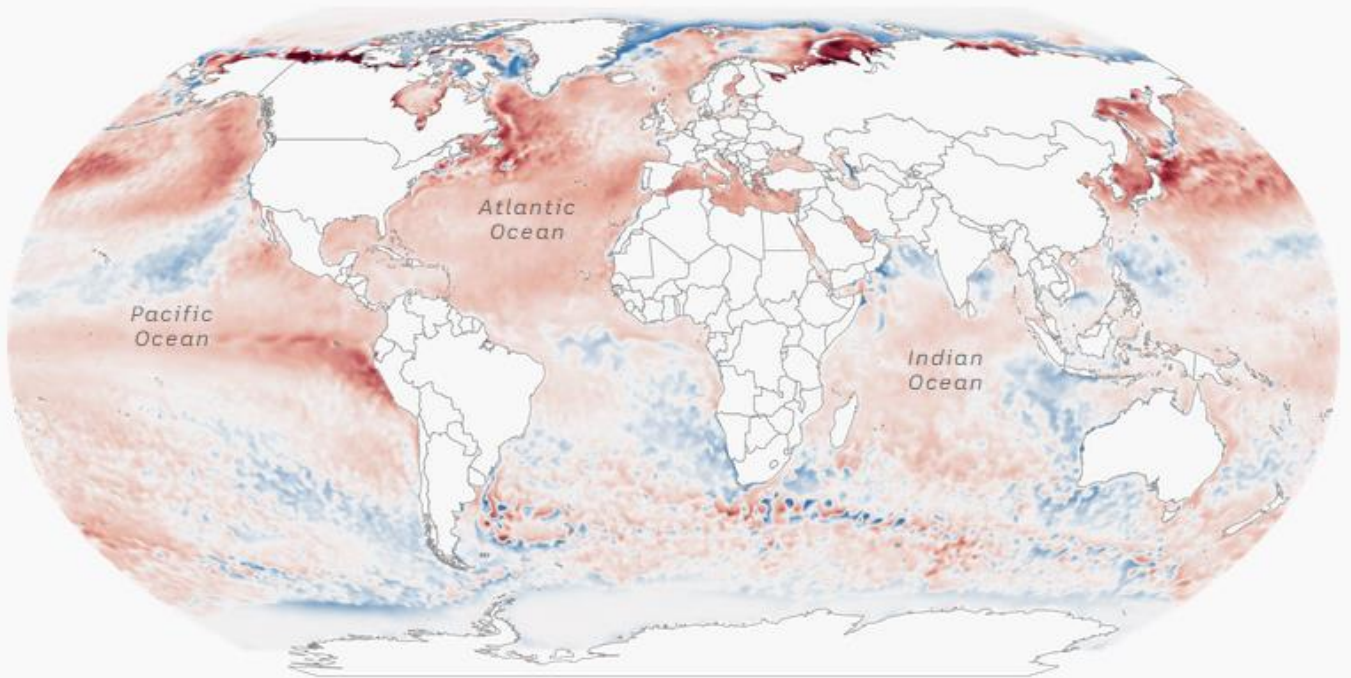


2011–2021 average vs 1956–1976 baseline

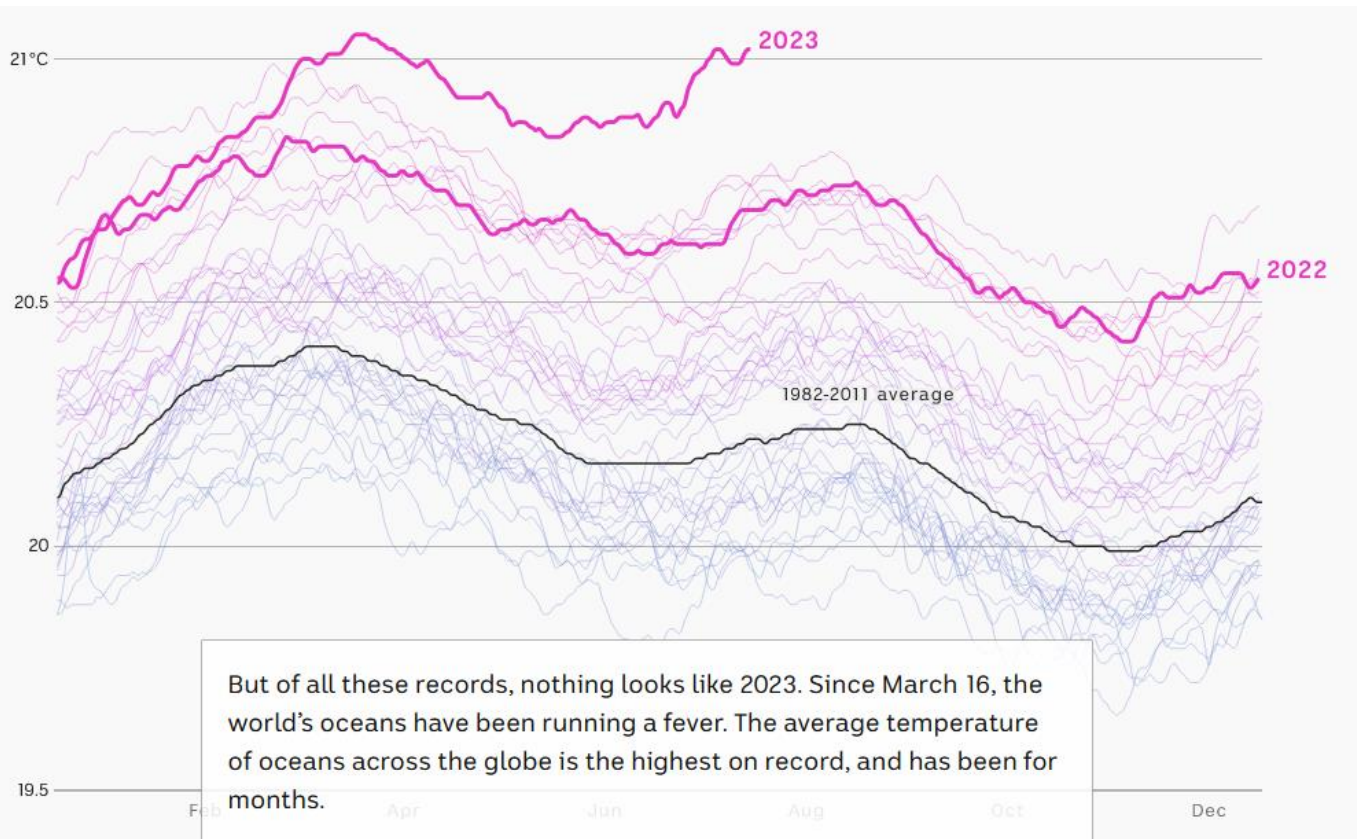


# Global sea surface temperature anomaly

July 31, 2023



Source: NOAA Optimum Interpolation Sea Surface Temperature (OISST) version 2.1





# Extreme Earth Events

**Global Warming:**

28 September 2011

James: Verna, is there really global warming, or is it something that seems to be happening but is being made up by certain people. I think I've asked you this question before –

That doesn't matter James, I'm happy to answer it again.

Verna, a Nature Spirit: Yes, global warming is real, but it's not happening solely because of humanity's impact on the world. Humanity is only minimally affecting it, the world for the most part being able to absorb all you do that results in global warming, however it's the Earth itself that is heating up, internally and because of external influences. And these will continue as I've told you. But all humanity does in regards to global warming will be of no account because of the overall changes that are going to take place.

Monday, 17 December 2018

James: Hi Nanna Beth, I feel like a chat, is that all right with you?

Nanna Beth – 3<sup>rd</sup> Celestial Heaven: Also you might like to know, the Earth itself is starting to change its rotation speed and is slightly moving on its axis, thereby causing shifts in surface weather patterns as warming and cooling takes effect, just happening in different places than how it has been. And these changes are coming from the core that's being affected by greater space changes. There is always massive pressures and forces affecting every part of natural creation, so the world and all space and all that's within it. And as David (Montaigne) points out, observers have observed that things remain the same, at least seem to be the same, although with minute incremental changes, all of which culminate to periodic, large swift changes. And so humanity is coming into a time of rapid change, and on all levels, not just the physical or spiritual. Of which I still can't say more.

So the debate about global warming or cooling will continue with both being right, as both are occurring. And in some areas they are affecting each other, in other areas they are happening independent of each other.

James: Thank you Nanna Beth, you've covered all I was wanting you to update.

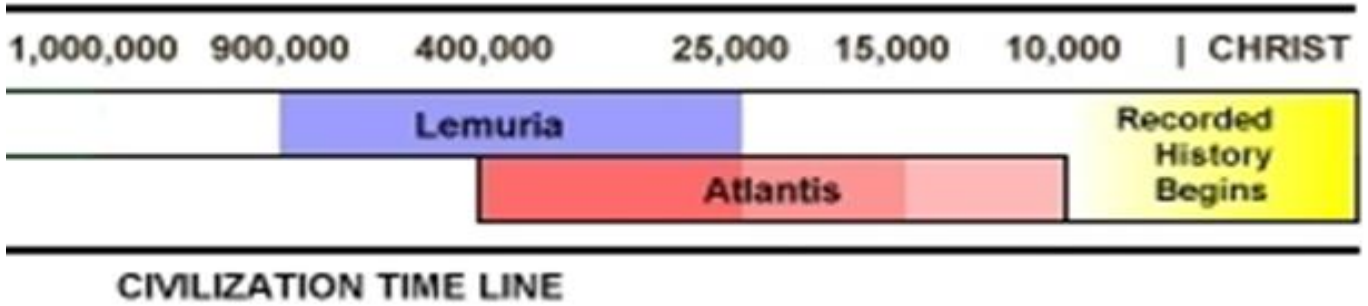
**NOTE:** Since the beginning of the ending of the Rebellion and Default commenced on 31 January 2018, communications with our invisible friends from much higher levels than previously allowed will progressively increase with those who open themselves to aspiring to live Feelings First!



