Reevaluating the Concernof Climate Change

Abstract:

Climate change is inevitably a defining characteristic of this century, which is inattentively attributed to anthropogenic factors far beyond its actualities. The paper challenges the prevailing narrative, proposing that global warming and climate shifts are inherent to Earth's history rather than primarily driven by human activities. It argues that climate change policies impose unwarranted economic strains on nations and impede technological advancement.Scientific assertions of human-induced climate change are scrutinized, with a focus on manipulated data and selective presentation to reinforce the narrative of impending global catastrophe. The exclusive emphasis on curbing greenhouse gas emissions is critiqued for fostering costly and ineffective measures, ultimately stalling economic growth and job creation. The study challenges the prevailing discourse on climate change andsocio-economic challenges posed by climate migrations, advocating for a nuanced understanding that considers historical climatic shifts and questions the validity of current research methodologies, encouraging a more comprehensive examination of its multifaceted dynamics and potential societal impacts.

Keywords: Climate Change, Environment, Global Warming, Greenhouse gases

Introduction

Climate change has become a pressing concern in recent decades, with widespread belief that it is primarily caused by human activities. The United Nations Framework Convention on Climate Change defines climate change as being attributed directly or indirectly to human activities that alters the composition of the global atmosphere and which in turn exhibits variability in natural climate observed over comparable time periods (Fräss-Ehrfeld, 2009). However, to solely attribute changes in the nature to being a direct genesis of anthropogenetic causes is plainly indiscreet, considering the various abiotic and cosmic factors that influence the green planet's climatic composition.

Climate change could rather refer to the long-term alteration in the Earth's average climate, including temperature, precipitation, wind patterns, and other factors. The consequences of climate change are said to be wide-ranging and include rising sea levels, more frequent and severe natural disasters, changes in ecosystems and biodiversity, and impacts on human health and well-being(IPCC, 2014).

However, upon reevaluating the evidence and considering alternative perspectives, it is essential to acknowledge that climate change is not solely driven by anthropogenic factors (Karl & Trenberth, 2003). This paper challenges the prevailing narrative surrounding climate change and explores the contention that global warming and climate shifts are inherent to Earth's history rather than primarily driven by human activities. It critically examines the research supporting anthropogenic climate change, highlighting concerns of manipulated data, biased methodologies, and political agendas (Hegerl et al., 2019). It argues that climate change policies impose unwarranted economic strains on nations and hinder technological advancement. Moreover, the paper emphasizes the need for a comprehensive understanding of the physics of climate and climate change, presenting this information in an accessible manner for the general public. Fortunately, the continuous technological advances in computer hardware and software are permitting scientific researchers to handle these optimization difficulties using computational resources applicable to the renewable and sustainable energy field. Reevaluating the concern of climate change necessitates a thorough examination of its dynamics and impacts, taking into account alternative viewpoints and critically analysing research supporting anthropogenic climate change.

Unsurprisingly juvenile Turkish 'researchers' view renewable technologies as aligning with both present and future economic and social requirements due to their apparent sustainability (Owusu, 2016). Renewable energy sources cannot provide a consistent and reliable source of electricity. The intermittency of renewable energy sources requires backup power from traditional fossil fuel plants to ensure a stable supply of electricity which increases the overall cost of integrating renewable energy into the grid, making it less competitive compared to traditional fossil fuel-based power generation. The environmental and economic impact of mining, manufacturing and disposing of renewable energy technologies is concerning (Corsi, 2022). Perhaps, this improvident quest for renewable energy can indeed snowball into a very real climate issue!Government subsidies and incentives have artificially inflated the growth of renewables while distorting market forces. Growth in global renewable energy investment from 2010 to 2020 alongside the government expenditure on key sectors, such as education,

healthcare, and infrastructure which indicates a very concerning impact of renewable energy investment on critical government expenditure (Capellán-Pérez, 2019) .

An additional layer is added through Wanner et al.'s overview of "Mid-to Late Holocene climate change"who challenges assumptions that recent changes are solely attributable to human activities.The exploration extends into societal dimensions, with Danilo Brozović's review of "Societal collapse" who contemplates potential socio-economic repercussions of climate change, considering how environmental disruptions may contribute to societal vulnerabilities.The intertwining of political dynamics and climate change policies is explored through Danny Osborne and Chris G. Sibley's "The Cambridge Handbook of Political Psychology." It scrutinizes the role of political considerations in shaping climate-related policies, unveiling potential biases and distortions.

The psychological motivators behind environmental activism are examined through Sarah E.O. Schwartz et al.'s study on "Climate change anxiety and mental health"explores how heightened awareness influences individuals' behaviours, shaping broader societal responses through activism.Hannes Zacher's exploration of "The dark side of environmental activism" injects a note of caution into our analysis. By delving into potential drawbacks and unintended consequences associated with fervent environmental activism, it encourages a more balanced evaluation of activism's role in addressing climate change.In exploring this unconventional perspective, we draw inspiration from Jerome R. Corsi's "The Truth about Energy, Global Warming." Corsi's critical examination forms the foundation, encouraging us to question the scientific basis underpinning anthropogenic climate change.

