

GLOBAL WARMING/CLIMATE CHANGE; HUMAN CAUSED CRISIS?

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INTRODUCTION

Webster's New World Dictionary defines the word crisis as "a decisive or crucial time, a time of great danger." Applied to past and recent extreme weather-related incidents – particularly in 2022 – this definition seems applicable as a steady increase of carbon dioxide in the earth's atmosphere is being globally proclaimed as the primary result of man-caused (anthropogenic) maladies that are allegedly resulting in the impending destruction of the earth and its inhabitants. Even though a strong emphasis on global warming/climate change (hereinafter known as climate change) is regularly found in bookstores such as Barnes & Noble, local, national and global newspapers, television news programs, scientific organizations such as NASA, and last but not least – a growing number of politicians – the recent frequency and emphasis has progressively increased to the point that the impending doom of earth from increased anthropogenic carbon dioxide is being portrayed as an unquestioned fact that has supposedly been verified by science and an alleged majority of global scientists.

Recently, the September 4, 2019, 7-hour CNN Climate Crisis Town Hall featured the remaining ten Democratic Presidential candidates presenting their plans for addressing climate change with a common goal of achieving carbon neutrality across the United States economy by 2050. The take home message

was – "if you were a Democratic candidate for President, you believed that climate change is an existential threat not only to the United States but also to human civilization." Additionally, CNN's framing of the Town Hall topic as a "crisis" reflects a steady shift and emphasis in how the press now describes climate change as factual in addition to being man-caused. Some recent governmental examples of man-caused climate change being presented as fact and a current existential crisis are as follows:

- On November 24, 2018, local and national news programs across this country reported on the released United States Government 4th Climate Assessment Report that claims "the message is loud, clear and undeniable: climate impacts are here and growing. The tragic Camp Fire in California serves as a stark illustration of how climate change is loading the dice for more extreme events that devastate people, homes and the economy. We should trust what we are seeing with our own eyes: more intense wildfires, hurricanes, flooding, and heat waves. This is what climate change looks like and it will become far worse unless we rapidly shift to a low-carbon economy."²
- o In August, 2021, the United Nations Intergovernmental Panel on Climate Change in Geneva, Switzerland, released its Sixth Assessment Report that stated "climate change is widespread, rapid, and intensifying. Many of the changes observed in the climate are unprecedented in thousands, if not hundreds of thousands of years, and some of the changes already set in motion such as continued sea level rise are irreversible over hundreds to thousands of years."³
- O According to the September, 2021, issue of the United Nations News, "we have reached a tipping point for climate action. Time's running out to avoid catastrophic heating. The disruption to our climate and our planet is already worse than we thought, and it is moving faster than predicted"⁴

Additionally, 2022 has seen a noteworthy number of disasters that have commonly been alleged to be the result of man-caused climate change as follows:

- o Floods in Death Valley, Yellowstone, Kentucky, and St Louis⁵
- O According to the San Francisco Chronicle "Yosemite National Park is bearing the brunt of climate change. Forests are burning, glaciers are melting and waterfalls are drying up, a scenario that reflects the disproportionate vulnerability that scientists say national parks face as the climate warms. The solution, is to slow climate change by cutting greenhouse gas pollution from cars, power plants, industry and agriculture"
- "Human-caused climate change made last week's deadly heat wave in England and Wales at least 10 times more likely and added a few degrees to how brutally hot it got," a study said⁷

 Fierce rains in France and Italy during a summer of drought, heat waves and forest fires across Europe that scientists link to human-caused climate change⁸

Additionally, along with the preceding climate crisis warnings, numerous public interest organizations have also voiced their concerns that human activity is causing detrimental changes to our global climate and will only get worse unless we take action. As an example – "carbon pollution is contributing to climate disasters that will only get worse unless we take action. Across the globe, extreme weather is becoming the new normal by enhancing destructive wildfires, deadly heatwaves and drought, increases in precipitation, record hurricanes, rising sea levels, torrential rains and flooding, and intense winter storms"

Clearly, the issue of climate change is at the forefront of newsworthy items, a centerpiece of many political concerns, and also allegedly supported by secular scientific apprehensions that must be addressed much sooner than later. So, before we consider some key questions, let's first define some essential terms that will be used in this discussion:

ANTHROPOGENIC

Pollutants originating from human activities.

IPCC

United Nations Intergovernmental Panel on Climate Change. A part of the United Nations that provides the primary global stimulus behind global anthropogenic climate change. The IPCC is located in Geneva, Switzerland.

GREENHOUSE EFFECT

The process where heat is trapped in the atmosphere by gases that form a "blanket" around the earth.

GREENHOUSE GASES

Atmospheric gases that trap energy. The primary greenhouse gases in the earth's atmosphere are (in order of importance) water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

CARBON NEUTRALITY (carbon neutral)

This phrase is the new "gold," and is defined as the balance between emitting carbon and absorbing carbon emissions from carbon sinks (systems that absorb more carbon than they emit, such as forests, soils, and oceans).

NET ZERO

Cutting greenhouse gas emissions to as close to zero as possible, with any remaining emissions re-absorbed from the atmosphere, by oceans, forests, soils.

CLIMATE POSITIVE

Activity that goes beyond achieving net-zero by removing additional carbon dioxide from the atmosphere.

COMMON CLIMATE CHANGE KEY QUESTIONS

WHAT IS THE DIFFERENCE BETWEEN GLOBAL WARMING AND CLIMATE CHANGE?

HISTORICAL

During the 1970's, the term *global warming* was scarcely used in this country except for a few selected scientific magazine articles. However, this remained the dominant term until 2009 and 2011 when a server at the Climatic Research Unit at the British University of East Anglia was hacked resulting in the public release of numerous revelatory emails between some top IPCC scientists, and became known as Climategate 1.0 and 2.0.¹⁰ Two primary themes emerged from the released emails:

- These scientists viewed climate change as a political cause rather than a balanced scientific inquiry
- Many of these scientists frankly admitted to each other that much of the science was weak and dependent on deliberate manipulation of facts and data

As a result, the term global warming began to be replaced by the more "user-friendly" term of climate change. However, some people in and out of science – and the media – often use both terms interchangeably.

SCIENTIFIC

- o *Global warming* refers to the earth's rising surface temperature. Said another way, global warming is one symptom of the much larger problem of mancaused climate change¹¹
- o Climate change includes warming and the "side effects" of global warming
- Note: As the phrase climate change tends to be more popular, this is the term we will use – where possible – as an umbrella for the balance of this discussion. Therefore, the phrase climate change will <u>include anthropogenic</u> <u>climate change (man-caused)</u>

DOES THE BIBLE ADDRESS CLIMATE CHANGE?