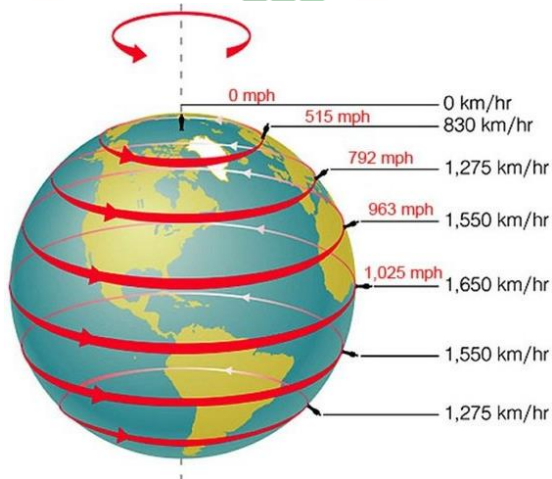
**Here is a thought!** Should those who are immersing themselves in research of historical significance AND are also embracing Living Feelings First, longing for the truth and understanding of what they are feeling, then could they be assisted with access to the museum at Jerusem?

**With the Passing of each Pole Shift, Humanity moved deeper into Rebellion and Default**

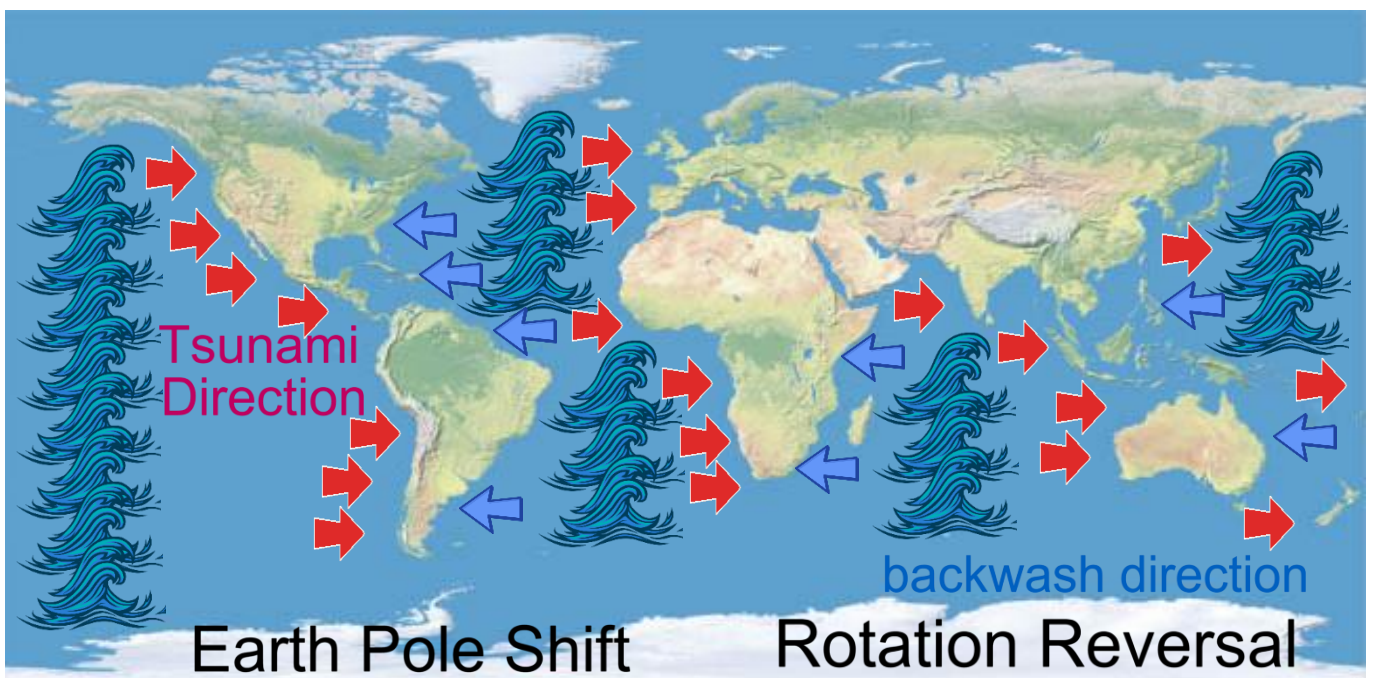
**GEOPHYSICAL POLE SHIFTS appears to take place every 12,000 to 13,000 years!**



50,000 years ago and earlier Laschamp reversal at regular intervals!      25,000 Lemuria submergence Atlantis frozen over      12,500 New Atlantis submerged      NOW! Unfolding



**This is a Pole Shift scenario:**  
**The rotation of the Earth will slow progressively preceding a rapid stopping and then pole shift reversal followed by a reversal of the rotation of Earth resuming in the opposite direction. The oceans will have significant momentum to inundate vast areas of landmass followed by a backwashing event.**





# Food Incorporated Stewardship for Hunger



Approximately 9.2% of the world's population faced hunger in 2022, compared with 7.9% in 2019. Moderate or severe food insecurity affected 29.6% of the global population (2.4 billion people) in 2022, with 11.3% being severely food insecure. 15 June 2022

The global burden of malnutrition across country income groups: Low- and lower-middle-income economies bear the greatest burden of stunting, wasting low birthweight, and anaemia cases while upper-middle- and high-income economies have the greatest burden of obesity cases.

There is no community that does not have people who do not have food insecurity. Malnutrition is everywhere. Every school has students who arrive without having had breakfast. Even the conditions throughout Australia, a food basket to the world, is chronically appalling.

Locations that are at war are extremely more stressed than regions that are in peace.

Food production worldwide is more than adequate to feed everyone, yet the mechanics and will to do so are not applied. Potable water, sanitation, nutritious food is to be secured for all with education to become freely available for all at any age in their lives.

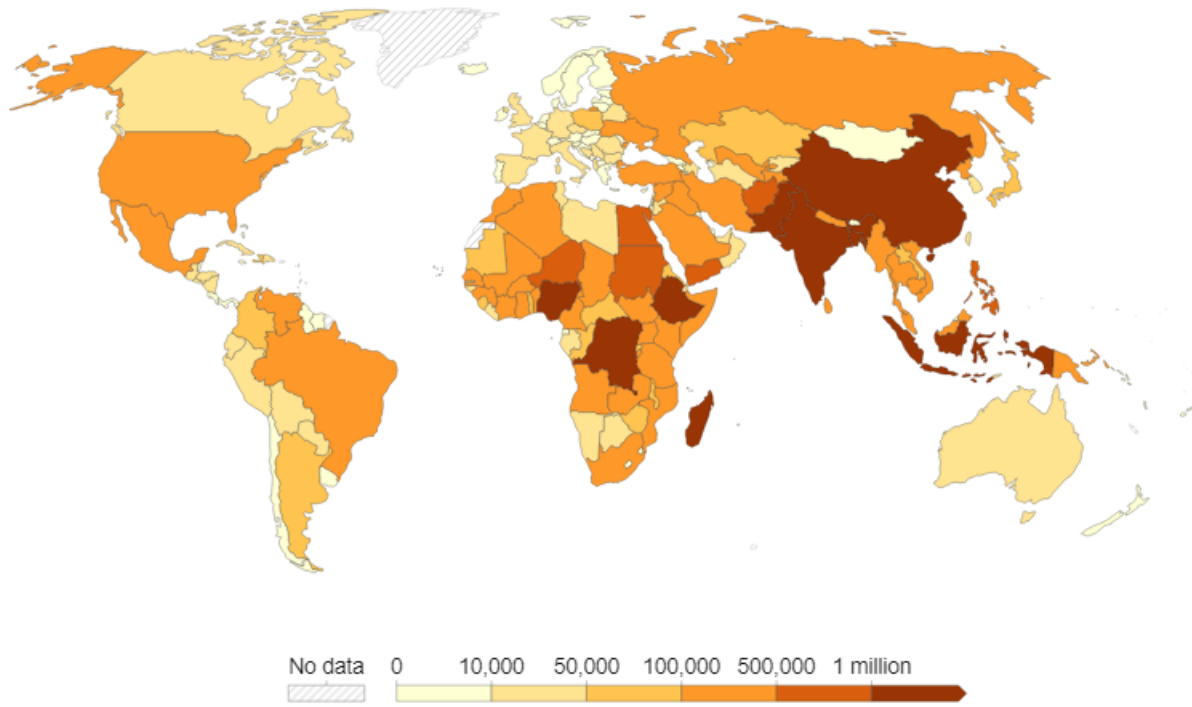
The way humanity has been addicted to their minds is the overarching cause of failure to resolve humanity's principal needs. No problem can be resolved of this nature and scale until we embrace living feelings first and have our mind in support of our feelings rather than having its addictions control.