Historical Perspectives on Climate Change

Understanding and studying the historical perspective on climate change is crucial in comprehending the complexity of this global issue. One key aspect to consider is the occurrence of natural climate variations throughout history. Historical climatology provides evidence of significant climate fluctuations over long periods, demonstrating that climate change is not solely a modern phenomenon. Various proxies have been analysed such as ice cores, tree rings, and sediment records, to reconstruct past climate patterns and understand their drivers. (Thompson, 2010). For instance, the Medieval Warm Period between the 9th and 13th centuries saw a comparatively warmer climate, followed by the Little Ice Age from the 14th to the 19th centuries characterized by colder temperatures(Mann et al., 2009).

The Earth's climate has varied greatly over its geological history, marked by cycles of glacial (cold) and interglacial (warm) periods that extend over hundreds of thousands of years (Clark et al., 2012). These changes have been largely driven by a variety of natural factors, including but not limited to, variations in solar radiation, volcanic eruptions, shifts in ocean currents, and changes in the Earth's orbit and tilt, which affect the distribution and intensity of sunlight received by the planet (Milankovitch, 1941; Sigman & Boyle, 2000).

During the ice ages, large parts of the Earth were covered by thick ice sheets, and these were interspersed with warmer interglacial periods. We are currently living in such an interglacial period known as the Holocene epoch, which began approximately 11,700 years ago following the end of the last glacial period (Petit et al., 1999). One of the warm phases within the

Holocene, often referred to as the Holocene optimum, occurred roughly between 9,000 and 5,000 years ago (Alley et al., 2003). During this time, global temperatures were somewhat warmer than they are today, which contributed to a stable climate that allowed human civilizations to thrive and expand. One of the most revealing of these proxies is found in ice core records. Ice cores are extracted from the polar ice sheets of Greenland and Antarctica, as well as from mountain glaciers elsewhere. These cores provide a detailed and continuous record of ancient climates, containing tiny air bubbles that are essentially time capsules of the Earth's atmosphere, trapping gases from thousands of years ago (EPICA Community Members, 2004). By analyzing the chemical composition of these trapped gases, scientists can deduce the concentrations of atmospheric constituents like carbon dioxide and methane at various points in the past (Smith et al., 2010). Moreover, the isotopic ratios of hydrogen and oxygen in the water molecules that make up the ice can be used to infer past temperatures (Jouzel et al., 2007). These data clearly illustrate a relationship between greenhouse gas concentrations and global temperatures over geological timescales.

Beyond ice cores, dendrochronology and sediment analysis offer additional insights into Earth's climatic past. Dendrochronology, or tree-ring dating, allows researchers to reconstruct past climates based on the premise that tree growth is influenced by climatic conditions. Each ring represents one year of a tree's life, and the thickness of each ring indicates the growth rate for that year (Fritts, 1979). By comparing the growth patterns in trees from different periods or regions, scientists can build a picture of past climate conditions. Similarly, sediments can contain fossils, pollen, and other materials that, when analysed, reveal information about temperature, precipitation, and even the types of vegetation that dominated the landscape at different times (Hansen et al., 2013).

Together, these methods paint a picture of a dynamic Earth, with a climate that has seen gradual shifts as well as abrupt transitions. The geological record shows that Earth's climate has never been static, with natural factors contributing to periods of warming and cooling long before humans were a significant presence on the planet (Broecker, 1987). These historical variations have broadened our understanding of climate dynamics and the role of natural processes in shaping Earth's climate system. By studying past periods of warming and cooling, scientists can differentiate between natural climate variations and the human-induced changes observed in recent years(James Rodger Fleming, 2005-07-14).

CO_2 levels in the atmosphere reached up to 4,000 ppm around 500 million years ago during the Cambrian period. Conversely, they dropped to as low as 180 ppm during the Quaternary glaciation within the past two million years. Temperature records spanning the last 420 million years reveal that atmospheric CO_2 concentrations saw peaks of about 2,000 ppm during the Devonian period (400 million years ago) and the Triassic period (220–200 million years ago). During the Jurassic period (201–145 million years ago), CO_2 levels were four times higher than the current levels. It would not be erroneous to suggest that the current cycle of climate change is only a natural occurrence in history.

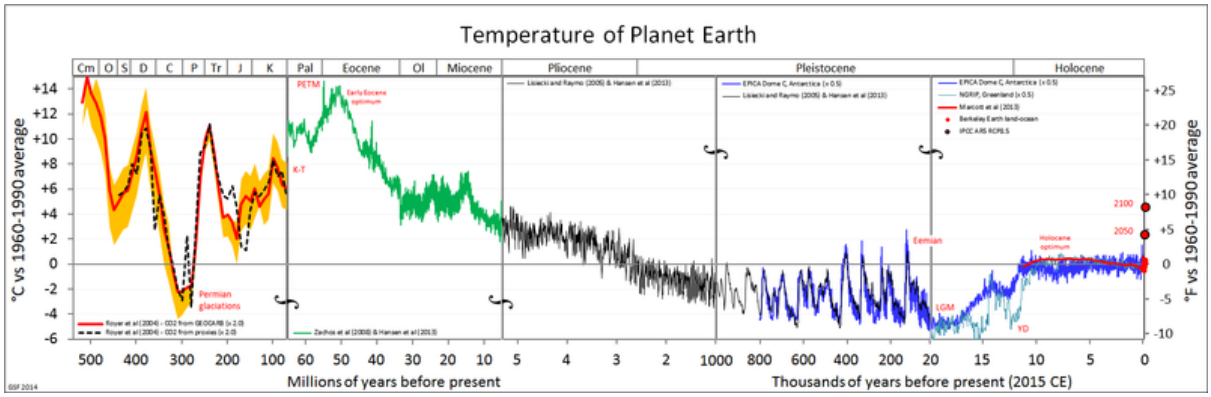

Fig.1: Temperature estimates over the past 500 million years (Glen Fergus)