Scripture assures us that humanity does not have the power to destroy the earth as stated by the two following verses:

- o Colossians 1:17 "and He is before all things, and in Him all things **consist** (to hold together)"
- Hebrews 1:3 "who being the brightness of His glory and the express image of His person, and **upholding all things** (the universe and everything in it is constantly sustained by the Son's powerfully effective word)

Additionally, God has also promised in Genesis and Ecclesiastes that He controls the future of the earth:

- O God's promise in Genesis 8:22 to Noah and his family after they departed from the Ark gives us ample reason to expect that the earth's temperature will remain within acceptable ranges – "while the earth remains, seedtime and harvest, cold and heat, winter and summer, and day and night shall not cease"
- We are further assured by Scripture in Ecclesiastes 1:4 that humanity does not have the power to destroy the earth, either gradually through climate change or through sudden cataclysm, such as a nuclear holocaust – "one generation passeth away, and another generation cometh: but the earth abideth forever"

To summarize the previous four verses, the destiny of the earth and humanity remains solely in God's command. In all cases, the primary focus should be on worshiping the Creator, not the Creation, as God is in control, not mankind. Regrettably, the preceding Scriptural promises are not recognized by secular science. So, let's continue and consider the purported validity of scientific and political claims of the alleged pending disastrous effects of climate change.

WHAT IS THE SECULAR HISTORY OF CLIMATE CHANGE POLICY?

As this is a global issue, lets summarize the history of global and domestic actions of governmental and scientific organizations pertaining to the primary issue of climate change from carbon dioxide:

GLOBAL

Attention to perceived climate change issues emerged as a political issue in the 1970's when activist efforts were taken to focus on more effective political action regarding climate change and other environmental crises on a global scale. In 1970, Earth Day was the first large-scale environmental movement and was soon followed by The Friends of Earth. These early climate activists started a shift from a scientific perspective to an issue of political concern. A formal political discussion of the global environment began in 1972 which led to the First World Climate Conference in 1979. In 1985, The Advisory Group on Greenhouse Gases was formed (by the International Council of Scientific Unions) with climate change suggested to be almost as serious as nuclear war at the 1988 Toronto Conference. 12

Additionally, the United Nations Environmental Program and the World Meteorological Organization jointly established the Intergovernmental Panel on Climate Change (IPCC) in 1988, and was endorsed by the United Nations. These efforts culminated in initial attempts to reduce global greenhouse gas emissions on a country-by-country basis and resulted in the IPCC issuing 6 periodic Assessment Reports up to the present. In 1997, the 3rd Conference of the Parties

(COP-3) passed the Kyoto Protocol containing the first legally binding greenhouse gas reduction targets followed by the 2009 Copenhagen Accord (keeping global warming below 2°C) and then the December 2015 Paris Agreement signed by 195 countries agreeing to keeping a global temperature rise (this century) well below 2°C above pre-industrial levels. Additionally, to also pursue efforts limiting the temperature increase even further to 1.5°C.¹³

DOMESTIC

The term *global warming* was initially used in a 1975 Science magazine article titled – Climate Change: Are We on the Brink of a Pronounced Global Warming?¹⁴ In 1988, global warming became the dominant popular term when a NASA scientist testified to Congress about climate issues and specifically used the term global warming.¹⁵ A presidential initiative in 1989 initiated the Global Change Research Act (USGCRP) of 1990 that has a legal mandate to conduct a scientific synthesis of climate impacts and trends across U.S. regions every four years and is known as the National Climate Assessment (NCA).¹⁶ The NCA is the official U.S. Government "State of The Union" about climate change to Congress and is updated every four years. The Fourth National Climate Assessment was released November 2018. The USCRCP is comprised of thirteen departments and agencies such as NASA, EPA, Department of Commerce, Department of Defense, and others.

The U.S. ratified the Montreal Protocol of 1987 in a 1990 amendment to the Clean Air Act. In 1992, the Senate approved the U.N. Framework Convention on Climate Change. 17 In 1993, the Clinton Administration commissioned the Climate Change Action Plan followed by an 18% carbon reduction target over the next 10 years. In 2013, the Obama Administration resurrected the Climate Action Plan which aimed to cut 32% of carbon emissions from electrical power plants. In 2015, the USA became a party to the Paris Agreement but President Trump decided to withdraw from the agreement in 2017 which was formalized in 2019 by officially notifying the United Nations of the impending withdrawal. However, 2019 also witnessed the Democrats regaining control of the House of Representatives and elevating climate change to a high priority along with the introduction of the New Green Deal. In 2020, Congress passed an omnibus package that includes research and deployment for clean energy technologies and directs the EPA to phase down the production and consumption of hydrofluorocarbons over a 15-year period. Currently, President Biden's 740 billion Inflation Reduction Act of 2022 has pledged 375 billion over the decade in climate change fighting strategies and cutting greenhouse emissions by 40% by 2030.18

HOW EFFECTIVE HAS THE CLIMATE CHANGE MESSAGE BEEN?

Consider the following current UN quote:

A new flagship UN report (4 April 2022) on climate change out Monday indicating that harmful carbon emissions from 2010-2019 have never been higher in human history, is proof that the world is on a "fast track" to disaster, the UN Secretary General has warned with scientists arguing that it's 'now or never' to limit global warming to 1.5 degrees C. The Secretary-General also insisted that unless governments everywhere reassess their energy policies, the world will be uninhabitable. Unless action is taken soon, some major cities will be under water and there will be unprecedented heatwaves, terrifying storms, widespread water shortages and the extinction of a million species of plants and animals¹⁹

Although this recent quote from the Secretary General of the United Nations certainly qualifies as an ominous warning to the world-at-large, it is also similar to numerous other climate change warnings from the IPCC, global governments, global/national news media outlets and an alleged 97% of scientists.²⁰ Equally, these forecasts predict certain doom for planet earth unless private and public sectors limit global temperature rise by making numerous and significant *costly*

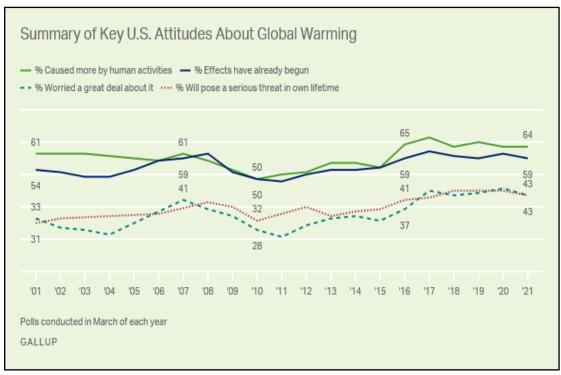


Figure 1: Global Warming Attitudes

changes. As these worldwide climate change warnings increase, so will the gradual public acceptance of the urgent need of anthropogenic climate change corrective measures. As an example, the Gallup Poll graph in Figure 1, illustrates

that the climate change concern from 2001 to 2021 in the U.S. has slowly risen as (1) the result of human activities, (2) climate change has already begun, (3) worried about climate change, and (4) a belief that climate change will pose a serious threat in a lifetime.²¹ Additionally, Figure 2 illustrates that public opinion from 2003 to 2021 on the subject of climate change is also a political issue as the