# Malnutrition: Number of children who are wasted, 2016

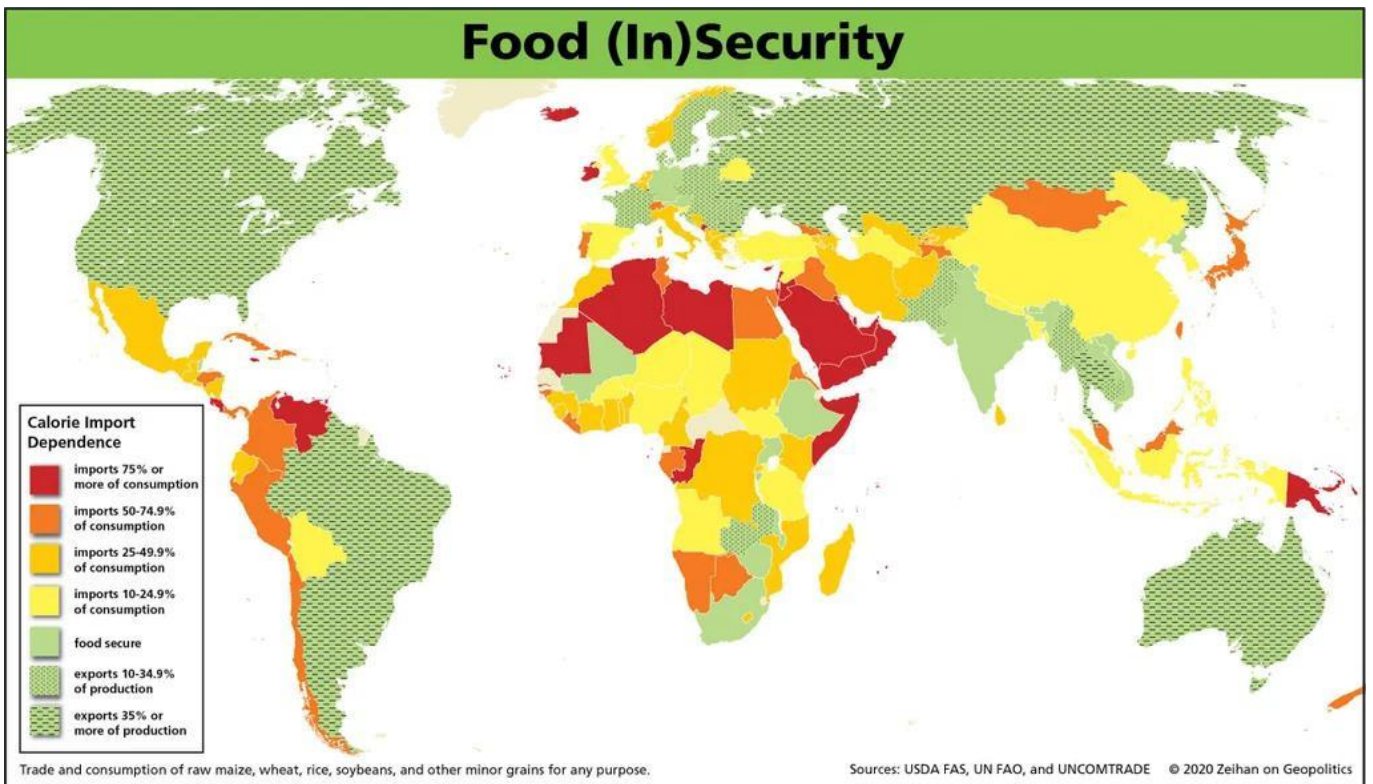


The number of children younger than five who are 'wasted'. Wasting is when a child's weight is significantly lower than the average for their height, for example because of acute food shortage or disease.

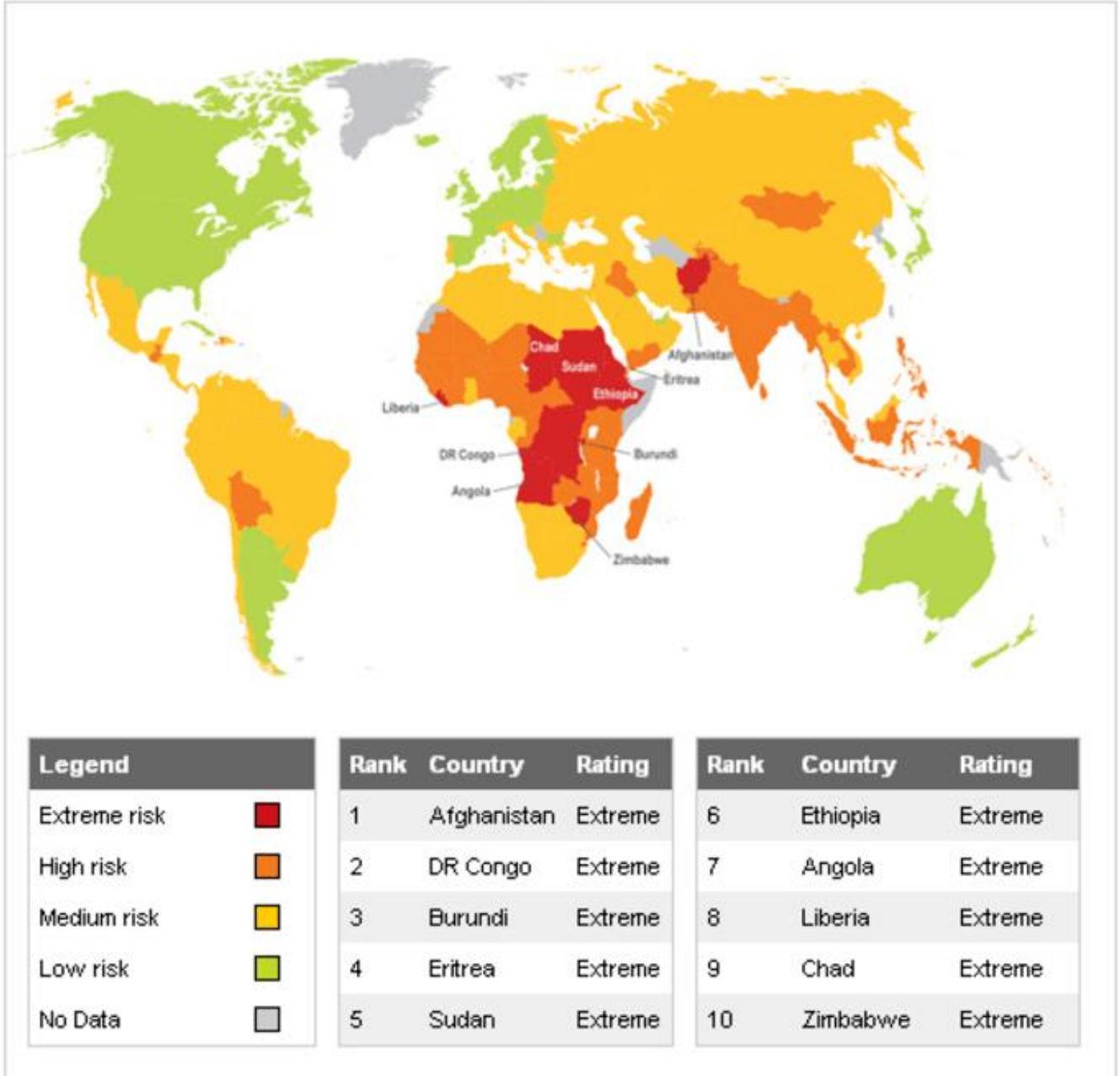


Source: Institute for Health Metrics and Evaluation (IHME)

OurWorldInData.org/hunger-and-undernourishment • CC BY



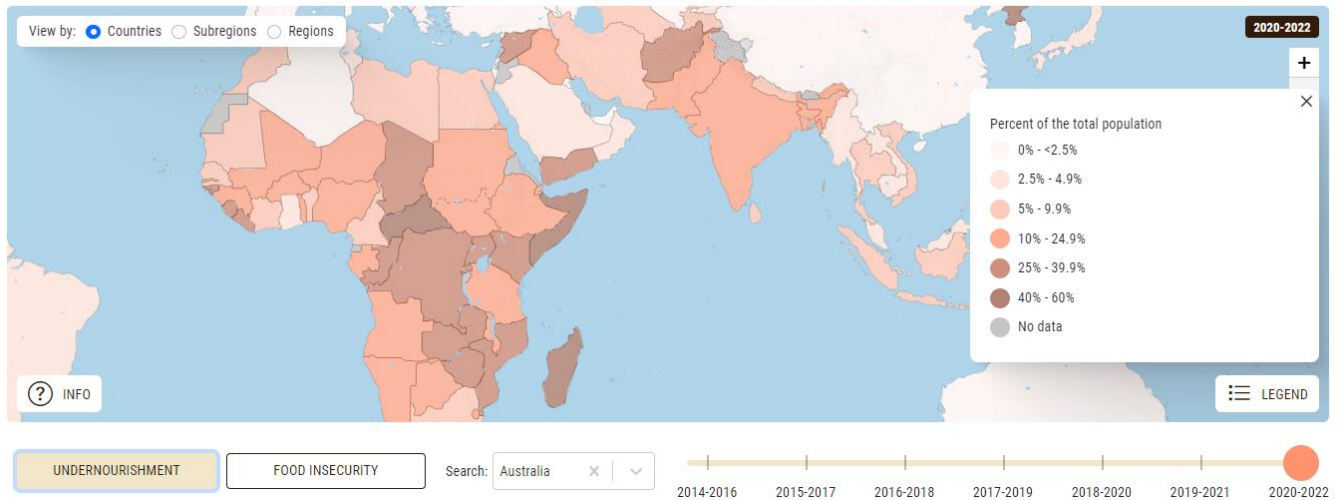
### Food Security Risk Index 2010



Food and Agriculture Organization of the United Nations



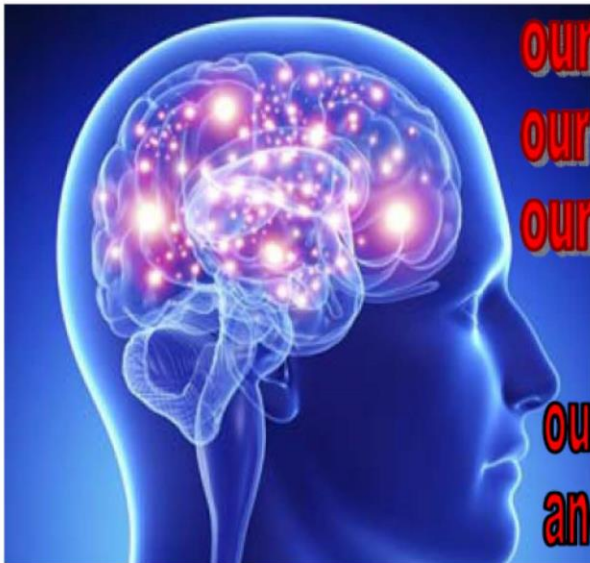
### PREVALENCE OF UNDERNOURISHMENT (PERCENT) (3-YEAR AVERAGE)



**The greatest danger to humanity is dependence upon technology! Common-sense and initiative go out the door, so to speak, when we subjugate our innate abilities to artificial intelligence. This has heralded the downfall of past developed societies and civilisations.**