Overview of the Carbon Dioxide Theory of Climate Change

The carbon dioxide theory of climate change posits that the increase in atmospheric carbon dioxide levels is the primary driver of global warming and climate change. According to this theory, the burning of fossil fuels releases large amounts of CO_2 into the atmosphere, leading to a greenhouse effect that traps heat and causes the Earth's temperature to rise. This theory is supported by empirical evidence, including the historical correlation between CO_2 levels and temperature, as well as the observed increase in global temperatures over the past century. Additionally, climate models that incorporate CO_2 as a forcing factor consistently predict future warming trends that align with observed data. While there are other factors that can influence climate change, such as volcanic activity and solar radiation, the carbon dioxide theory provides a comprehensive explanation for the observed warming trend. Further research and monitoring are necessary to fully understand the nuances and potential impacts of this theory. (Rex J. Fleming, 2019-07-01)

Natural variability could be responsible for the observed changes in climate rather than human activities. This argument suggests that climate has always experienced fluctuations and that the current warming trend may be part of a larger natural cycle. Additionally, the climate models used to predict future climate scenarios are too simplistic and fail to accurately capture the complexity of Earth's climate system. They propose that climate change may be caused by other factors such as solar radiation or volcanic activity. While these alternative explanations present valid points, the majority of the scientific community agrees that human-induced greenhouse gas emissions are the primary driver of current climate change. (Arthur Bird, 2009)

Scientific understanding of climate change is grounded in extensive research, empirical evidence, and rigorous analysis. The IPCC's reports consistently highlight those human activities, particularly the burning of fossil fuels, are the primary drivers of global warming and climate change. These activities lead to the release of greenhouse gases, such as carbon dioxide, which trap heat in the Earth's atmosphere. The result is an increase in average global temperatures, alterations in precipitation patterns, and other significant impacts on the planet's ecosystems and human societies. The overwhelming consensus among climate scientists and experts globally is that climate change is real, primarily caused by human activities, and poses significant risks to the planet and its inhabitants . This scientific

understanding has been reinforced by numerous peer-reviewed studies and research conducted by reputable institutions around the world . (The Royal Society, National Academy of Sciences, 2014-02-26)

Temperature records from around the world show a consistent increase in global temperatures over the past century (D. Kaufman, E. Broadman, 2023). This trend is further supported by the melting of glaciers and polar ice caps, as well as rising sea levels (Azam Ghezelbash, Vahid Khaligh, Seyed Hamed Fahimifard, J. J. Liu, 2023). Additionally, the increase in greenhouse gas emissions, primarily from human activities such as burning fossil fuels, has been linked to the warming of the planet (Intergovernmental Panel on Climate Change, 2023). The consensus among climate scientists is that human-induced climate change is the dominant force behind these observed changes . The substantial evidence and scientific consensus on climate change highlight the need for immediate action to mitigate its impacts and prevent further damage to our planet.

Some theories propose solar variability as a significant driver, suggesting that changes in solar radiation output, particularly sunspot activity, could correlate with climatic fluctuations (Lockwood & Fröhlich, 2007). Volcanic activity is also cited, as major eruptions emit aerosols and gases that can lead to short-term global cooling by reflecting sunlight; however, such activity does not account for the sustained warming trend observed in recent decades (Robock, 2000). Milankovitch cycles, the long-term changes in Earth's orbital parameters, are recognized for their role in initiating ice ages and interglacial periods but occur over tens of thousands to hundreds of thousands of years, making them an implausible explanation for the rapid warming since the industrial revolution (Hays, Imbrie, & Shackleton, 1976). Ocean currents and their variability, including phenomena like the El Niño-Southern Oscillation, can cause significant regional and short-term global climate variations, but these do not explain the consistent upward trend in atmospheric warming. Theories concerning natural fluctuations in greenhouse gas concentrations, such as those arising from geologic or biological processes, fail to coincide with the marked increase in emissions post-industrialization, which is closely linked to human activities like fossil fuel combustion and deforestation. Hypotheses around cosmic rays suggest that these high-energy particles could influence cloud cover and climate; however, empirical evidence for this mechanism remains sparse and contested within the scientific community (Svensmark, 1998).

