



Climate change is an extraordinary emergency

Muir Glacier, Alaska, 13 August 1941



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Muir Glacier, Alaska, 30 August 2004

2015/10/30/image-of-the-week-63-years-of-the-muir-glaciers-retreat/



This Paper comprises:

Laing *Submission 2 to 2020 Climate Enquiry Paper* “**Climate change is an extraordinary emergency**”. 2020, 57 pages

It is a Summary of:

Expert Witness Affidavit for the Defence “**Why climate change is an extraordinary emergency**” in trial of Stop-Adani activist Greg Rolles, invoking s25 Queensland Criminal Code defence, with international ramifications for climate activism. 2020, 81 pages.

As an Expert Witness Affidavit tendered to the Queensland District Court in the trial 2292/19: ROLLES V QPS, this Paper focusses on the Bowen region of North Queensland. It nevertheless directly reflects Australia's climate change across the continent.

Summary

- 1 The Earth has been experiencing climate change since the start of the Industrial Revolution; the actions of humankind have caused climate change, and climate change has resulted inter alia in global heating.
- 2 The global heating has been impacting central Queensland for around seven decades, with faster heating in the Bowen area.
- 3 The startdate for climate heating at different towns around central Queensland was between 1930 and 1965.
- 4 Australia's climate regime in the Bowen area has already heated by 2-3°C per century.
- 5 The Bowen region will continue to heat at this rate into the future.
- 6 There is evidence that the heating of Australia's east coast including central Queensland may be accelerating, with a number of identified local impacts on the Bowen and local area.
- 7 That at least ten components of climate change are clearly manifest in the Bowen region.
- 8 The extent of climate change in Australia and the Bowen region to date, and its already-observed, and predicted, consequences, amount to an extraordinary emergency.

Introduction

Australia, along with the rest of the world, has had the last five years to make up our mind whether climate change is an emergency.

Around the world to date, 1,849 jurisdictions - Governments at national, state and local level - in 33 countries have declared a climate emergency. This represents 820 million citizens; 10.5% of the world, or around 15% of the world's adults. It includes 90% of Britain and 75% of New Zealand. In Australia close to 100 jurisdictions representing 9 million people, or 35% of our population, have declared a climate emergency. Last year 300,000 adults and schoolchildren - over 1% of Australians - went on strike, in the middle of a working Friday, to express their plea for action on climate change and to express their anger at the Australian Government for their

failure to act on climate change. Last year a historic petition of 404,538 people - nearly 2% of Australians - called on the Australian Parliament to take urgent action on climate change.

So how has this overwhelming mass sentiment been absorbed and digested by its target, the Australian Government, since then? Four days ago - 2 December 2020 - the Australian Government, along with our alternative government the Australian Labor Party, voted against declaring a climate emergency. Yet again - groundhog day 15 October 2019.

As a climate scientist who has just produced a comprehensive analysis of Australia's climate since 1856 (see separate Laing Submission), I have unearthed a bunch of facts. They are not interpretations or assumptions or the will of God. Australia is heating at a rate of 2.4 degrees per century (DPC). This is double the world rate. Seven towns around our nation have been heating at 4 DPC or more for the past 60 years (post-1956 mean): Longreach (fastest heating at 5.3 DPC; one degree every 19 years), Bowen, Camooweal, Wagga, Boulia, Charleville, and Rockhampton (4.0 DPC). The same central Queensland region is also the fastest-cooling region in the cooling stage which preceded Australia's current strong heating stage (pre-1956 mean): Camooweal (fastest cooling at -8.6 DPC), Thargomindah, Bowen, Burketown, Normanton, and Longreach (the slowest of the fast-cooling at -1.6 DPC). Albeit currently unexplained, these regional climate behaviours are not accidental; they are indisputable, highly potent, regional events.

So what are our elected Australian decision-makers doing, to in response to (a) Australia's climate science facts, and (b) the science-informed will of their Australian constituents? I write this paper in the hope that someone will present and argue it to our political masters. I write as a Queenslanders, to make the point that Australians *in their home town* face an emergency; this is not some international shadow or national cloud which may or may not affect me. It has already affected me by heating my region (the Bowen region) 2 degrees since I was born, and it will go on heating my kids' and my grandkids' days and nights until either someone listens, or the world becomes catastrophe.

Climate change is not just an emergency. Climate change is an extraordinary emergency.