**our MIND is a CONTROL ADDICT!  
our MIND is addicted to UNTRUTH!  
our MIND cannot discern TRUTH!**

**our MIND is within our SPIRIT BODY  
and orchestrates our physical BRAIN.**

**ASSUMPTIONS are the product of our MIND!**

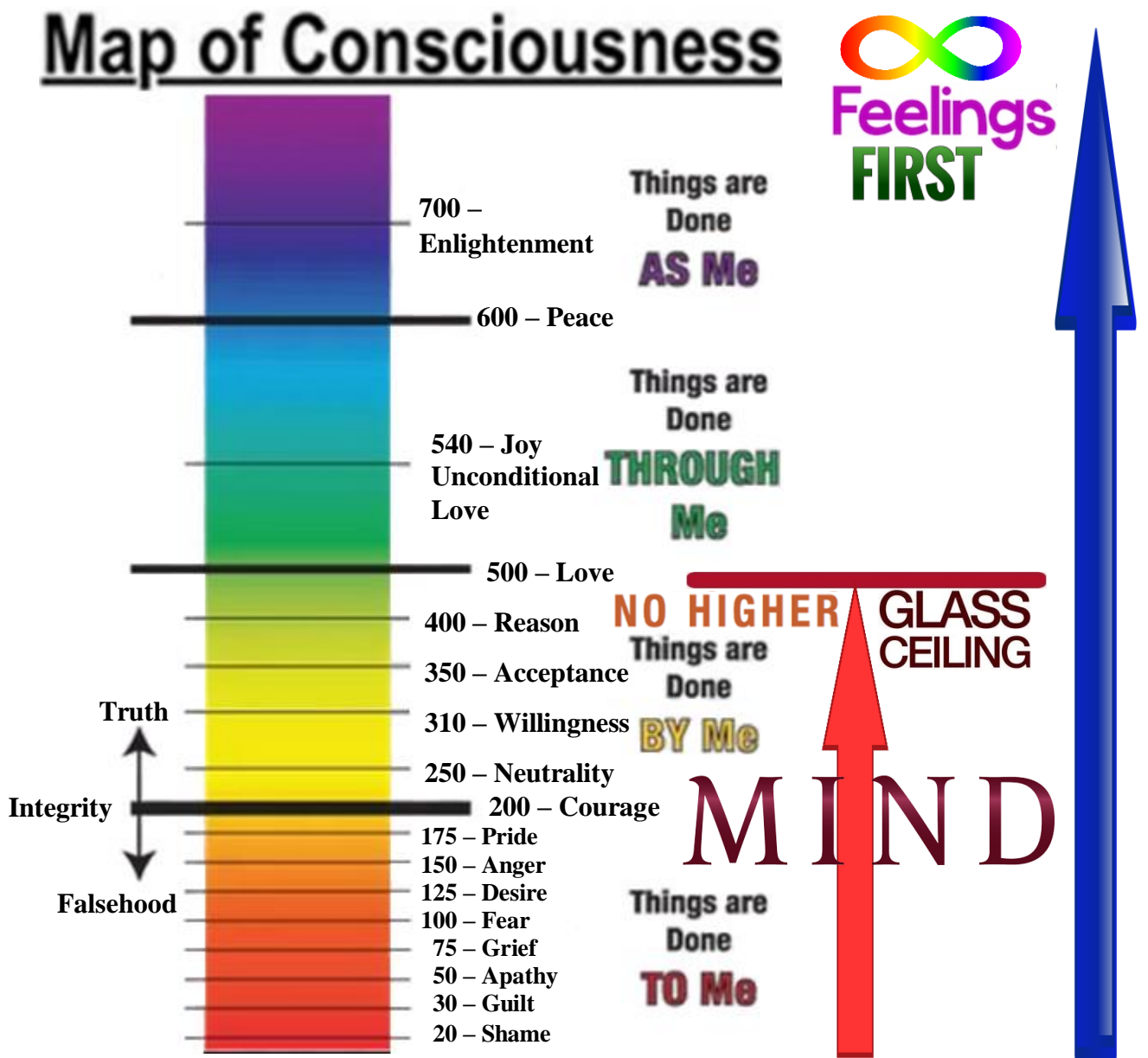
**HEALING** ends  
**MIND-CONTROL!**



**our SOUL is our TRUTH!  
our FEELINGS are our TRUTH!  
FEELINGS FIRST, mind to follow!**

**all we need is WITHIN.  
our MIND suppresses FEELINGS.**

We have all been guided and taught, from the moment of conception through to our death, to be mind centric, to worship our minds, to believe that through our minds we can achieve all heights of excellence and wonderment, even to become mini-gods. This we adhere to by suppressing our feelings, ignoring our feelings, all the time when it is our feelings that is our doorway and path to freedom, ingenuity, intuitiveness and evolutionary progress. We are fully self-contained. Our feelings are always in truth! Our feelings are to guide us, lead us, be our beacon of light, and our mind is to follow in supporting and assisting in implementing what our feelings are prompting us to embrace. Feelings First is how we are to live. It is through living feelings first we enter upon the pathway to Paradise – the one and only pathway that there is!



# Root Cause

Highly esteemed Lanonandek spirits from within our local universe of Nebadon were assigned as System Sovereigns of our local system to oversee Earth's humanity and their spiritual development. 200,000 years ago they, the Lucifers, became infatuated with their authority and turned against the regents of Nebadon, Mary and Jesus, as well as rejecting God. Through their Planetary Princes, also Lanonandek spirits, they had taken the humanities of 37 worlds within their local system into their Rebellion.

Through living through our minds, suppressing our feelings, we on Earth will continue to be at war with each other, illnesses of all descriptions will continue from our feelings suppression, famine and inequalities prevail, control of others is the core of all systems, we cannot determine truth from falsehood and life on Earth is a living hell. We have been continually seduced by mind Mansion World spirits and we live life in a stupor – nothing more than zombies doing the begging of the evil ones, the rebellious Lanonandek spirits.

Through living through our minds, suppressing our soul based feelings, we have been progressively going further and further away from our Heavenly Parents, now to the point that we cannot go any further. Through working cracks in the Universal Contract governing the Rebellion and Default, this control has been ended formally as of 31 January 2018.

# Pathway Forward

To liberate one's real self, one's will, driven by one's soul, moves one to embrace Feeling Healing, so as to clear emotional injuries and errors. With the Divine Love, then one is also Soul Healing. We are to feel our feelings, identify what they are, accept and fully acknowledge that we're feeling them, express them fully, all whilst longing for the truth they are to show us.

**God's Divine Love: Pray for it, ask for it, and receive it.**

**The Golden rule is: Never interfere with another's will.**

**Golden Rule: that one must always honour another's will as one honours one's own.**

**New Feelings Way: learning how to live true to ourselves by living true to our feelings.**

**We are to express our feelings, both good and bad, at all times, and to long for the truth of them.**

**By living true to ourselves true to our feelings, we are living true to God. It's that simple.**



# MAP OF CONSCIOUSNESS

*Map of Consciousness* from Dr David R Hawkins, M.D., Ph.D. "Power vs Force".

Level	Log
ENLIGHTENMENT	700-1000
PEACE	600
JOY	540
LOVE	500
REASON	400
ACCEPTANCE	350
WILLINGNESS	310
NEUTRALITY	250
COURAGE	200
PRIDE	175
ANGER	150
DESIRE	125
FEAR	100
GRIEF	75
APATHY	50
GUILT	30
SHAME	20