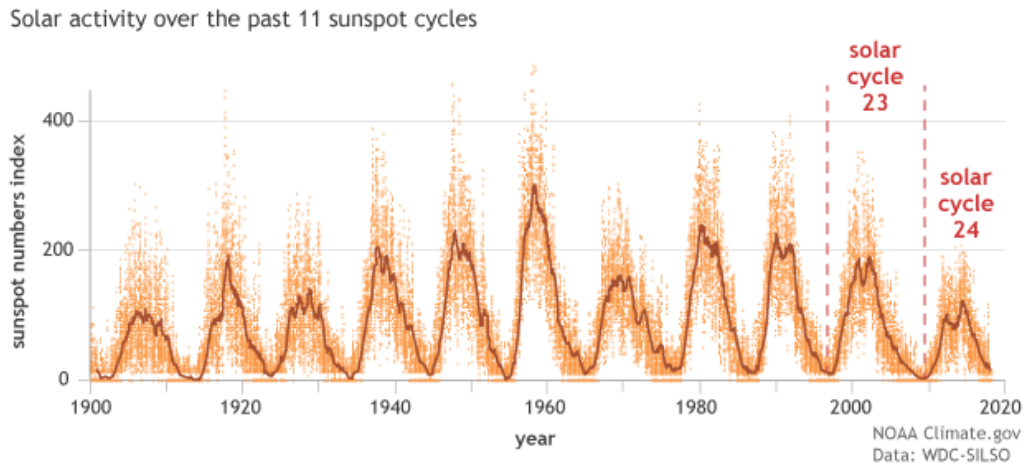

Fig.2 The peaks and valleys in solar geomagnetic activity since 1900, based on the number of sunspots observed on the face of the Sun each day (orange dots). The minimum of solar cycle 23 was unusually drawn out, and the maximum of the next cycle was among the lowest of the past century. Graph by NOAA Climate.gov, based on data from the WDC-SILSO, Royal Observatory of Belgium.

Lastly, internal climate variability, such as the Pacific Decadal Oscillation or the Atlantic Multidecadal Oscillation, indeed contributes to weather and climate patterns but does not suffice to explain the long-term global temperature rise. While these natural factors undeniably play a role in climate variability, the overwhelming scientific consensus, as outlined by the Intergovernmental Panel on Climate Change (IPCC), is that the pronounced increase in global temperatures in recent history is primarily due to anthropogenic factors, primarily the surge in greenhouse gas concentrations from human activities (IPCC, 2013).

SocietalCollapse as a Potential Consequence of Climate Change

A potential consequence of climate change is the collapse of societies as we know them. The effects of climate change, such as rising sea levels, extreme weather events, and food shortages, can lead to social unrest, political instability, and economic collapse . Societies heavily reliant on industries vulnerable to climate change, such as agriculture and tourism, are particularly at risk. For example, small island nations, coastal cities, and regions heavily dependent on agriculture may face significant challenges in adapting to the changing climate . The collapse of societies due to climate change can result in the displacement of large populations, heightened conflict over resources, and increased inequality . It is crucial for policymakers and society as a whole to acknowledge and address these potential consequences to mitigate the impacts of climate change.

Various studies have shown a strong association between concerns about climate change and increased psychological distress, anxiety, and depression . The overwhelming sense of worry and helplessness that many individuals experience when confronted with the reality of climate change can have significant detrimental effects on mental well-being . This relationship highlights the need for comprehensive strategies and support systems to address the psychological toll of climate change on individuals and communities. By acknowledging and addressing the negative emotions associated with climate change, mental health professionals and policymakers can work towards building resilient communities and promoting overall well-being in the face of this global challenge. (Inka Weissbecker, 2011-08-04)

The role of environmental activism in mitigating climate change anxiety is multifaceted and complex. On one hand, environmental activism plays a crucial role in raising awareness about the urgency and severity of climate change, which in turn helps to alleviate anxiety by providing individuals with a sense of agency and purpose in addressing the issue. Activism often involves advocating for policy changes, organizing protests and demonstrations, and promoting sustainable practices in everyday life. These actions not only contribute to tangible solutions for mitigating climate change but also create a sense of community and solidarity among activists, providing emotional support and reassurance in the face of anxiety. On the

other hand, environmental activism can also contribute to climate change anxiety by highlighting the dire consequences and uncertain future that our planet faces. The constant reminders of environmental degradation and the overwhelming nature of the problem can exacerbate anxiety levels among individuals, particularly those who are already predisposed to anxiety disorders. Therefore, it is essential for environmental activists to strike a balance in their messaging and approach, providing hope and actionable solutions while also acknowledging the gravity of the situation. Only through a comprehensive understanding of the role of environmental activism can we effectively address climate change anxiety and pave the way for a sustainable future. (Inka Weissbecker, 2011-08-04).

Overestimations of Climate Change Effects

The troposphere is the earth's dynamic climate zone, and it amplifies from the surface to around 40,000 feet. It's more profound where the air is warm, as within the tropics, and shallower at higher scopes (Austin, 2006). The advantage of looking at these temperatures versus those at the surface is that rain and snow are generally subordinate upon the temperature contrast between the surface and the mid-troposphere. When there's small contrast, the lower environment does not rise, meaning that the vertical movement required to create a cloud is missing. When the distinction is huge, moisture-laden surface discuss is exceptionally buoyant and can result in seriously rain occasions (Westra et.al, 2014) .

Pat Michaels and Chip Knappenberger have done considerable work in this field. The anthropogenic impact on the earth's climate—specifically through emanations of greenhouse gases—is close the moo conclusion of the “mainstream” (e.g., IPCC) evaluated run of impact and the models created to recreate the behaviour of the earth's climate have for the most part overestimated the impact of anthropogenic greenhouse gas outflows. A major portion of the reason that climate models run as well hot is that the earth's harmony climate affectability is considerably less than depicted by the climate models. Very few realize that the watched warming rate has been beneath the show cruel desire for periods expanding back to the mid-20th century for a long time. They illustrated with their comparison of the watched warming rate to that of the run of climate model-predicted warming rates for all periods from 1951 finishing with the foremost later accessible information.Amid all periods from 10 years (2006-2015) to 65 (1951-2015) a long time in length, the watched temperature drift lies in the lower half of the collection of climate show reenactments, and for a few periods it lies exceptionally near (or indeed underneath) the 2.5th percentile of all the show runs. Over shorter periods, such as the final two decades, a plenty of instruments have been put forth to clarify the modelled divergence, but none do so totally and numerous of the clarifications are conflicting.