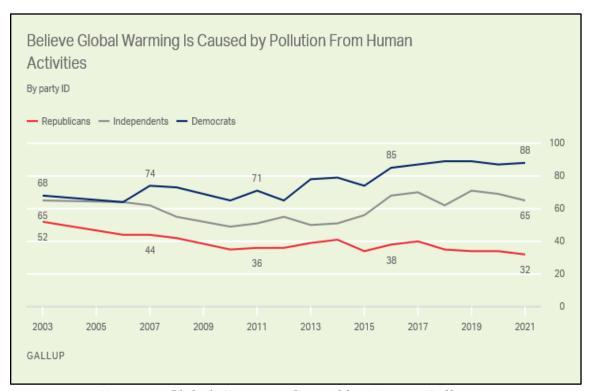


Figure 2: Global Warming Caused by Human Pollution

perception of climate change being caused by pollution from humans has risen by 20% for democrats, remained fairly constant for independents, and has dropped by about 30% for republicans.²²

Even so, to accelerate the desired IPCC goal of reducing climate change to 2°C and ultimately 1.5°C while also increasing public climate change concern and support, the average person should expect significant and costly changes to be focused on cutting anthropogenic emissions in high value areas such as transport, heat, food and industry as follows:

Note: The following five areas are common examples from numerous organizations committed to increasing climate commitments and supporting global efforts to limit global temperature rise, and is summarized from The World Economic Forum.

TRANSPORTATION

As transportation is alleged to be the nation's top source of planet-warming greenhouse-gas emissions,²³ expect to see numerous changes from fossil fuels to electric modes of transportation in all forms of vehicles. As an example:

- O President Biden has signed an executive order to make the federal government carbon-neutral by 2050 (buildings, trucks, cars and federal contracts (military exempted)²⁴
- Sales of electric cars more than doubled from 4% of global auto sales in 2020 to nearly 9% in 2021. To be on track for net-zero, this share must reach 50% by 2030, obviously requiring an ambitious leap in manufacturing ²⁵
- o Not surprisingly, there is no longer any doubt that the U.S. (and international) auto industry is going electric with U.S. General Motors going all electric by 2035 with Ford not far behind. Closer to home, the California Air Resources Board is set to require that all new cars sold in the state by 2035 be free of greenhouse gas emissions with Washington State also set to ban sales of new gas cars by 2035. More than a dozen other states typically follow California's lead when setting their own emission standards²⁶
 - Note: On September 6, California Governor Gavin Newsome declared a grid emergency, warning of rolling electrical blackouts which have already begun in selected areas.²⁷ If the California electrical grid is currently capable of being overburdened, what is the forecast for the grid when numerous EV vehicles are added?
- Tesla has already developed a working commercial long haul semi-truck and a seven-billion-dollar factory for its production
- The Los Angeles Fire Department is currently using the world's first electric full-size fire engine
- United Airlines has invested 15 million into Eve Mobility, and has ordered an initial 200 flying EV flying taxis to be delivered in 2026

Before we leave this section on Transportation, let's briefly explore the authenticity of the perception that electric vehicles conform to the advertising claim of "zero emissions." The following study is repeated from Environmental Economist Bjorn Lomborg, Director of the Copenhagen Consensus Center:²⁸

- o The claim of *zero-emissions* is based on EV's running on electricity and emitting no CO₂ whereas fossil fuel vehicles emit CO₂ from their exhaust
- When an EV rolls off the production line it is responsible for 25,000 lbs. of CO₂ which is a total from production and mining for battery elements (lithium, cobalt and nickel)
- o When a conventional car rolls off the production line it is responsible for 16,000 lbs. of CO₂

- Electric cars are powered by electricity which is often produced by the fossil fuel – coal
- Over 90,000 miles a Nissan Leaf is responsible for 31 metric tons of CO₂ (production, electrical consumption and scrapping)
- Over 90,000 miles a comparable Mercedes Benz cdi A160 is responsible for 34 metric tons of CO₂ (same 3 parameters)
- Over the lifetime of a Tesla, it will be responsible for 44 metric tons of CO₂ (same 3 parameters)
- Over the lifetime of a comparable Audi A7 Quatro, it will be responsible for 49 metric tons of CO₂ (same 3 parameters)
- All things considered EV vehicles are not quite as zero-carbon friendly as the advertising claim of "zero emissions"

ENERGY

To get to net zero, the world needs to stop building new coal and gas plants immediately. Existing coal and gas plants must have no emissions, or be closed by 2025 and 2035 respectively. This area is a "code red" as 345 new coal plants and 438 new natural gas plants are currently under construction globally. An "immediate halt" is needed to build new fossil fuel plants, followed by the closure of existing coal plants and phasing out of natural gas as fast as possible.

ENVIRONMENT

By 2030, at least 30% of the world's oceans must be protected, and 50% by 2050. Currently, only 8% of earth's coastal oceans are currently protected. To get to net zero, the practice of deep-sea bottom trawling in the commercial fishing industry needs to end. Additionally, every six seconds, forest areas the size of football fields are lost. In 2021, this totaled 3.75m hectares of forest lost because of human action. By 2030, the world must stop destroying forests and plant more trees than we log or burn. A commitment to end deforestation by 2030 was made by 141 countries at the United Nations Climate Change Conference in Glasgow in November 2021.

FOOD

To cut emissions from livestock, the world needs to eat a quarter less beef and dairy by 2030, and 50% less by 2050. Weekly per-person consumption in the U.S. is currently 1.1 lbs. of beef and 3.8 lbs. of dairy. Plant-based alternatives to beef and cheese need to be "improved and scaled" to shift demand away from high-emissions proteins.

INDUSTRY

Seven heavy industries account for a third of global emissions – but face the toughest challenges to cut emissions. These industries are aluminum, aviation, chemicals, concrete, shipping, steel and trucking. Briefly, steel makers need to halve emissions from the steel-making process by 2030, rising to a 90% cut in

emissions by 2040. The steel industry currently generates 1.9 metric tons of CO₂ per one metric ton of steel produced. Steel is the single biggest industrial source of emissions, at 4 gigatons.

DO 97% OF CLIMATE SCIENTISTS AND PUBLISHED SCIENTIFIC ARTICLES FIND THAT CLIMATE CHANGE IS HAPPENING AND HUMAN-CAUSED?