Global and National Issues

Global warming or climate change is a scientifically proven and accepted fact [1]. The term global "warming" relates to only a temperature phenomenon: the more accurate term is global "heating" which is an energy phenomenon, and encapsulates the process of atmospheric energy increase which underpins climate change. A principal effect of climate change is global heating (Figures 1-4, 8). The Earth's atmosphere in which all our climate is developed and manifest is proportionally one-third the thickness of an appleskin. Australia is contributing more than our share of carbon emissions, and we have heated at a rate faster than the published global averages (Figures 5-7).

The dominant causal driver of atmospheric heating is anthropogenic CO₂ emissions, and the most damaging has been the burning of coal and the heating associated with that (Figures 1-4). Coal is the dirtiest of the three fossil fuels, with emissions as follows (pounds of CO₂ emitted per BTu) [2]: coal 210, oil, 160, gas 120-140. Coal emits the most CO₂ in electricity generation. In the US in 2018 produced 33% of energy-related CO₂ emissions of which coal produced 65% and natural gas produced 33%. So-called "clean coal" is only cleaner than traditional coal by 20-30%; "clean coal" does not exist.

We see many other effects of climate change on people, property and the environment. Climate change components include:

- a) atmospheric heating (Figures 1-4, 6-7)
- b) ocean heating (Figures 4, 6, 8)
- c) ocean levels (Figure 8)
- d) ocean acidification
- e) ocean current changes
- f) ocean biosystems
- g) icecap melting and disappearance (Figures 9-10)
- h) mountain glacial melting and disappearance
- i) permafrost (arctic soils) melting and release of greenhouse gases (GHG)
- j) extinction of biological taxa well beyond species level
- k) major biological changes in taxa: morphology, distribution, behavior
- l) major changes particularly losses, in commercial utilization and value of the biosphere
- m) major changes in humans: health, material wealth, behavior, and the beginning of Homo sapiens' redistribution as climate refugees
- n) These changes are variably harmful, benign or useful. Most are harmful, because they destroy an equilibrium which nature and evolution have established: it is the equilibrium in which all living things, including humans, have evolved over millions of years.

These changes can be seen day to day in our lives because of the significant change in *the rates of our weather*. This is an extraordinary component of climate change that we can see now. It is an inevitable consequence of the heat added to the atmosphere and oceans by the greenhouse effect. This extraordinary new component particularly impacts on humans, because our material infrastructure and our social structures are far more sensitive to weather rates than all other life forms. And unlike them, humans are psychologically vulnerable to weather rates - we can become disturbed, to the point of individual suicide, by the outcomes of extreme weather rates.

Climate impacts are not just impacting global or national communities and there can be many variables that affect one community over another. For example:

- a) Harm: to people - peoples' health (extremes of hot weather, wildfire smoke), peoples' mortality (many have already died). Newly-normalised extremes of weather may extend social phenomena such as hot-weather mental health problems (eg the temperature-aggression hypothesis, or Darwin's "mango madness"), into new climate zones and larger populations (Figures 11-12).
- b) Harm: to property - built culture destroyed or damaged in various landscapes: unprecedented permafrost melting, unprecedented mountain ice and snowmelt, unprecedented wildfires, unprecedented flooding (mountain and coastal plain), unprecedented heating (roadways melting, railways buckling), unprecedented sea-

level rise (coastal storms feature wave action intruding landward to unprecedented distances).

- c) Harm: to the environment - in most or all Earth landscapes: unprecedented permafrost melting, mountain ice and snowmelt, wildfires, flooding (mountain and coastal plain), heating, increasing desertification, biodiversity reduction, species extinction.
- d) Timeframe: the harm has happened, is happening, or will happen soon
- e) Vulnerability: The factors affecting the subject's vulnerability particularly include prior history (environmental history + community history - especially culture of individualism vs socialism, and disaster planning). A unique component of the climate emergency is its inherent propensity to render a significant proportion of the community incapable of acknowledging the emergency.
- f) Landscapes: Virtually every place on Earth has been touched by climate change, and given the omnipresence of climate elements in the Earth's biosphere, every human being is and will be impacted directly by climate change, in any or all of its many components;
- g) Controllability: In the early days of acknowledged climate change (second half of C20) the harm may have been reversible. Some of the experienced harm is now irreversible. It remains to be seen how much harm - current and future - can be reversed. More to the point, it remains to be seen whether "small harms" are accelerating into "big harms" which will inherently be irreversible.
- h) Uncertainty: The quantum of harm (now/future) may be hard to determine - many, but not all, emergencies feature uncertainty. Most emergencies are instantly identifiable, and even those which are not (geological phenomena such as earthquakes tsunamis and volcanic eruptions, which we can now begin to detect months or years prior to the event), we know that it is coming, what it will consist of, and its specific location - even if its timing is uncertain. Climate change is unique in its degree of uncertainty.
- i) Permanence: Scientists know that some, perhaps many, components of climate change are now permanent. Humans can still reverse, or stop, many components, if we act within a window which scientists and the IPCC state is the next 10-12 years. The already-permanent components cannot be undone. The dangerous components are those which appear temporary and/or reversible, but which are permanent, or worse, accelerating. The unforeseen permanence of any climate change component is a danger in proportion to the harm it will cause.