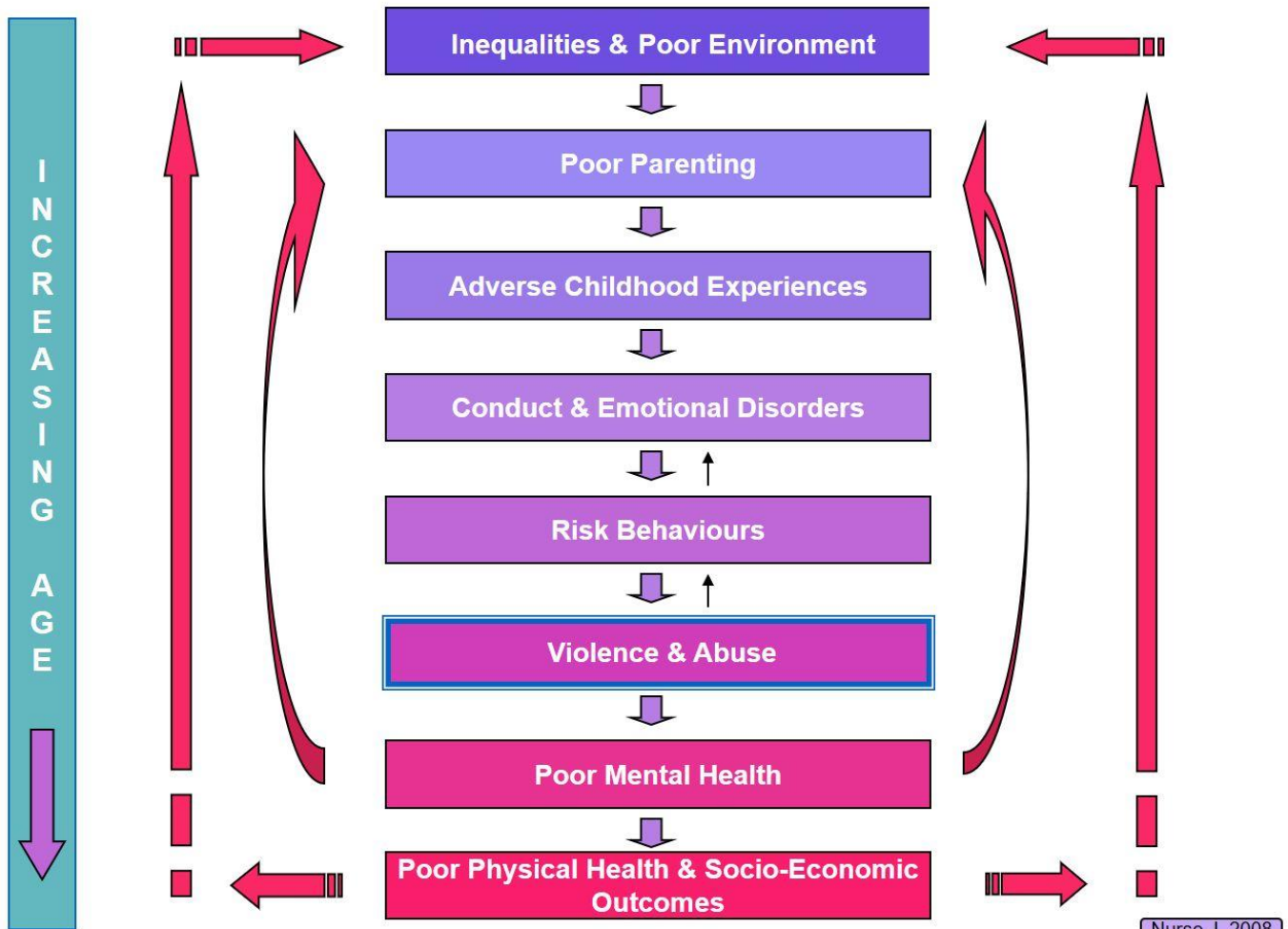
**PERSONALITY TRAITS:**

- Less than two dozen people on planet Earth.
- Would not pick up a weapon let alone use it. These people gravitate to the health industry and humanitarian programs.
- Debate and implement resolutions without argument and delay. 470
- Debate and implement resolutions in due course. 440
- Debate and implement resolutions with some degree of follow up generally needed. 410
- Management supervision is generally necessary.
- Politics become the hope for man's salvation.
- Cause no harm to others starts to emerge. Power overrides force. Illness is developed by those man erroneous emotions that calibrate 200 and lower.
- Armies around the world function on pride. Force is now dominant, not power.
- Harm of others prevails, self-interest prevails.
- Totally self-reliant, not God reliant.
- Fear dominates all motivation.
- Suicide is possible and probable.
- At these levels, seriously harming others for even trivial events appears to be justifiable.
- Poverty, unemployment, illness, etc., this is living hell on Earth.

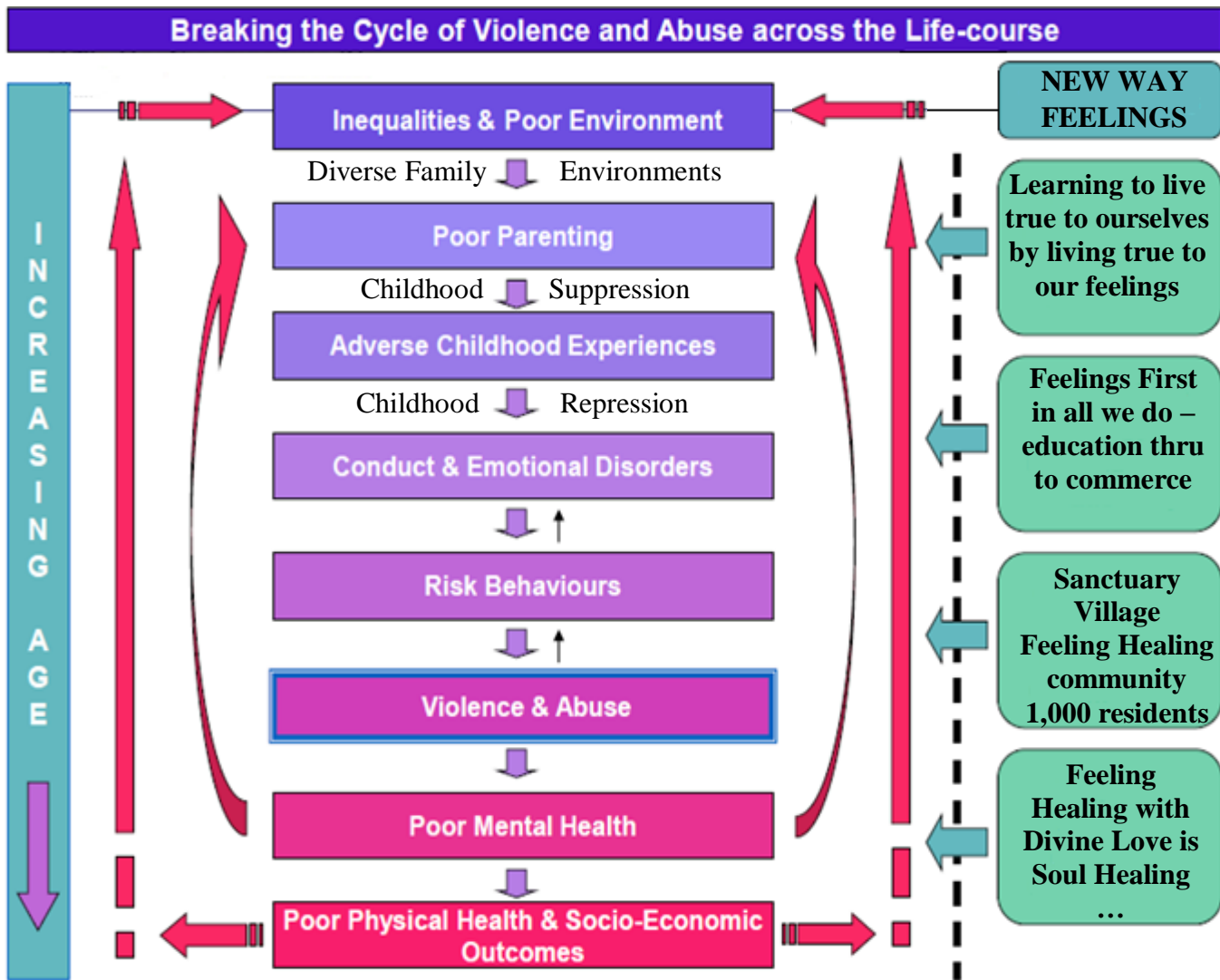
# LIFE IS FOR LEARNING



## The Cycle of Violence and Abuse across the Life-course



Seek **truth** from the cradle to the grave.



# Heartfelt TRUTH

Our feelings are soul-based. Our soul is always in truth. It is our soul based feelings, that when allowed to be freely recognised, we will begin to express and be who we are. This takes time and perseverance as we have encrusted our souls with layers upon layers of errors and false beliefs, it is these layers that will confuse the truth that our soul is conveying to us. Only by our progression with our Feeling Healing will our soul's expression of truth become clear and free of all cloudiness and contamination.

Through our Feeling-Healing we long for the truth of what we're feeling whenever we can. So as often as you can. You want, and REALLY WANT WITH ALL YOUR BEING, ALL YOUR WILL, to know why you are feeling bad. You yearn, want, long and beg and beg and BEG God to show you the truth of yourself through your feelings. So when you are expressing your bad feelings you can stop and long for the truth to show you what's going on, why do you feel so bad, and you can do it any time you think of it or feel to do it.

Notes from 'Feeling Healing' by James Moncrief

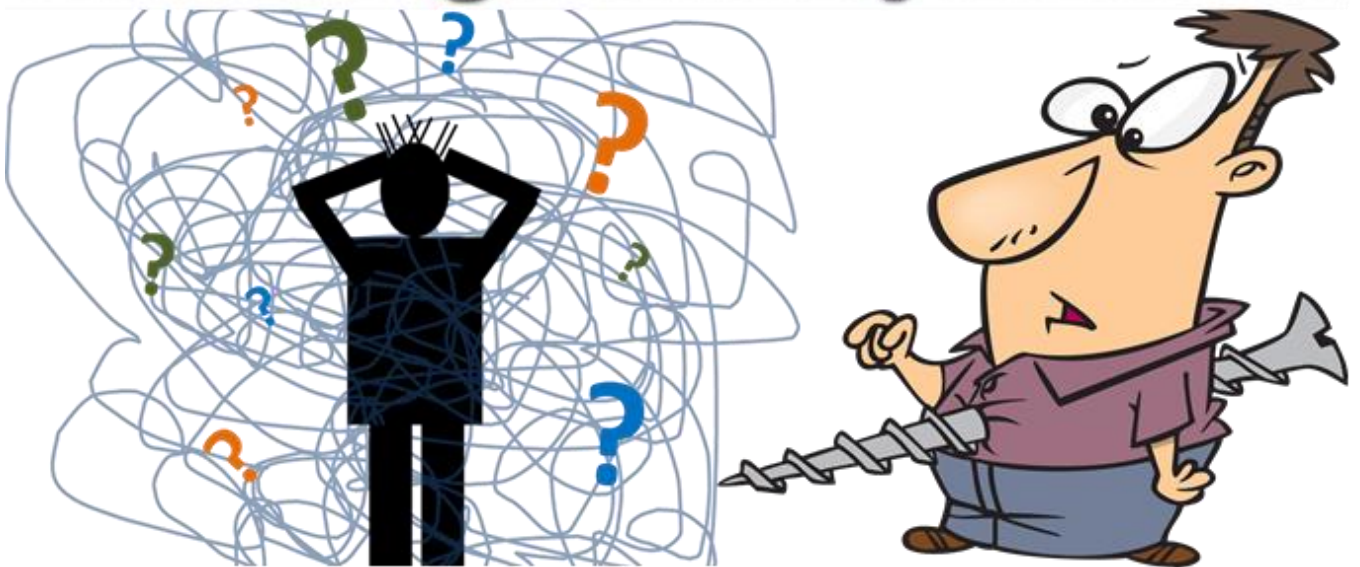
We are to apply our longing, apply our will, but not with our mind, although it can help one to determine what you want to do, but with and through one's feelings. We can't long with our mind, we have to FEEL-long. Our longing is an expression of what we feel. We feel we want God's love, so we express that feeling in our longing.



Healing is the feeling and expressing of childhood injuries and erroneous beliefs. They will be expressed progressively through one's healing process.

“The real KEY to our Healing is longing for the Truth, and that is the truth that will come from our feelings. If you don't want the truth of what you are feeling, then you can forget it. You can express your feelings all day like a kettle letting off steam, however if you're not seriously wanting, and longing hard, and praying with all your will to God to help you uncover and see the TRUTH that your feelings are to show you, then you can forget it. The expressing and releasing ARE just as important, however a little less than longing for the truth.” James Moncrief 28 May 2018

**We are being screwed by our Minds!**



Feelings First with Mind to follow in support.