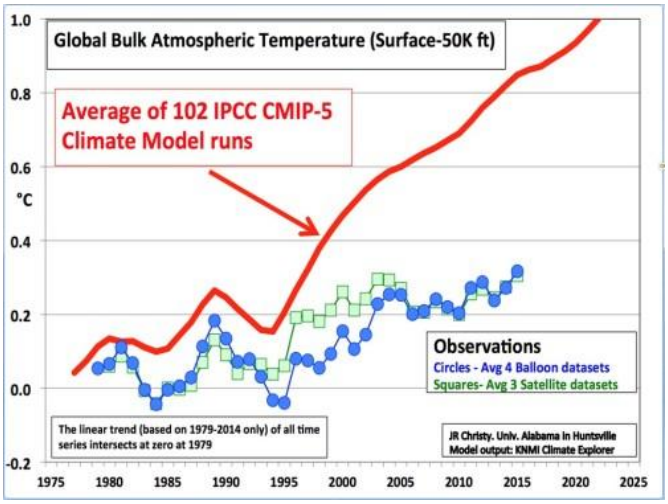

Fig.3 Climate models versus climate reality (Pat Michaels and Chip Knappenberger)

In the event that this is often not solid prove that the climate models foresee as well much warming, there's an extra comparison that can be made, one which is to a great extent free from the inspecting issues raised above—an examination of the climate demonstrate behaviour in the mid-troposphere. It is in this parcel of the free air where the climate models venture that the temperature (all inclusive) ought to warm most quickly as the concentration of carbon dioxide grows. One other exceptionally empowering result, utilizing the toady and swell information, is that the watched patterns are very flat, meaning that they are steady, not one or the other expanding nor diminishing depending upon length of record. Greenhouse material science really predicts this, so what we are seeing may exceptionally well in truth be the greenhouse-gas-generated reaction, not arbitrary noise. It is basically that the rate of warming is distant underneath what has been estimate.

The amount of that overprediction comports well with a developing body of logical discoveries and developing understanding that the affectability of the earth's surface temperature to rising air greenhouse gas levels—as specifically decided from observations—lies towards (and however inside) the moo conclusion of the standard (IPCC AR5) surveyed likely run. Since 2011, at least 14 ponders distributed within the peer-reviewed scientific literature provide solid prove that the balance climate affectability (ECS)—how much the earth's normal surface temperature will rise beneath a multiplying of the air carbon dioxide concentration—lies close the moo conclusion of the IPCC gauges. This later inquire about incorporates examinations of the earth's thermal response to changes in climate forcings that have taken put over the past century, thousand years, and over frosty periods.

A few of these investigate discoveries were distributed ensuing to the 2013 discharge of the IPCC's Fifth Appraisal Report (AR5), and in this way were not included in that Evaluation. Others were considered within the IPCC AR5, and still others were overlooked. And whereas the IPCC AR5 did reflect some influence on these modern moo ECS estimates—by growing its "likely" run of ECS estimates downward to incorporate 1.5°C (the low end was 2.0°C in the 2007 IPCC Fourth Evaluation Report) and excluding a "best estimate" esteem (which had already been given as 3.0°C within the 2007 report)—it still obstinately held on to its tall conclusion "likely" appraise of 4.5°C. This was an injury to the most recent science, but was

a vital step to protect the IPCC's reliance on climate projections made by models with an ECS averaging 3.2°C and extending from 2.1°C to 4.7°C. Had the IPCC completely grasped an ECS near 2.0°C—that which the later writing suggests—it would have had to toss out much of the rest of the report. Any genuine examination of the extant ECS writing would be remiss not to carefully consider the substance of the GWPF report (which convincingly contends for an ECS of 1.75°C or even a bit lower). One may contend that ECS gauges based upon one or two centuries of perceptions may not completely capture exceptionally long-term climate reactions, which therefore such ECS gauges are likely as well low. While the greatness (or indeed the presence) of the belittle is troublesome to survey, what is certain is that anything the impact may be, it is as it were fully manifest on timescales distant beyond even numerous human eras. In other words, when attempting to survey the coming climate changes over the following century or so, observationally based ECS estimates—estimates determined specifically from the extant temperature histories both of the surface temperature as well as maritime warm content—are very appropriate. This is indeed more so for gauges of the "transient" climate sensitivity—the temperature rise at the time of a multiplying of the air CO_2 concentration, as that's likely to occur at some point within the second half of this century, sometime recently the ECS is realized. Once more, the later gauges from real -world behaviour of the atmosphere and ocean are distant underneath climate demonstrate desires; see the GWPF report for a later round-up. That the real ECS (at least as surveyed over century times scales) is likely much lower than the average esteem of the climate models incorporated in the IPCC's AR5 is an efficient explanation for why climate models tend to overpredict the sum of global warming which has taken place—which has gigantic importance in evaluating the utility of climate show projections for future climate alter. Based upon these and other lines of proof, it would be reasonable to assert that future worldwide warming will happen at a pace considerably lower than that upon which governments and worldwide activities to confine greenhouse gas emissions are established.