These components of climate change can be seen in Queensland:

- a) Communities in Queensland suffering deep and prolonged drought;
- b) Catastrophic fire events leading to unprecedented loss of natural habitats like Queensland tropical rainforests;
- c) Hotter summers and increase in local average temperatures in Queensland, and Bowen specifically;
- d) Extreme rain events leading to unprecedented flooding.

The IPCC has set a level of 2°C for limiting catastrophic impacts of climate change. This limit is not simply “2° hotter”. It is not arbitrary; it is life’s temperature window. This impacts on all mammal (warm-blooded) life, and most non-mammalian life (Figure 13). The Paris temperature targets if exceeded will not merely impact the non-biological Earth processes; they will cause catastrophic damage to most living systems.

The author has recently completed a major study of Australia's climate and climate change, endorsed in principle by the Chief Climatologist of the Bureau of Meteorology [3]. North Queensland has the fastest rate in Australia, at a mean 3°C per century and the fastest local rate at Longreach: 5.3°C per century.

Australia's weather has become extreme. The Australian Bureau of Meteorology in 2013 was forced to add a new higher-temperature colour category to weather maps as climate heat increases [4], while in 2017 the Australian bushfire danger rating system was modified to include a new additional 6th danger category of “catastrophic” [5] (Figure 14).

Extraordinary and/or emergency from the scientific perspective

From a scientific perspective, and based on the quantifiable data, the current climate situation is certainly extraordinary, and can be considered an emergency in light of recent events.

The world’s climate emergency is extraordinary, in five unique new components (Figure 15):

- a) its Earth-spanning nature
- b) its direct threat to the existence of our species and millions of others
- c) its long timeframe compared to "normal" natural and human emergencies
- d) its initial covertness (it took decades to be confirmed, and more decades for its key dynamics to be identified)
- e) the systemic denial of a solution by those with the power to deliver it. Climate change and climate action have been subject to well-documented, systematic, half-century-long censorship [7, 8, 9, 10, 11].

The world's geologists have made a historic first acknowledgement of the extraordinary character of our current climate change: the declaration of a new geological epoch, the Anthropocene, to accommodate anthropogenic climate change [6]. The Anthropocene epoch was formally defined in 2016 by the Working Group on the Anthropocene of the International Geological Congress, following a record rapid establishment period of only seven (7) years. This was faster by an order of magnitude than any previous epoch establishment, in more than two centuries of geological science. The 70 year-long (short!) Anthropocene epoch is shorter than “natural” geological timeframes by 2-6 orders of magnitude. It is the epoch in which humankind began to manipulate the Earth systems which we thought were unchangeable, principally and most dangerously our climate. The manipulation has led to rates of change in Earth systems which are outside humankind's knowledge and experience, and which constitute an extraordinary environmental crisis. It is a measure of the extraordinary nature of the climate emergency that conservative precedent-sensitive geologists fast-tracked the protocol, so as to better address, professionally and technically, the science and human issues of climate change.

The urgency of climate change and climate action has now been mathematically quantified, and this has revealed a key new aspect of emergencies generally, and the climate emergency specifically. All emergencies can be characterised by the long-known risk equation [12], but with

an additional timeframe factor to distinguish an emergency: its urgency [13]. Many people have asserted that climate change is not an emergency because its timeframe is too long. To evaluate this assertion, the author has analysed the urgency factor of [13] (Figure 16) and upgraded it into a formal Urgency Index. Surprisingly, it turns out that the Urgency Index is not predominantly about "speed", and it does not require a "short timeframe". The Urgency Index recognises the real diagnostic of an emergency: the ratio of time required to deal with the emergency, versus the time available to do so. The Urgency Index for climate change at February 2020 is high, and becoming higher (Figure 17).