As stated by NASA – "multiple studies published in peer-reviewed scientific journals show that 97-percent or more of actively publishing climate scientists agree that climatewarming trends over the past century are extremely likely due to human activities."²⁹ This statement by NASA is deliberately deceptive for the following reasons:

- The preceding quote utilizing the 97% figure is an example of using consensus science to generate and/or amplify credibility for a specific viewpoint, which in this case is the claimed accuracy and overwhelming evidence for mancaused climate change. The fallacy of this technique is best explained in a speech from Dr. Michael Crichton at Cal-Tech "I would remind you to notice where the claim of consensus is invoked. Consensus is invoked only in situations where the science is not solid enough. Nobody says the consensus of scientists agrees that E=mc². Nobody says the consensus is that the Sun is 93 million miles away from the earth. And so, in this elastic anything-goes world where science-or-non-science is the handmaiden of questionable public policy, we arrive at last at global warming. It is not my purpose here to rehash the details of this most magnificent of the demons haunting the world. I would just remind you of the now-familiar pattern by which these things are established. Evidentiary uncertainties are glossed over in the unseemly rush for an overarching policy, and for grants to support the policy by delivering findings that are desired by the patron."³⁰
- O Contrary to NASA's opinion, there is no shortage of qualified scientists that do not agree with the 97% figure. As an example, Professor Mike Hulme, Ph.D., Cambridge University, is a prominent scientist and a key IPCC insider. His paper for *Progress in Physical Geography* stated that the actual number of climate scientists who backed the IPCC report on Anthropogenic Global Warming "was only a few dozen experts. Claims such as thousands of the world's leading scientists have reached a consensus that human activities are having a significant influence on the climate are disingenuous"³¹
- O The aforementioned NASA quote neglected to mention that there are 31,487 American scientists (including 9,029 scientists who have Ph.D.'s) have signed on in support of the *Global Warming Petition Project*. This petition is available online and declares that the theory of catastrophic climate change is "not supported by scientific evidence." The petition also states "CO₂ is a beneficial gas, not a pollutant"³²

The claim that "97% of published scientific articles find that climate change is happening and human-caused" is a common assertion in the climate change message. As an example – "a Skeptical Science peer-reviewed survey of all (over 12,000 peer-reviewed abstracts on the subjects of global climate change and global warming published between 1991 and 2011) found that over 97% of the papers taking a position on the subject agreed with the consensus position that humans are causing global warming."³³ What this statement does not say is that scientific material that does not support climate change is not welcomed and/or not published in secular peer-reviewed materials. Therefore, virtually all secular peer-reviewed material/abstracts support climate change. To underscore this fact, try to find published material in the secular peer-reviewed field of evolutionary origins that does not support Darwinian evolution (and particularly published material submitted by biblical-based scientists that focus on the origins account as presented in Genesis).

WHAT ARE ATMOSPHERIC AND GREENHOUSE GASES?

ATMOSPHERIC GASES

The earth's atmosphere is comprised of about 78% nitrogen, 21% oxygen and .9% argon. Combined, these three gases are known as **atmospheric gases** and form 99.9% of the earth's atmosphere that is essential for life, providing a protective blanket around the earth, and are **not** considered greenhouse gases as they are scientifically defined as "gases that do not absorb and emit energy."³⁴

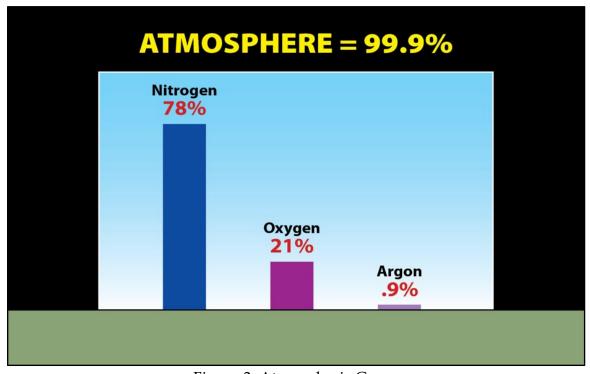


Figure 3: Atmospheric Gases

GREENHOUSE GASES

The remaining .1% of atmospheric gases are considered **greenhouse gases** as they are defined as "gases that absorb and emit energy"³⁵ and help to warm the earth. Without a greenhouse gas-containing atmosphere, the surface temperature of the earth would be minus 3°F!³⁶

Note: Water vapor is the earth's most abundant greenhouse gas. However, some influential websites either minimize its importance and/or do not include its importance with other greenhouse gases which allows the primary focus to be on carbon dioxide. As an example, the U.S. Environmental Protection Agency (EPA) website – Climate Change Indicators: Atmospheric Concentrations of Greenhouse Gases – uses the following disclaimer to omit water vapor as the primary greenhouse gas and focus on carbon dioxide as a primary greenhouse gas – "Water vapor is the most abundant greenhouse gas in the atmosphere. Human activities have only a small direct influence on atmospheric concentrations of water vapor, primarily through irrigation and deforestation, so it is not included in this indicator." Also see earthhow.com/earthatmosphere-composition/ for a pictorial without water vapor as a greenhouse gas.

The following figures are *percentages* of the .1% that comprise greenhouse gases (so water vapor is 94% of .1%, carbon dioxide is 3% of .1% and so on). The five primary greenhouse gases are:

- o H₂O Water vapor @ 94% (not counting clouds)
- CO₂ Carbon dioxide @ 3%
- CH₄ Methane @ 2%
- N₂O Nitrous oxide @ 0.9%
- O₃ Ozone @ 0.1%

From the preceding five greenhouse gas percentages, notice their overall relationship:

- Water vapor is *principally* the more active and important greenhouse gas contributing *about* 94% of the .1% of greenhouse gases to any potential greenhouse effect³⁷
- o CO₂ is a very small percentage (3%) of the .1% of gases that forms the earth's greenhouse gases. It is also the reason it is called a *trace gas* as CO₂ comprises only a tiny component of the earth's greenhouse gases³⁸
- Methane, Nitrous Oxide and Ozone are very minor participants as greenhouse gases

The reason climate change supporters rarely discuss water vapor as a major contributor to the greenhouse effect is because there is nothing humanity can do to modify the amount of water vapor in the atmosphere. Instead, CO₂ is the

primary culprit since it is alleged that humanity can control the release of CO₂, and therefore, it is being blamed for increasing our "carbon footprint."³⁹

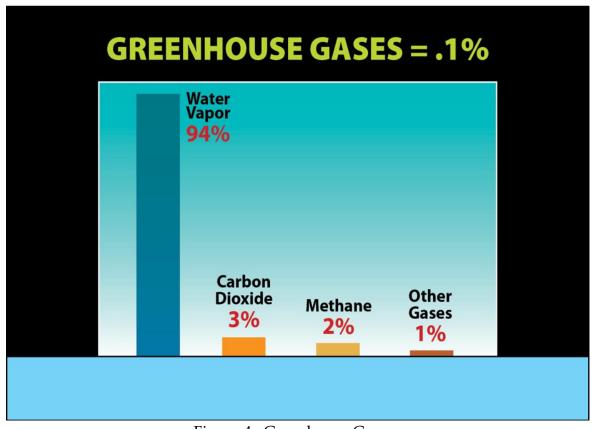


Figure 4: Greenhouse Gases

HOW DO GREENHOUSE GASES WORK?