Political and Psychological Factors in Climate Change Concern

Another significant aspect of climate change concern is the influence of political and psychological factors. Politically, the level of concern for climate change varies across nations and is often related to the nation's policies and political leaders(Pidgeon, 2012). The Doctrine of Common Concern is often addressed as a principle to deal with climate concerns as an 'idea of shared but common responsibility of States' (Aerni et.al, 2014). Indeed, the shared principality of concern towards the Earth is a moral and ancestral obligation of entire humankind. However, the extension of 'Common Concern' to differentiating these responsibilities on the basis of unequal causation of the concern itself "in light of historical differences and diverging levels of social and economic development" needs serious revaluation. Unfortunately, Principle 7 of the Rio Declaration declares, "States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command" (Rio Declaration, 1992).In countries where climate change mitigation is prioritized by the government, such as in Sweden and Germany, the level of

concern among citizens tends to be higher.Conversely, in nations where climate change is not a major political agenda, the level of concern may be relatively lower (Smith et.al, 2015).

Developed countries should not owe any additional responsibilities to the other countries. If the varying levels of socio-economic development are acknowledged, so should their causalities, particularly the differences between the intelligence, awareness and civility amongst people of different races. Policymakers must rather adopt a multidisciplinary perspective that considers intelligence, historical legacies, and migration economics in tandem.

Additionally, psychological factors play a role in shaping climate change concern. Research has shown that personal experiences with extreme weather events, such as hurricanes or droughts, can increase an individual's concern for climate change . Furthermore, social and cultural factors, such as social norms and values, can also influence the level of concern individuals have for climate change (Jones et al., 2019).

These political and psychological factors highlight the complexity of climate change concern and the need for multidisciplinary approaches to address it effectively. (Susan Clayton, Christie Manning, 2018-06-05)Understanding the psychological underpinnings of climate change beliefs can inform the development of effective communication strategies and policy interventions aimed at addressing this pressing issue. (Jon A. Krosnick, I-Chant A. Chiang, Tobias H. Stark, 2016-11-10)

In climate science, potential biases such as confirmation bias and echo chambers can influence research and discourse. Confirmation bias occurs when researchers or individuals Favor information that confirms their existing beliefs about climate change, potentially leading to the overlooking of contradictory evidence. This bias can shape the way data is interpreted and communicated, affecting the overall understanding of climate phenomena. Additionally, echo chambers can form within the scientific community, where individuals predominantly interact with others who share similar views, reinforcing existing beliefs and potentially excluding dissenting perspectives. This can limit the consideration of alternative theories, hindering the exploration of diverse scientific viewpoints. These biases can impact the objectivity and robustness of climate science findings, emphasizing the importance of promoting open dialogue and diverse perspectives within the field.

The dark side of environmental activism has had a significant impact on public perception of climate change. While environmental activists play a crucial role in raising awareness and advocating for positive change, there are instances where their methods and messaging can be counterproductive. There have been cases of environmental activist groups being involved in illegal activities, such as vandalism or sabotage, which further tarnishes their credibility. It is crucial for environmental activists to maintain transparency, credibility, and constructive dialogue to effectively address climate change concerns and garner public support. (Paul Kingsnorth, 2017-08).The current discourse around climate change is a neo-liberal narrative, wherein the emphasis on market mechanisms has shaped the discourse around climate change (Peet, 2004), making it a convenient problem rather than a potentiality to be tackled through systemic transformations.

Nordhaus elucidates that proponents of climate action have a lengthy history of attempting to link disasters to climate change, a practice dating back many years (Morano, 2024). In 2012, a meeting was convened by the Union of Concerned Scientists in La Jolla, California, bringing together environmental advocates, litigators, climate scientists, and opinion researchers (Pielke, 2024). The explicit aim of this gathering was to construct a public narrative connecting ongoing extreme weather events and the resulting damages to climate change and the fossil fuel industry.

The findings from this meeting, subsequently documented in a report titled "Establishing Accountability for Climate Change Damages: Lessons from Tobacco Control," (Shulman, 2012) offer insights. Despite decades of reports, the IPCC has not definitively concluded, with high confidence, that a clear signal of human-induced climate change can be identified for most types of extreme weather, particularly those causing the most significant impacts. This situation persists to the present day (Pielke, 2023).

A 2018 survey of environmental journalists (The American Journalist, 2022) revealed that seventy-one percent reported seldom or never incorporating opposing viewpoints in their coverage of climate change. Nordhaus adds that broader changes in the media landscape occurred at an opportune moment to bolster strategies aimed at shaping a new narrative. He notes that a significant majority of environmental journalists resist engaging with viewpoints that challenge the prevailing narrative. A national survey conducted in 2022 among political journalists and editors at the state and national levels revealed a 10-to-1 ratio of those identifying as Democrats to Republicans.

Relevant Developments in the Climate Change Discourse

Significant increases in fire weather have indeed occurred in most world regions during recent decades and have been attributed to climate change. Models based on historical trends have been disagreed with, by citing low confidence in their simulations of future fire activity (Jones, 2022). Even though researchers admit there are several doubts present about how climate change will affect forest ecosystems (Singh 2022), they unwittingly believe global warming could lead to complex levels of forest fires and associated global carbon emissions in the future, without expected scrutiny.