**This time, in the history of humanity, is the most exciting time ever experienced.**

# feelings

New way

The NEW The NEW

It's all about  
**Experiences**  
&  
**FEELINGS**



**BE FEELINGS  
EXPRESSIVE!**

**WHOLE DIFFERENT** Way of Life.

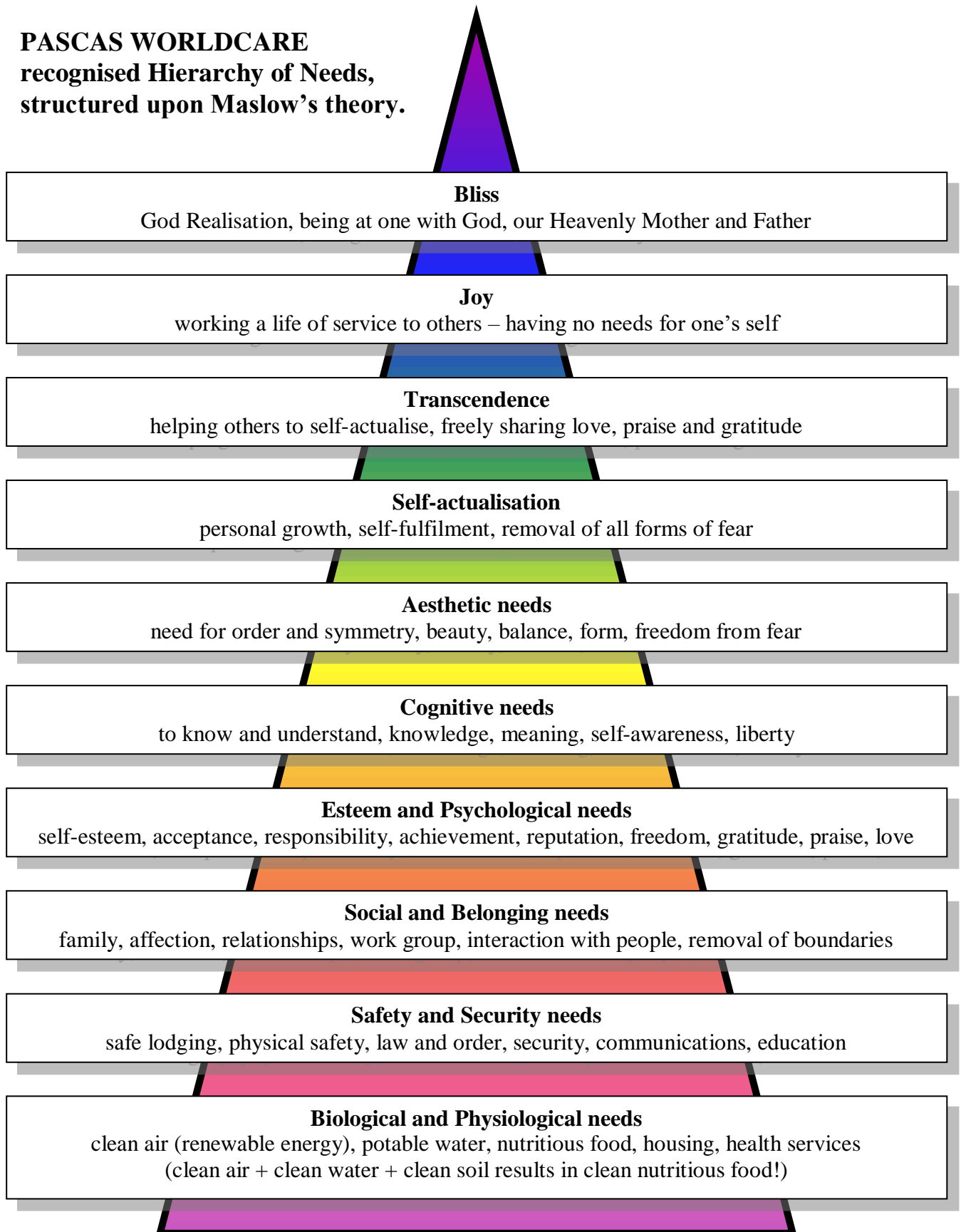


Mind



feelings

**PASCAS WORLDCARE**  
 recognised **Hierarchy of Needs**,  
 structured upon Maslow's theory.





# PASCAS UNIVERSITY

## PASCAS FOUNDATION (Aust) Ltd

**We enable awareness so that people and communities may profoundly grow their lives, livelihoods and exponentially enhance their futures.**

Empowerment is by:

the New Way: Learning how to live true to ourselves by living true to our feelings;

enabling the true liberation of women through the truth of their feelings;

assisting urban as well as remote and rural communities with access to truth through all levels and forms of education;

supporting delivery of quality and accessible healthcare;

improving opportunities for and the safety of all, especially women and children;

and fostering a new era of leadership and leaders.

*It takes a village to raise a child.*

**LIVING FEELINGS FIRST and EARLY CHILDHOOD**

<http://www.pascashealth.com/index.php/library.html>

## **Library Download – Pascas Papers**

All papers may be freely shared. The fortnightly mailouts are free to all, to be added into the mailout list, kindly provide your email address. [info@pascashealth.com](mailto:info@pascashealth.com)

### **In this series:**

Chaldi Child Care Centre – Safe Space  
 Chaldi College Free to Learn Instinctively  
 Chaldi College Free to Learn Pathway  
 Chaldi College Primary thru to High – Feelings First  
 Chaldi College Women and Girls' Education  
 Chaldi College (WW) – Education through Feelings  
 Chaldi College (WW) – Technology & Product Information  
 Chaldi College (WW) – Massive Open Online Courses  
 Chaldi University Postgraduate Feelings Degree

Pascas Care Letters Psychology and Feeling Healing  
 Pascas Care Living Feelings First Adult  
 Pascas Care Living Feelings First Children  
 Pascas Care Living Feelings First Children Annexures  
 Pascas Care Living Feelings First Children Discussions  
 Pascas Care Living Feelings First Children Graphics  
 Pascas Care Living Feelings First Drilling Deeper  
 Pascas Care Living Feelings First Drilling Deeper Structures  
 Pascas Care Living Feelings First Reference Centre

Pascas University and Global View  
 Pascas University and the Meeting House  
 Pascas University Education Core Errors  
 Pascas University Papua New Guinea Leadership Team  
 Pascas University Universally Free Education  
 Pascas University We Learn By Doing



Important recommended reading is:

by James Moncrief

### **The Rejected Ones – the Feminine Aspect of God**

<http://divinelovesp.weebly.com/my-free-books-and-free-padgett-messages.html> ALSO at  
<https://www.pascashealth.com/index.php/library.html?file=files/opensauce/Downloads/MEDICAL%20-%20SPIRITUAL%20REFERENCES/Rejected%20Ones%20via%20James%20Moncrief.pdf>

<http://www.pascashealth.com/index.php/library.html>

## Library Download – Pascas Papers

All papers may be freely shared. The fortnightly mailouts are free to all, to be added into the mailout list, kindly provide your email address. [info@pascashealth.com](mailto:info@pascashealth.com)

Within the Library Download page within Pascas Care Letters at [www.pascashealth.com](http://www.pascashealth.com) kindly download the following two files:



[Pascas Care Letters Root Cause now to Pathway Forward.pdf](#)



[Pascas Care Letters Root Cause now to Pathway Forward short.pdf](#)

Important recommended reading is:

by James Moncrief

### The Rejected Ones – the Feminine Aspect of God

<http://divinelovesp.weebly.com/my-free-books-and-free-padgett-messages.html> ALSO at

<https://www.pascashealth.com/index.php/library.html?file=files/opensauce/Downloads/MEDICAL%20-%20SPIRITUAL%20REFERENCES/Rejected%20Ones%20via%20James%20Moncrief.pdf>

**To liberate one's real self, one's will, being one's soul, is by embracing Feeling Healing so as to clear emotional injuries and errors. With the Divine Love, then one is also Soul Healing. We are to feel our feelings, identify what they are, accept and fully acknowledge that we're feeling them, express them fully, all whilst longing for the truth they are to show us.**

Within the Library Download page within Pascas Care Letter at [www.pascashealth.com](http://www.pascashealth.com) kindly download the following:

- Pascas Care Letters – Family Shelters Abuse & Remedial
- Pascas Care Letters – Family Shelters Overview
- Pascas Care Letters – Family Shelters Protection
- Pascas Care Letters – Family Shelters Social Housing
- Pascas Care Letters – Family Shelters Support Centre
- Pascas Care Letters – Family Shelters towards Liberation





**FURTHER READING:**

Free downloads are from [www.pascashealth](http://www.pascashealth.com) in the Library Download page, scroll down for the PDFs:

**PASCAS CARE PARENTING**

Sam's Book – Parenting and Feeling Healing	Book I	Experience
Sam's Book – Parenting and Feeling Healing	Book II	Conception
Sam's Book – Parenting and Feeling Healing	Book III	Magic
Sam's Book – Parenting and Feeling Healing	Book IV	Nothingness
Sam's Book – Parenting and Feeling Healing	Book V	Setting Free
Sam's Book – Parenting and Feeling Healing	Book VI	Pain and Rage
Sam's Book – Parenting and Feeling Healing	Book VII	Vision
Sam's Book – Parenting and Feeling Healing	Book VIII	Childhood
Sam's Book – Parenting and Feeling Healing	Book IX	Self-Acceptance
Sam's Book – Parenting and Feeling Healing	Book X	Physical Illness

Pascas Care – Parenting Awareness  
 Pascas Care – Parenting Eureka Moment  
 Pascas Care – Parenting Feelings Supreme Guides  
 Pascas Care – Parenting Health Generation  
 Pascas Care – Parenting into the Abyss  
 Pascas Care – Parenting Rebellion

Important recommended reading is:

by James Moncrief

### **The Rejected Ones – the Feminine Aspect of God**

<http://divinelovesp.weebly.com/my-free-books-and-free-padgett-messages.html> ALSO at  
<https://www.pascashealth.com/index.php/library.html?file=files/opensauce/Downloads/MEDICAL%20-%20SPIRITUAL%20REFERENCES/Rejected%20Ones%20via%20James%20Moncrief.pdf>