Greenhouse gases act like a radiative blanket over the earth's atmosphere, causing the lower atmosphere to be warmer and the upper atmosphere to be cooler than if they were not there. Refer to Figure 5 to see how this works:⁴⁰

- 1. Sunlight is radiated from the sun to earth as *shortwave radiation*. Earth's atmospheric gases can't slow down or block most of these small hot-rays so the majority of sunlight passes through our atmospheric gases to hit and warm the earth's surface
- 2. Most shortwave sunlight/radiation is absorbed by earth's surface items such as oceans, soil, buildings, people, and other similar items that have the capacity to get hot and expel a portion of that heat as *longwave radiation* or *infra-red radiation*
- 3. As the *longwave/infra-red radiation* is radiated upwards towards the atmospheric gases, some radiation is passed out into space. However, a noteworthy portion is absorbed by the greenhouse gases (and is also radiated

back towards earth) and becomes trapped within earth's atmosphere, warming the earth and currently keeping it at *around* 59°F.

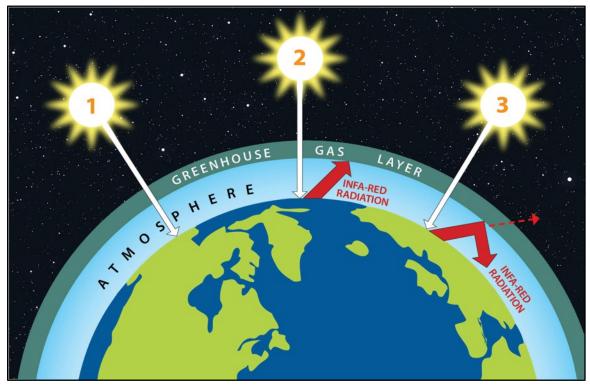


Figure 5: Greenhouse Gases and Their Effect

Even though water vapor is the primary (94%) greenhouse gas, CO₂ is considered the culprit of the greenhouse gases as an increasing amount of CO₂ is alleged to be causing a surface/atmosphere-warming tendency as it makes the earth's natural greenhouse effect stronger. Current climate change theory dictates that the earth's surface/atmosphere is rapidly heating up to hazardous levels as a result of the increased CO₂ emissions by humanity. *This is the climate change mantra*.⁴¹ *However, valid science does not support the anthropogenic climate change mantra as we will see in the following sections.*

DOES HISTORY SUPPORT ANTHROPOGENIC CLIMATE CHANGE?

The credible scientific answer to this question is *NO!* So, to expand on this response, let's look at two areas that soundly refute current climate change dogma – (1) Climate Change History, and (2) Reports from the National Oceanic and Atmospheric Administration (NOAA):

CLIMATE CHANGE HISTORY

As a starting point, modern *worldwide* temperature measurements were **not** made prior to AD 1880. Prior to 1880, they were – and still are – based on data from historical records, ice core measurements, sediment layers and tree-ring data. So,

when a common climate change comment uses the phrase "this is the warmest month and/or year on record," this means the "record" started in 1880. Today, measurements are made from adjusted satellite orbits, weather stations, weather balloons, ships, radars and buoys. From a scientific perspective, it is well known and published that earth has warmed and cooled naturally on roughly 100,000-year cycles for at least the last million years (using secular dating methods) and has likely varied as much as 5 to 15°F43 which is significantly higher than modern times. Not surprisingly, historical climate records *before* 1880 are never mentioned because they do not support current climate change dogma.

From historical records, it is known that the earth's climate has demonstrated numerous *cyclical warm and cold periods* over thousands of years. As an example, the temperature changes recorded in the GISP2 ice core from the Greenland Ice Sheet show that the global warming experienced during the past century pales into insignificance when compared to the magnitude of profound climate reversals over the past 25,000 years (using secular dating methods). In addition, small temperature changes of up to a degree or so, similar to those observed in the 20th century record, occur persistently throughout the ancient climate record.⁴⁴

For a more recent look, let's briefly consider the past 2,750 years to present as they have been evidenced by dramatic *cyclical warm and cold periods*:⁴⁵

Cool Period (750 B.C. to 200 B.C.)

Prior to the founding of the Roman Empire, Egyptian records show a cool climatic period from about 750 B.C. to 450 B.C. and the Romans wrote that the Tiber River froze and snow remained on the ground for long periods.

Roman Warm Period (200 B.C. to 440 A.D.)

Registered temperatures were 3.6°F warmer than today and is considered as the warmest period during the last 2,000 years according to new studies.^{46,47} After 100 B.C., the Romans wrote of grapes and olives growing farther north in Italy than had been previously possible.

Dark Ages Cool Period (440 A.D. to 900 A.D.)

The Dark Ages were characterized by marked cooling. Temperatures fell in Ireland, Great Britain, Siberia, North and South America, and snow fell in the summer in southern Europe. In 800-829 A.D., the Black Sea and the Nile River froze over.

Medieval Warm Period (900 A.D. to 1300 A.D.)

This was another time of a warm climate when global temperatures were over 1.8°F warmer than today.48 In Europe, grain crops flourished, the Vikings

colonized Greenland and grew vineyards as far north as England, and wheat and oats were grown in Norway.

The Little Ice Age (1300 A.D. to 1800 A.D.)

At the end of the Medieval Warm Period, global temperatures dropped about 7°F in less than 20 years and the cold period that followed is known as the Little Ice Age. Glaciers expanded worldwide, violent storms and recurrent flooding swept Europe, the Thames River in London froze over, and New York Harbor froze over in 1780. Winters were bitterly cold in many parts of the world with the Viking colonies in Greenland dying out because they could not grow enough food. In North America, early European settlers experienced exceptionally severe winters.