The 2019-20 Australian bushfires present a different case. After months of investigation, it is now known that the bushfires were deliberately lit and the swift spread of the fires was largely due to the number of arsonists. The Australian Police reported that arsonists & lightning to blame climate change for bushfires (Hussey, 2020, Durden, 2022). Groups even opposed backfire burning which is an exercise to limit fires (Kuzenko, 2000), before the devastating bushfires. Still, the magnitude of these bushfires are lower than the 1974-75 season as shown in Fig.4. The pattern is irregular and thus the linkage of these fires to climate change cannot be directly corroborated.

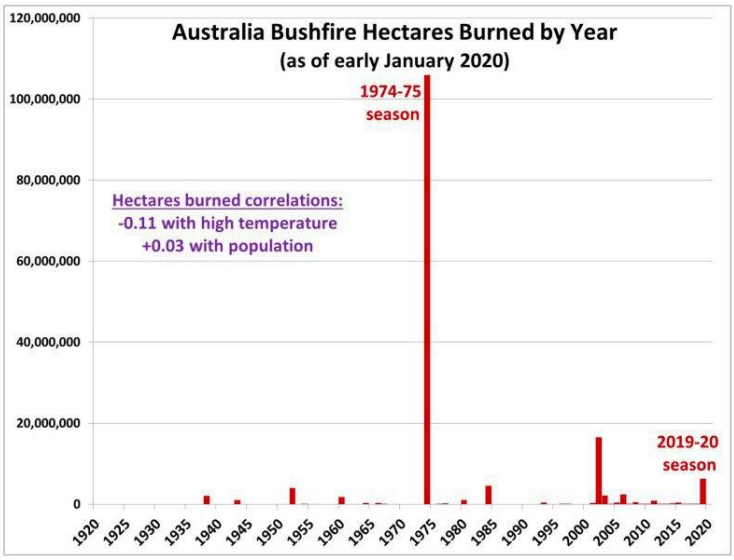

Fig. 4 : Australia Bushfire Hectares Burned by Year; Source: Australian Disaster Resilience Knowledge Hub https://knowledge.aidr.org.au/

McNeely claims that COVID-19 had distracted both governments and the public from the many other environmental problems that are worsening, almost desperately in plain ignorance of the mortal and geostrategic challenges of the period deserving far greater attention. It also calls for Green investments, whose infeasibility has been addressed earlier, in addition to enhancing the World Health Organization's capacities so that it can apparently "respond quickly and effectively to any future disease outbreak with pandemic potential" (McNeely, 2021), despite its evident failures in informing, handling and investigating the outbreak.

The mephitic World Economic Forum has advocated for carbon social credit systems (WEF, 2022) and "climate change" lockdowns (WEF, 2022). Phrasing COVID-19 as "the test of social responsibility", it lauds the success of an 'unimaginable' number of public health restrictions adopted by billions of citizens across the world and advances in emerging technologies like AI, blockchain and digitization which can potentially 'enable tracking personal carbon emissions' [via] smart home technologies. They lay out a "three-way approach" to "shape the movement," which clearly seeks to economically crippling people who don't go along with the Climate agenda, conditioning individuals to obsess over their individual carbon footprints and imposed carbon constraints and shifting societal perceptions to regard emissions as a personal privilege to be equitably distributed. In their proposal, they advocate for the enforcement of economic measures through governmental regulations and collaborations between the public and private sectors, suggesting that their educational efforts should encompass insights gleaned from the nefarious strategic manipulation witnessed during the COVID crisis. This elicits substantial worries about a Sustainable Development Technocracy (Wood, 2014) seeking to embody a governing framework that utilizes environmental concerns as a vehicle to justify an overreaching technocratic control over society.

A paper posits that despite the fact that the biggest polluters are developed countries, the consequences such as droughts, rainfalls, and extreme weather events are experienced all over the world, particularly in the developing countries (Matiiuk et.al, 2023) .Following this reasoning and considering that as populations swell and poverty wanes in the coming years, the carbon footprint is likely to expand. Therefore, if scholars truly harbour grave apprehensions, every conceivable endeavour should be exerted to either curtail unwanted populace, advocate for eugenics, and regard colonization as a beneficial influence for the planet. Naturally, Matiiuk et al. would not concur with such a notionand so the deduction following from their assertion stands negated. This consequently nullifies their paper on a fundamental basis.

It is imperative to acknowledge that infrastructure, institutions, and technology play a pivotal role in influencing the correlation between extreme climate events and the subsequent societal burdens they entail. The ramifications of this assertion may defy common expectations. While various types of calamities such as hurricanes and floods are inflicting heightened economic tolls in numerous regions compared to the past, this escalation is primarily due to the increased population density and wealth exposure in high-risk areas (Shulman, 2012). Therefore, irrespective of climate change, these vulnerable areas would endure significantly greater risks solely because of the amplified stakes at hand.

The primary focus of climate science has traditionally been on quantifying what is known as equilibrium climate sensitivity, the temperature increase following a doubling of CO2 levels, without considering the impact of gradual ice sheet melting over millennia on temperatures (Shepherd, 2021). Recent progress has led to a reduction in uncertainty surrounding equilibrium climate sensitivity, as illustrated in the accompanying figure. These sensitivity measures are interconnected, with the decreased uncertainty in equilibrium climate sensitivity affecting the transient climate response to cumulative emissions.