**Mind Centric Way**

**Feelings First Freedom**

<b>Primary recommended reading:</b>	<b>consider commencing with:</b>	<b>Paul – City of Light and Sage – and the Healing Angels of Light</b>	
<b>The Rejected Ones</b>	<b>2002 – 2003</b>	<b>xxx</b>	<b>– James Moncrief</b>
<b>Messages from Mary &amp; Jesus</b>	<b>2003</b>	<b>xxx</b>	<b>– James Moncrief</b>
<b>Soul Light from Zelmar Melchizedek</b>	<b>2003</b>	<b>xxx</b>	<b>– James Moncrief</b>
<b>Paul – City of Light</b>	<b>2005</b>	<b>xxx</b>	<b>– James Moncrief</b>
<b>Feeling Healing</b>	<b>2017</b>		<b>– James Moncrief</b>
<b>Religion of Feelings</b>	<b>2017</b>		<b>– James Moncrief</b>
<b>Mary Magdalene and Jesus' comments on the Padgett Messages</b>	<b>2007 – 2010</b>	<b>xxx</b>	<b>– James Moncrief</b>
<b>Speaking with Mary Magdalene &amp; Jesus Sage and the Healing Angels of Light</b>	<b>2013 – 2014</b>	<b>xxx</b>	<b>– James Moncrief</b>
<b>Road map of Universe and history of Universe:</b>	<b>2017</b>	<b>xxx</b>	<b>– James Moncrief</b>
<b>The Urantia Book</b>	<b>1925 – 1935</b>	<b>xxx</b>	<b>as primary reading</b>
<b>Divine Love supporting reading:</b>			
<b>Revelations</b>	<b>1954 – 1963</b>		<b>– Dr Daniel Samuels</b>
<b>Judas of Kerioth</b>	<b>2001 – 2003</b>		<b>– Geoff Cutler</b>
<b>The Book of Truths containing the Padgett Messages or Little Book of Truths</b>	<b>1914 – 1923</b>	<b>xxx</b>	<b>– Joseph Babinsky</b>
<b>True Gospel Revealed anew by Jesus Vol I, II, III, IV</b>		<b>xxx</b>	<b>– Geoff Cutler</b>
<b>Available generally from:</b>			
<a href="http://www.lulu.com">www.lulu.com</a>	<a href="http://www.amazon.com">www.amazon.com</a>	<a href="http://www.bookdepository.com">www.bookdepository.com</a>	
<b>For Divine Love focused websites and forums:</b>			
<b>Pascas Health:</b>	<a href="http://www.pascashealth.com/index.php/library.html">http://www.pascashealth.com/index.php/library.html</a>		
<b>Spiritual Development:</b>	<a href="http://new-birth.net/spiritual-subjects/">http://new-birth.net/spiritual-subjects/</a>		
<b>Padgett Books:</b>	<a href="http://new-birth.net/padgetts-messages/">http://new-birth.net/padgetts-messages/</a>		
<a href="http://divinelovesp.weebly.com/my-free-books-and-free-padgett-messages.htm">http://divinelovesp.weebly.com/my-free-books-and-free-padgett-messages.htm</a>			

### **BIBLIOGRAPHY NOTE:**

James Moncrief has written numerous books and prepared numerous movie scripts. Incorporated here are primary writings.

Pascas has 600+ supportive 'Pascas Papers' accessible in Library Download at [www.pascashealth.com](http://www.pascashealth.com)

Pascas Primary publications being:

- U-Turn for Humanity Pascas reveals New Feelings Way
- U-Turn for Humanity pathway being New Feelings Way
- U-Turn for Humanity shutting hells through New Feelings Way
- U-Turn for Humanity soul light and New Feelings Way
- U-Turn for Humanity through the New Feelings Way
- U-Turn for Humanity treacherous assumptions New Feelings Way
- U-Turn for Humanity unfolding the New Feelings Way
- Universal Gift – Feeling Healing with Divine Love
- Feeling Healing and Divine Love Discussion Prompts
- Pascas Care Death & Dying Transition & Assimilation Marjorie

Selected Pascas Papers, as noted below, can be downloaded from [www.pascashealth.com](http://www.pascashealth.com) from within the Library Download page.

**James Moncrief's books, the Padgett Messages and The Urantia Book at:**

**DIVINE LOVE SPIRITUALITY – DLS:**

<http://divinelovesp.weebly.com/my-free-books-and-free-padgett-messages.html>

All Padgett Messages (for condensed versions – see below) 1914 – 1923 Pages 945  
The Urantia Book (see suggested papers to read below)

James Moncrief Books:	MoC		
The Rejected Ones – the Feminine Aspect of God	1,490	Nov 2002 – Jan 2003	228
Messages from Mary and Jesus book 1	1,485	Feb – Apr 2003	189
Messages from Mary and Jesus book 2	1,485	Apr – Oct 2003	170
Soul Light from Zelmar, a Melchizedek, books 1 and 2	1,480	May – Sep 2003	480
Mary Magdalene and Jesus' comments on the Padgett Messages – book 1		Aug 2007	164
Messages from 31 May 1914 – 12 January 1915	1,495		
Mary Magdalene and Jesus' comments on the Padgett Messages – book 2		Sep 2010	177
Messages from 13 January 1915 – 29 August 1915	1,494		
Speaking with Mary Magdalene and Jesus blog – book 1	1,490	Jan – Apr 2013	206
Speaking with Mary Magdalene and Jesus blog – book 2	1,489	Apr – May 2013	229
Speaking with Mary Magdalene and Jesus blog – book 3	1,490	Oct – Jan 2014	187
Speaking with Mary Magdalene and Jesus blog – book 4	1,491	Jan – May 2014	191
Mary Magdalene comments on Revelation from the Bible KJV	1,485	Dec 2013 – Jan 2014	84
		This group being pages of	2,305

Paul – City of Light	1,488.5	2005	149
Ann and Terry		2013	235
Feeling bad? Bad Feelings are GOOD!	feeling-healing book 1	2006	179
Feeling bad will make you feel BETTER – Eventually!	feeling-healing book 2	2006	159
Breaking the Golden Rule.	feeling-healing book 3	2006	168
Feeling-Healing exercises, and other healing points to consider.		2009	175
Cathy and Mark – a novel introducing Feeling-Healing.		2010	151
Introduction course to Divine Love Spirituality		2006	139
Speaking with the Dead, Death and Dying		2009	173
Spirits and their Childhood Repression Healing		2010	179
With Verna – a nature spirit		2008	279
Communication with spirits – meet a spirit friend		2010	37
Introduction to Divine Love Spirituality website			362
Sage – and the Healing Angels of Light		2017	260
Divine Love Spirituality	1,500	2017	201
Feeling Healing – you can heal yourself through your feelings		2017	153
Religion of Feelings	1,500	2017	47

This group being pages of 3,046

**Religion of Feelings**

<http://religionoffeelings.weebly.com/>

**Introduction to Divine Love Spirituality**

<http://dlspirituality.weebly.com/>

**Main website of DLS**

<http://divinelovesp.weebly.com/>

**Childhood Repression website**

<http://childhoodrepression.weebly.com/>

**DLS and CR forum**

<http://dlscr.freeforums.net/>

<http://withmarymagdaleneandjesus.weebly.com/blog---and-free-books-speaking-with-mary-and-jesus>



**FEELING HEALING and SOUL HEALING with the DIVINE LOVE:****James Moncrief Publications:****all publications are free downloads:**<http://divinelovesp.weebly.com/my-free-books-and-free-padgett-messages.html>

It is suggested for one to consider reading as follows:

**Speaking with Mary Magdalene and Jesus – books 1 – 4**

These four books encapsulate the second of the revelations with the first having been introduced by James Padgett one hundred years previously. These four books provide a wide range of guidance that has never previously been made available.

**Soul Light – books 1 and 2**

A Melchizedek, Zelmar, sums up how we are to heal ourselves and ascend to Paradise.

**Paul – City of Light**

As a gentle intro into the Divine Love and Healing; being James Moncrief's first novel.

**Ann and Terry**

An example for people who might want to immediately start working on themselves and doing their Healing.

**Feeling Bad? Bad Feelings are GOOD**

For more understanding about our denial of our feelings and why we should not deny our feelings, and it includes how it all came about for James, using himself as an example.

**Feeling bad will make you feel BETTER – Eventually!**

This includes specific examples of Marion and James working on expressing particular bad feelings, again with the hope that it will help others gain something of an idea as to what's involved in doing your Feeling Healing.

**Sage – and the Healing Angels of Light**

Through Sage who's 13 years old, the story is primarily about the two aspects of healing; that being, with the help of our angels, and the full Healing we can do by looking to our feelings for their truth.

**Religion of Feelings  
Feeling Healing**

**Welcome to LOVE – the Religion of Feelings  
you can heal yourself through your feelings**

So these books, including the four Speaking with Mary Magdalene and Jesus books, provide the essence of it all and are examples of James' work. Then it's up to whatever takes one's fancy. Other reading to consider may include:

**The Padgett Messages being published as:****The True Gospel Revealed Anew by Jesus volumes 1 – 4****Book of Truths by Joseph Babinsky****The Urantia Book**

**Release one's pain through expressing one's feelings.**

**in conjunction with**

**Longing for the Truth when also longing for Divine Love.**

### **FEELING HEALING with DIVINE LOVE is SOUL HEALING:**

*A collection of 'papers' that draw together specific topics including all of the above and more from other sources of information and revelation designed to help increase one's awareness about why we have the problems we do and how to heal them, all whilst living a more healthy and sustainable life. They provide a brief snapshot of the more complicated topics and issues.*

**Firstly, consider discovering the truth of your emotional pain through Feeling Healing.  
Secondly, consider longing for our Heavenly Parents' Love as you progress with your healing.  
Primary and most important readings are the writings of James Moncrief.  
Then consider the Padgett Messages, and then The Urantia Book.**

Pascas Papers, being free, are located within the Library Download [www.pascashealth.com](http://www.pascashealth.com)  
<http://www.pascashealth.com/index.php/library.html>

[PASCAS – document schedule.pdf](#)      **downloadable index to all 550+ Pascas Papers.**

FH denotes Feeling Healing; SH denotes Soul Healing, which is: Feeling Healing with the Divine Love;  
DL denotes Divine Love – living with the Love.