In summary, note that the Roman and Medieval Warm Period's increase in global temperature was *unrelated* to an increase in CO₂ emissions due to lower population levels and minimal industrialization compared to today (current industrial revolution started 1760-1820), thus a very minimal human contribution to increased CO₂ levels. So, does climate history support climate change, particularly from man-caused carbon dioxide? When examining climate history, it becomes apparent there is a clear *up and down cyclical* movement of temperatures over the past 2,750 years that is unrelated from man-caused carbon dioxide. Climate history supports a *cyclical pattern* of climate change, not of steadily rising temperatures that can destroy the earth. Consider the following four statements:

- o Current temperatures are proclaimed as the warmest on record. In fact, the world was warmer than today for 97% of the last 10,000 years
- o The Medieval Warm Period just 1,000 years ago was over 1.8°F warmer than today. Today, the public is told that a similar warming will be catastrophic
- o The Roman Warm Period was 3.6°F warmer than today
- We are told that the amount and rate of temperature increase in the last 100 years is abnormal. Compare current temperatures with the global climate temperatures prior to 1880

REPORTS FROM NOAA

The National Oceanic and Atmospheric Administration (NOAA) is an American scientific and regulatory agency within the United States Department of Commerce that is charged with the responsibility of the maintenance and analysis of the U.S. temperature databases. A yearly average temperature of the earth from 1880 to present can be easily accessed from their website, allowing a scientific overview of global temperatures.

On August, 2020, NOAA published a report entitled "Climate Change: Global Temperature," and stated that the average surface temperature of the earth had increased by 2°F for the period 1880-2020. Mathematically, that is an increase of 0.014°F per year, hardly a heat wave and well within the measurement margin of error using thermometers calibrated in 1°F or more measurement. Also, the data depicted a global cooling period from 1880-1940, where the yearly average temperature dropped 0.54°F, from the long-term average; and several global cooling periods from 1945-1977, where the average global temperature dropped by 0.36°F, and is illustrated in Figure 6. From 1880-1977, the concentration of C02 in the atmosphere reportedly increased from 280 ppm to 335 ppm while most of the global temperatures for the same period were below normal.

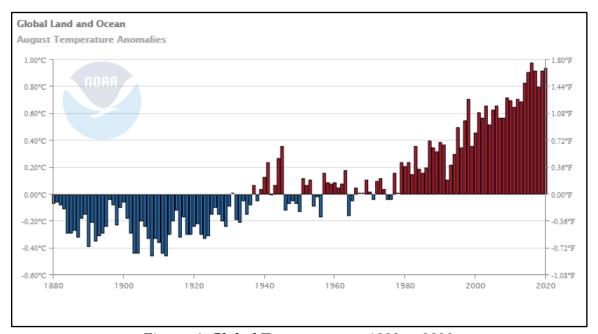


Figure 6: Global Temperatures, 1880 to 2020

Finally, based on the NOAA report, the average global surface temperature peaked in 2017 and has been declining since, while the concentration of CO₂ in the atmosphere has risen to 410 ppm at the end of 2020. In summary, the land surface temperature database maintained by the U.S. Government entity responsible for that information reports a global warming of 0.014F/yr., well within the measurement margin of error. This is further confirmation that there has been no statistically significant warming of the earth's landmass and/or a steady rising temperature increase since 1880^{49,50} which is in opposition to the common mantra of a continuously rising global temperatures since 1880, such as – "according to a continuous study conducted by the NASA's Goddard Institute, the earth's average global temperature has risen by 1.40 F since 1880."⁵¹

IS CARBON DIOXIDE THE PRIMARY CAUSE OF CLIMATE CHANGE?

This question is a focal point within the climate change debate. Information from environmental advocates such as the IPCC focus on the repetition that human-generated greenhouse gases are the principal cause of climate change as evidenced by a recent report from the IPCC as follows:

"Anthropogenic greenhouse gas emissions have increased since the pre-industrial era, driven largely by economic and population growth, and are now higher than ever. This has led to atmospheric concentrations of carbon dioxide, methane and nitrous oxide that are unprecedented in at least the last 800,000 years. Their effects, together with those of other anthropogenic drivers, have been detected throughout the climate system and are extremely likely to have been the dominant cause of the observed warming since the mid-20th century" 52

Based on the previous quote from the IPCC, let's make two apparent observations:

- 1. The phrase "extremely likely" indicates the IPCC is less than 100% confident in their conclusions
- 2. The IPCC states that anthropogenic drivers (environmental pollution originating from human activity) such as carbon dioxide that has been produced by mankind, were the dominant cause of observed warming since the mid-20th century (1950). If that were true, how do IPCC statements clarify the Roman and Medieval Warm Periods as humans did not cause the warming cycles in these ancient civilizations by employing an industrial revolution and/or burning fossil fuels? It is apparent that human activity during AD 1 thru AD 1300 had minimal or no correlation with global temperatures as a result of fossils fuels, and this is the primary reason why climate change advocates do not mention these conundrums

As an additional point of clarification based on the premise that human pollution by carbon dioxide is the most cited cause of an increase in climate change, refer to Figure 7 (*graph is in Celsius*).⁵³ Comparing the carbon dioxide and temperature estimates there is a noticeable lack of correlation between carbon dioxide and temperature! Let's look at several examples in Figure 7:

- The global temperature is declining from AD 1000 to AD 1700 while carbon dioxide concentrations during the same period nominally change
- The global temperature rise that begins around AD 1700 actually precedes the rise of carbon dioxide concentrations in AD 1800

The data in Figure 7 does not support the viewpoint of a correlation of rising carbon dioxide concentrations proceeding and/or causing rising global temperatures.

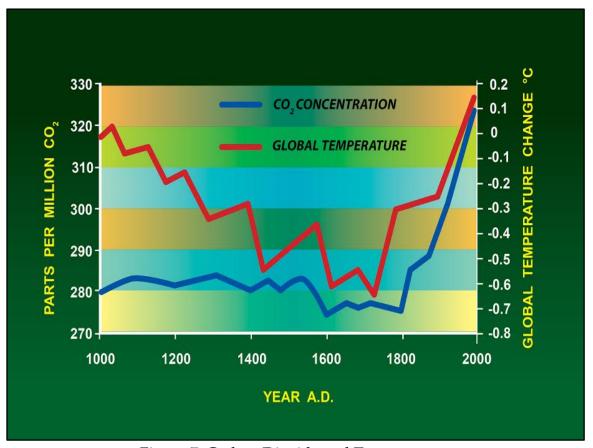


Figure 7. Carbon Dioxide and Temperature

Another carbon dioxide reality that needs to be briefly discussed is the amount of carbon dioxide that is being added to the atmosphere and allegedly responsible for anthropogenic climate change. To understand the amount of carbon dioxide being added to the atmosphere and its effect on climate change, consider the following quote from Dr. Roy W. Spencer, Principal Research Scientist, University of Alabama, Senior Scientist for Climate Studies at NASA, and co-developer of the original satellite method for precise monitoring of global temperatures from earth-orbiting satellites:

"The major concern in climate change is that mankind's burning of fossil fuels is slowly increasing the carbon dioxide content of the atmosphere. Those who fret over such things usually put the increase in the most dramatic terms possible, for instance – total global emissions are now running about 30 billion tons per year. Notice what they don't tell you is how that compares to the total weight of the atmosphere: about 5 quadrillion tons.