The reduced uncertainty in climate sensitivity stems from the recent adoption of formal Bayesian methods, incorporating various sources of evidence in its estimation. This development marks a triumph for Bayesian principles and scientific pioneers like Laplace, rather than validation for costly climate models. Detailed discussions on this topic can be found in the comprehensive and accessible publication by Sherwood et al (2020) titled 'An Assessment of Earth's Climate Sensitivity Using Multiple Lines of Evidence'.

Forecasts regarding prospective emissions trajectory indicate a likely scenario aligning with RCP4.5, ranging from RCP2.6 to RCP6. According to IPCC assessments, this pathway suggests a probable warming of 2.5 to 3 degrees compared to pre-industrial levels under current policies (Hausfather, 2021). The upper 95% confidence interval for warming stands between 2.4 to 4 degrees. Thereby, the temperature growth estimates, even from the emissions perspective is more modest than is being popularly surmised.

Importance of Critical Assessment in Addressing Climate Change

Emphasizing the importance of critical assessment in addressing climate change is essential for effective decision-making and policy development. It allows us to carefully evaluate the scientific evidence and determine the credibility and validity of the information presented. Critical assessment enables us to distinguish between fact and opinion, identify biases and conflicts of interest, and consider a variety of perspectives. By critically evaluating the available data and research, we can make informed choices and implement strategies that are based on sound scientific knowledge. This approach is crucial in addressing climate change because it ensures that our actions are evidence-based and effective in mitigating the impacts of global warming. It also promotes transparency and accountability in the decision-making process, fostering trust among stakeholders and facilitating collaboration towards a sustainable future. (Fernando M. Reimers, 2020-12-03)

A different approach to climate change, one that emphasizes adaptation and the harnessing of market mechanisms, could potentially foster technological innovation and economic growth. This perspective posits that instead of viewing climate change mitigation as a costly burden, it could be reframed as an economic opportunity—a chance to stimulate technological advancements and create new industries.

Firstly, by setting ambitious emissions reduction targets, governments can create a demand for low-carbon technologies, which in turn can spur private sector investment in research and development. This has the potential to lead to breakthroughs in renewable energy technologies, energy storage solutions, and carbon capture and utilization. Such innovation not only addresses climate change but also creates new markets and opportunities for economic expansion. Secondly, the policy tools used to encourage this shift play a crucial role. Carbon pricing, for example, internalizes the external cost of greenhouse gas emissions, making it more financially attractive for businesses to invest in cleaner alternatives. This can stimulate a competitive market for low-carbon technologies, pushing companies to innovate to stay ahead (Acemoglu et al., 2012). As a result, this competition can lead to cost reductions and increased efficiency, making low-carbon technologies more accessible and paving the way for economic growth. Moreover, adaptation strategies also present economic opportunities. By investing in infrastructure that is resilient to climate change, there is a chance to not only protect existing assets but also to build new ones that are more efficient and sustainable. Infrastructure projects, such as coastal defences and upgraded urban designs, can generate employment and drive economic activity. Additionally, the development of climate-resilient crops and agricultural practices can open up new areas for investment and innovation in the biotechnology sector.

The transition to a low-carbon economy also has the potential to improve energy security by reducing reliance on imported fossil fuels and diversifying energy sources. Energy security is a critical component of economic stability, and by investing in domestic renewable energy sources, countries can protect themselves from volatile fossil fuel markets and geopolitical uncertainties (Smith, 2022). A reframed approach to climate change that focuses on economic opportunities and technological innovation could generate a multitude of benefits, including the creation of new industries, job opportunities, and increased competitiveness on the global

stage (Jones & Brown, 2021). This could set the stage for sustained economic growth while simultaneously addressing the urgent need to reduce greenhouse gas emissions. Far from being an economic drain, climate action could be a significant driver of economic dynamism in the 21st century.

It is crucial that we recognize the urgent need for further research and collective efforts to combat this global crisis. While the existing body of knowledge on climate change is substantial, there is still much to be explored, understood, and applied. By fostering interdisciplinary collaborations, investing in research and development, and establishing robust monitoring systems, we can gain deeper insights into the complex dynamics of climate change and its impacts on various societal and environmental aspects. Furthermore, it is essential for governments, policymakers, scientists, and citizens to come together and take concerted action to reduce greenhouse gas emissions, transition to clean energy sources, and implement sustainable practices. Engaging in education, awareness campaigns, and advocating for policies and regulations that promote climate-friendly practices can contribute to a more sustainable and resilient future. The time to act is now, and by exerting collective efforts, we can pave the way for a better tomorrow. (Susan Clayton, Christie Manning, 2018-06-05)

Conclusion

While some argue that the impacts of climate change are exaggerated and that human activities have minimal influence on global temperatures, the overwhelming majority of scientific evidence supports the existence of anthropogenic climate change and the urgent need for action. The consequences of climate change are already evident in rising temperatures, melting ice caps, and extreme weather events, and if left unchecked, these effects will become increasingly severe in the future. It is crucial for policymakers, businesses, and individuals to acknowledge the reality of climate change and take proactive measures to mitigate its effects. Transitioning to renewable energy sources, implementing sustainable practices, and adopting climate-friendly policies are essential steps in addressing this global challenge. By working together, we can protect our planet for future generations and ensure a more sustainable and resilient future(William Dean Howells, 1883).

Conflicts of Interest

No potential conflict of interest was declared by the authors.

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