**PASCAS INTRODUCTION NOTES:** *All papers below can be found at Library Download link.*

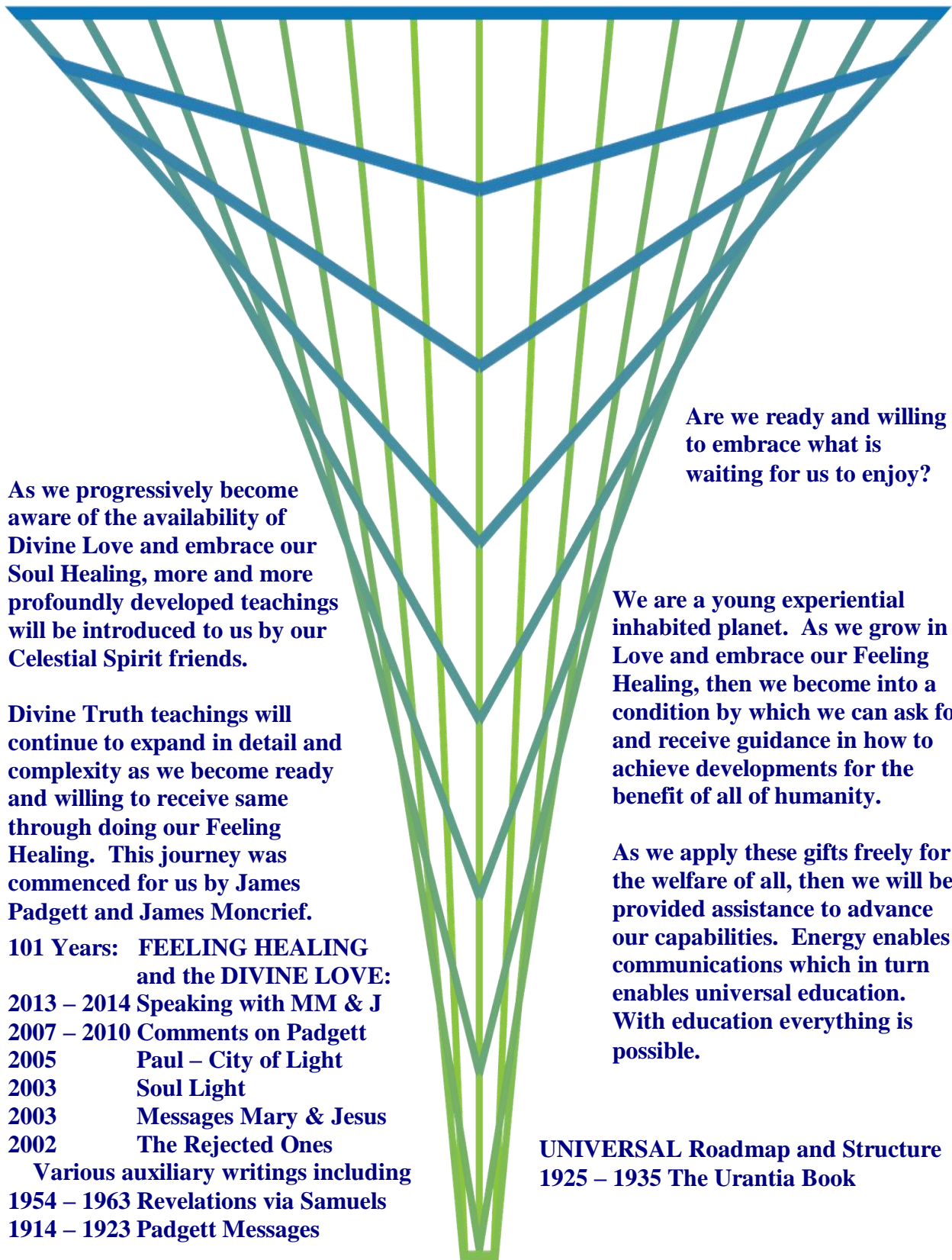
- Pascas Care Letters A Huge Upturn
- Pascas Care Letters Big Revelation
- Pascas Care Letters Feeling Healing Benefits Children
- Pascas Care Letters Feeling Healing Way
- Pascas Care Letters Little Children
- Pascas Care Letters Women's Liberation and Mother

### **MEDICAL – EMOTIONS:**

- Pascas Care – Feeling Healing
- Pascas Care – Feeling Healing All is Within
- Pascas Care – Feeling Healing and Health
- Pascas Care – Feeling Healing and History
- Pascas Care – Feeling Healing and Parenting
- Pascas Care – Feeling Healing and Rebellion
- Pascas Care – Feeling Healing and Starting
- Pascas Care – Feeling Healing and Will
- Pascas Care – Feeling Healing Angel Assistance
- Pascas Care – Feeling Healing Being Unloved
- Pascas Care – Feeling Healing Child Control
- Pascas Care – Feeling Healing Childhood Repression
- Pascas Care – Feeling Healing End Times
- Pascas Care – Feeling Healing is Rebellious
- Pascas Care – Feeling Healing Live True
- Pascas Care – Feeling Healing Mary Speaks
- Pascas Care – Feeling Healing My Soul
- Pascas Care – Feeling Healing Perfect State
- Pascas Care – Feeling Healing Revelations X 2
- Pascas Care – Feeling Healing the Future
- Pascas Care – Feeling Healing Trust Yourself
- Pascas Care – Feeling Healing Versus Cult

**PASCAS  
PAPERS**

**DIVINE LOVE and DIVINE TRUTH Revelations and Teachings escalating:**





# What Is Genius? True Self Expression

Children Tutoring Each Other!

Feelings  
Orientated  
Education



People Interacting!



# *We Learn By Doing!*



**P**hilosophy of global changes

**A**ge of a new way

**S**oul healing

Put **C**hildren first

**A**wareness so that people can improve their lives

**S**pirit creating alternative solutions

**Team Ukraine**





# "THE" profession is: TEACHING



to:

*Learn through play*  
*Independently explore subject*  
*Research with fellow students*  
*Explore topics you enjoy*  
*Engage in what you are passionate about*  
*Ask — and keep asking*  
*Question every aspect*  
*Commonsense is not common*  
*Assumptions are mostly in error*  
*Embrace what you may be feeling*  
*We have been retarded and restrained*  
*We are to be our true self*  
*We are to express all our feelings*  
*We are self contained — all is within*  
*By doing is how we learn*  
*Tutoring others is a great self teacher*  
*Our capabilities are infinite*



while you



Living Feelings First!

INTUITIVE

INSIGHTFULNESS

DYNAMIC

NATURAL INTELLIGENCE

SPONTANEOUS

VIBRANCY

foresightful

*Wisdom & Truth*

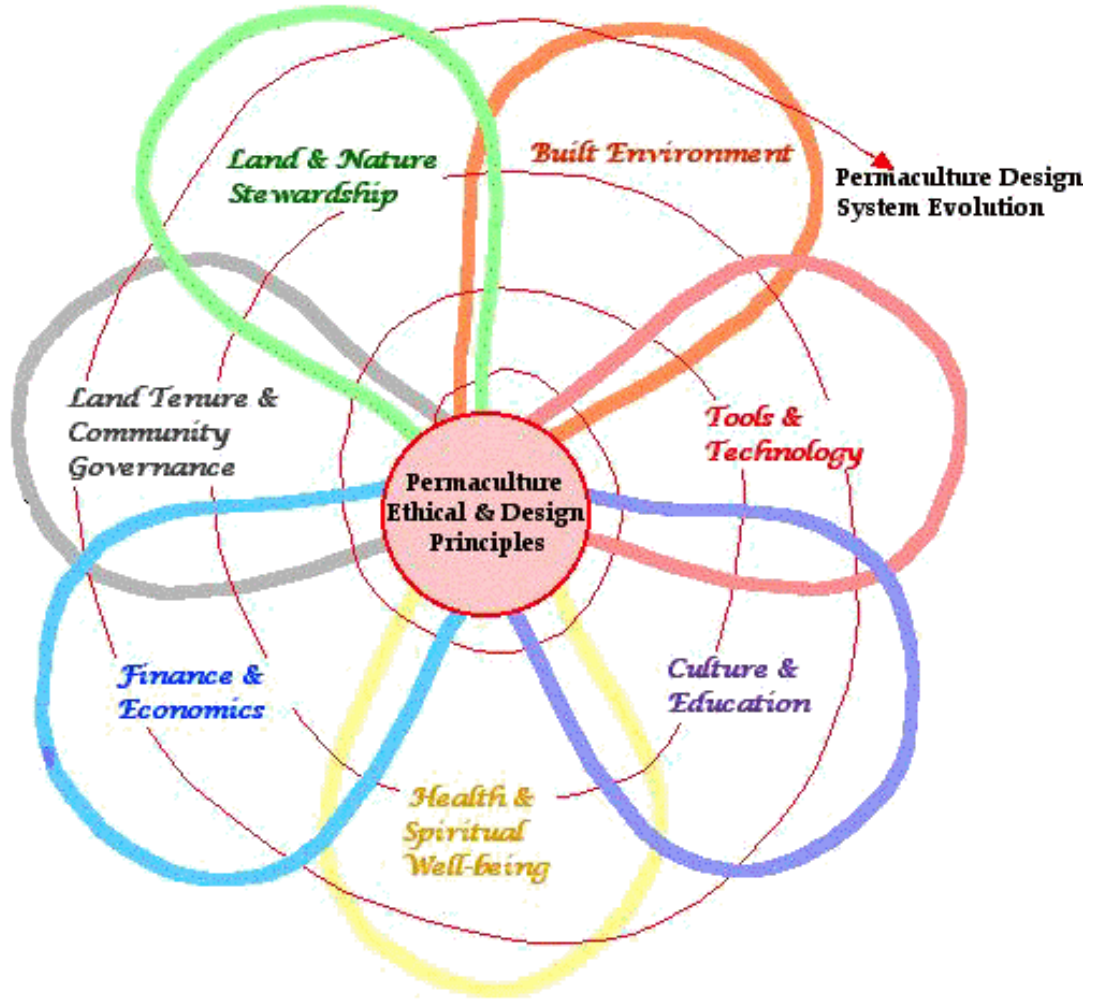
FREEDOM

EQUALITY

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# Food Park Project







perceived truth MoC 915 – relative truth potential MoC 1,480