Lastly, temperature changes recorded in the GISP2 Ice Core from the Greenland Ice Sheet show that the magnitude of global warming experienced during the past century is insignificant compared to the magnitude of the profound natural reversals (cold/heat) over the past 25,000 years (using secular dating methods) which preceded any significant rise of atmospheric CO₂. If much more intense periods of warming occurred naturally in the past without an increase in CO₂, why should the mere coincidence of a small period of low magnitude warming this century be blamed on CO₂?⁵⁵

IS CARBON DIOXIDE A DETRIMENTAL OR BENEFICIAL ATMOSPHERIC GAS?

Carbon dioxide can be considered a beneficial gas from three significant and relevant viewpoints:

- o As previously mentioned, CO₂ is a greenhouse gas and is instrumental in greenhouse gases keeping the earth at around 59-degrees F. Without the greenhouse gases, earth would not be a habitable planet
- o Scientists believe that atmospheric CO₂ levels have oscillated in the past between about 180 ppm and 300 ppm. Today, CO₂ levels are around 410 ppm. As a result, the IPCC is concerned about the increasing amount of CO₂ in the atmosphere and that it has risen above a self-imposed ceiling of 300 ppm. As a result, the IPCC would like to reduce CO₂ levels to around 180 ppm.⁵⁶ Unfortunately, achieving a "floor" of 180 ppm is the level at which plant life would be in significant jeopardy. Without plant life on earth, there would be no human life
- o CO₂ is essential to life on earth particularly for plant life. Plants need CO₂ for the photosynthesis process to produce sugars and oxygen. When plants are starved for CO₂, photosynthesis does not work very well and/or ceases to function. It is known that higher levels of CO₂ are beneficial for plants as the growth rate for plants increases from 5-50% when CO₂ levels are higher than the current levels of about 410 ppm. Interestingly, the maximum growth rates

for most plants occurs when CO₂ levels are in the range of 1,000 to 1,200 ppm.⁵⁷

WHAT IS THE PRIMARY CAUSE OF MODERN RISING GLOBAL TEMPERATURES?

With the assistance of Figures 6 and 7, historic and scientific evidence points to the fact that carbon dioxide concentrations in the atmosphere are not responsible for the dominant cause of increasing global temperatures. This was clearly illustrated during the Roman and Medieval Warm Periods that were hundreds of years before mankind burned "fossil fuels."

So, if the earth's temperature has been moderately stable for at least 2,000 years, then what is the primary cause of today's rising global temperatures? Let's consider the following clarifications:

- Science will readily admit the subject of weather and climate are still not fully understood⁵⁸
- o As evidenced by AD 1 thru 1800 AD, it is historically clear that global temperatures for at least 1,000 years have been cyclical and not linear
- o After the Little Ice Age (about AD 1800), temperatures have fluctuated by about 1.8°F. As an example, AD 900 to AD 1300 was considered a "warm period" and was then followed by a "little ice age" during AD 1300 to AD 1800 when the overall temperature dropped to about -0.6°C (during this time, glaciers advanced, whereas now they are receding)
- The most significant and long-lasting natural process that can affect global temperatures is a change in "total solar irradiance" (TSI) from the Sun. Since the advent of satellites measuring solar radiation since 1979, it has been verified that sunshine is not constant as once thought. Changes due to sunspots and bright hot spots that change with time on the Sun's surface equate to more solar radiation when there are more sunspots.⁵⁹ Sunspots run in cycles such as the 11-year cycle, 22-year cycle, and long period cycles that can last several hundred years and were instrumental in the Roman and Medieval Warm Periods. Obviously, these fluctuations are cyclical and are a direct result of cycles in the Suns radiation levels. As the earth receives more heat from the Sun, the oceans will warm and release more carbon dioxide into the atmosphere. Conversely, as the Sun emits less heat, less carbon dioxide will be released as temperatures cool.^{60,61,62} Remember that 70% of the earth's surface is covered by oceans
- Based on the Roman and Medieval Warm Periods, today's rising temperature is not unprecedented and is better explained as a cyclical global weather pattern

The Sun and associated atmospheric cloud effects (clouds are capable of reflecting heat from the Sun) are responsible for much of past climate changes. Therefore, it is highly likely that the Sun and clouds are a major cause of twentieth-century warming with man-caused warming only a minor contribution. Scientific evidence from highly accurate satellite data indicates that modern warming does not bear the "fingerprint" of man-caused effects. Research of a growing number of scientists agree that variations in solar activity and its relationship with cosmic rays and reflecting clouds are the true driver of climate change, not anthropogenic greenhouse gases^{63,64}

CAN EARTH'S CLIMATE BE ACCURATELY PREDICTED?

Based on leaked data from the IPCC, the answer to this question is *NO!* To clarify this conclusion, consider the following facts:

- o Specifically, there has been about a 1.8°F rise in the globally averaged temperatures from 1880 until 2022,65 depending on sources. Today, the current global temperature is about 59°F
- Although the overall global temperature trend since AD 1800 is up, it is problematic (at best) to forecast a temperature rise or fall over the coming years as evidenced by the *cyclical rise and fall* of global temperatures prior to 1880

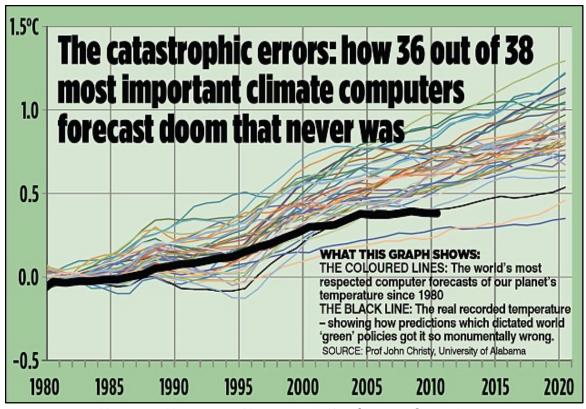


Figure 8. Erroneous Forecasting Predictions Since 1980

- The reality of inaccurate forecasting of global temperatures by any climate organization, particularly the IPCC or any organization with a climate change ideology, was exposed by the graph in Figure 8 that was leaked from the IPCC via The Daily Mail, and is based on data directly from the IPCC.⁶⁶ Clearly, the IPCC predictions (as well as many other climate organizations) were in error
- When trying to predict future temperatures based on a history of over 1,000 years of cyclical warm and cold periods, future predictions are virtually impossible, particularly when all of the factors that impact the global climate are not fully understood⁶⁷ (like predicting the stock market). Nevertheless, this is what anthropogenic climate change supporters are attempting to do

WHY ISN'T BOTH SIDES OF THE CLIMATE CHANGE DEBATE PRESENTED FOR PUBLIC DISEMINATION AND REVIEW

The simple answer to this question is – both sides of the climate change debate are presenting their viewpoints for public dissemination and acceptance. The difference between the two perspectives is in the *methodology of presentation*:

SUPPOPRTERS

Without question, the *supporters* of climate change have been – and are continuing to be – very successful in providing alleged evidence for their perspective. Secular science, scientific organizations, the media and many politicians repeat the same mantra on a continual aggressive basis along with an increasing amount of urgency for good measure to enhance this. As a result, the public is subjected to a constant diet of alleged facts that seem to support a climate change environment that is rapidly leading to the demise of earth in a short period of time. This is an example of the concept "Engineering Consent" that was pioneered by Edward Bernays, the nephew of Sigmund Freud, who authored the books – Crystallizing Public Opinion, and Propaganda and Public Relations. Engineering Consent is based on the fundamental principle of the scientific technique of shaping and manipulating public opinion to create specific circumstances and pictures in the minds of millions of persons.⁶⁸ Some examples of the constant media mantra are as follows:

- o "The scientific evidence is clear: global climate change caused by human activities is occurring now, and it is a growing threat to society" 69
- o "Human-induced climate change requires urgent action. Humanity is the major influence on the global climate change observed over the past 50 years" 70
- On September 23, 2021, California Governor Gavin Newsome signed a 15 billion climate package to provide funding programs to combat drought and climate change in the state "At the end of the day, we have to deal with the realities of climate

change that are here right now. We can't afford to sit back passively and watch the debate unfold in Washington D.C."⁷¹

So, with a constant diet to the American public of the preceding mantra by the media and politicians, it is easy to see why the alleged warming of the earth by mankind is a current problem that may have some merit and must be addressed at any cost, or humanity will perish (it's all in the presentation). As an additional perspective, virtually all-secular climate change evidence is selectively presented to support the climate change mantra. As an example, consider the following quote:

"Temperature data showing rapid warming in the past few decades, the latest data going up to 2018. According to NASA, 2016 was the warmest year since 1880, continuing a long-term trend of rising global temperatures"⁷²

The preceding quote is partially correct (temperatures have been rising), but overall is deliberately deceptive as it is designed to focus on rising temperatures since 1880. The key to this quote by NASA is the fact that 1880 was the year that temperatures were beginning to be globally measured by science. However, notice that there is no mention of temperatures *before 1880* which were not only higher than modern temperatures, but were also cyclical as well which is in stark contrast to the climate change repetition of rising linear temperatures (remember Figure 6?) as it's all in the type of presentation.

NON-SUPPORTERS

The *non-supporters* of climate change have been – and are continuing to be – very unsuccessful and ineffective in providing evidence for their perspective. Yet, as we have previously discussed, although the historic evidence is against climate change, scientific material/literature, the media, and/or politicians do not present any factual evidence that does not support the climate change mantra. Therefore, the truth is missing on the public stage of climate change opinion but is available on the Internet and in some selected scientific material.

WHAT IS THE CURRENT EMPHASIS BEHIND ANTHROPOGENIC CLIMATE CHANGE?

As we have previously discussed, the temperature of the earth's climate is currently being presented as steadily rising with the alleged calamitous consequences of this increase being directly attributed to human activities. This has resulted in an increasing emphasis on the need to make significant *rapid* changes regardless of any inherent cost. This was evidenced by the July 10, 2019, Climate Emergency Declaration, submitted to Congress by Representative Alexandria Ocasio-Cortez and Senator Bernie Sanders asking Congress to declare

that climate change is an emergency. The resolution demands a massive mobilization of resources on par with the United States response to WWII to halt, reverse, mitigate, and prepare for the consequences of the impending climate emergency and to restore the climate for future generations.⁷³

Even though this intense approach to climate change is currently becoming more routine (even hurricane Dorian was linked to climate change)⁷⁴ a more subtle but revolutionary emphasis with an open admission to the motivation behind anthropogenic climate change was mentioned in a 1993 document titled "The First Global Revolution" published by the Club of Rome, a globalist European think tank. This document outlines their plans to use a fabricated environmental crisis of climate change to rush humanity into achieving the club's hidden goal of global government and also gives credence to the perspective that the man-made climate change alarmist campaign is intended to produce a powerful world-governmental body under the authority of the United Nations. Following is a portion of that document:

"In searching for a common enemy against whom we can unite, we came up with the idea that pollution, the threat of global warming, water shortages, famine and the like, would fill the bill. In their totality and their interactions these phenomena do constitute a common threat which must be confronted by everyone together.....all these dangers are caused by human intervention in natural processes, and it is only through changed attitudes and behavior that they can be overcome. The real enemy then is humanity itself"75

This goal was given additional support in 2009 by incoming European Council President, Herman Van Rompuy who described the 2009 United Nations Copenhagen Climate Summit as – "another step towards the global management of our planet."⁷⁶ Even more ominous is the following quote from A Skeptical Layman's Guide to Man-Made Global Warming – "In America, socialism is bent on removing individual freedoms and placing the government in charge of our lives. The climate change issue is an important strategy for the advancement of socialism, under the guise of saving the Earth."⁷⁷ A current quote that puts additional emphasis on the preceding quotes comes from a former Ocasio-Cortez campaign aide Waleed Shahid who admitted that Ocasio-Cortez's Green New Deal was "a proposal to redistribute wealth and power from the people on top to the people on the bottom."⁷⁸

WHERE DOES THE PARIS CLIMATE AGREEMENT FIT INTO THE CLIMATE CHANGE AGENDA?

Because most people have heard of the Paris Climate Agreement and it has been an integral part of the past two presidential administrations including the present administration, let's finish this discussion with a brief overview of this Agreement.

The Paris Agreement is billed as a legally binding international treaty on climate change. It was adopted by 196 parties in Paris on December 12, 2015. Its primary goal is to limit global warming to well below 2° C, and preferably 1.5°C. To achieve this goal, countries are to try to reach a global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by 2050. As a result of this "united global effort" to limit greenhouse emissions, several noteworthy considerations highlight this global attempt to limit greenhouse gases around this planet:⁷⁹

- Beginning in 2024, countries will report transparency on actions taken and resultant progress
- o "The Paris agreement reaffirms that developed countries should take the lead in providing financial assistance to countries that are less endowed and more vulnerable. Climate finance is needed for mitigation, because large-scale actions are required to significantly reduce emissions." For simplicity, the United States can be substituted for "developed countries"
- As of September 2021, none of the world's major economies including the entire G20 - have a climate plan that meets their obligations under the 2015 agreement⁸⁰
- To date, the United States is the only country to have withdrawn from the agreement. President Trump finalized the exit on November 4, 2020, saying that letting countries such as India and China to use fossil fuels while the United States had to curb its carbon emissions was unfair. However, this year President Biden reversed President Trump's decision and pledged to cut carbon emissions in half, compared to 2015 levels, by the end of this decade⁸¹

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