The climate emergency threatens catastrophe, independent of our human response. There are different types of effects or "emergencies" associated with climate change - Dangers to life, Dangers to health, Dangers to the environment, and there are also personal and property impacts as well.

The current environment situation is not "normal" and is profoundly unique.

Extreme weather (like those set out above for example and as seen in the Bowen area) is a predicted consequence of climate change (Figure 18). It has already occurred, in a timeframe and areal scope which has been described, by professionals, media, and governments, in terms of (inter alia) "extraordinary" "unheard of" "unprecedented" "not seen before" "disastrous" "catastrophic". Each descriptor is consistent with "extraordinary". In fact, if it were not for its historically entrenched usage, the term "extreme weather" which is now applied daily somewhere around the globe, could be supplanted by "extraordinary weather" without resistance from scientists and meteorologists.

Community expectations and responses to climate change

Studies have revealed an increasing level of worldwide community knowledge about climate change. Declarations of a climate emergency have now been made worldwide by 1355 jurisdictions and Governments representing more than 814 million people - over one tenth of the world [14]. They include almost 100 jurisdictions in Australia representing 8 million people or a third of Australian people - cities- Local Governments. An international group of over 11,000 scientists declared a climate emergency in November 2019 [15].

There has been rising prominence of people like Swedish schoolgirl Greta Thunberg who in 2018 staged a sustained weekly protest outside the Swedish Riksdag (Parliament) concerning climate change, Peter Garrett, former Australian Minister for Environment, statement June 2018: "Emissions rising, Antarctic melting. It's a climate emergency" [16], and Al Gore, former Vice President of the United States, October 2018: "We have a global emergency" [17].

Climate change has been accepted and classified as an emergency by most key sectors of the world community, except the fossil fuel industry: the majority of the scientific community, over 99% of the world's scientific community [18], the bureaucratic sector, the majority of the corporate world, most mainstream media, and the banking and insurance industries [19].

Many world leaders have accepted the 2015 Paris Accord, but Australia has not in reality accepted its key targets. The scientifically-impeccable journal Nature's Climate Action Tracker (2019 assesses Australia's commitments including pledges to the Paris Accord as "Insufficient leading to 2-3 degrees warming"; this classification lies in the middle of the 5 Nature classifications, ranging from "Compatible with 1.5°C " to "Critically insufficient leading to over 4 °C " [20].

The planned and embryonic Adani Carmichael coalmining project has not made a serious attempt to address climate change when measured against their fellow coalmining companies in the Bowen area.

Impact of climate change on the Bowen region

The Bowen region has experienced substantial climate change. This is in accord with the newly-documented Australian climate regime [3] (Figures 19-22).

The evidence is clear, from the literature and personal experience of several colleagues, that climate change has affected the Bowen area, and the railway area where the offence occurred, in at least ten direct ways.

- 1 The carbon emissions from the coalmining companies whose operations include the Bowen Basin are greater than the entire economy of Australia [21] (Figures 23-24). These are "offset" emissions in that they are calculated for the coal destination countries; but the coalmining itself produces significant emissions; both from the mining process, and from the methane generated from the exposed coal during mining and from the post-mining legacy open pits.
- 2 There has been major climate heating of the Bowen area. Data from the Bureau of Meteorology show that the temperature of the area has risen at a rate of between 2.5 and 3.6°C per century (Figures 25-29). This is more than double the currently accepted global heating rate (Figure 7). The heating began broadly synchronously, between circa 1930 (one location) and 1969, in all locations in the Bowen area. This startdate set is consistent with the array of over 100 high-quality ACORN-SAT weather stations across the continent, which have a tightly-constrained mean of 1954±10 years [2].
- 3 The Bowen area has been "slow-roasted", by anomalously greater (faster and longer) heating, than the remaining Queensland coast, since the climate heating began (Figures 31-32). My newly-developed climate parameter " $\Delta\text{Heat} = \text{Temperature rise} \times \text{Period of rise}$ " (Figure 30) accommodates both of the key climate heating parameters; the heating rate and the duration of the heating (NSW Bushfire Enquiry, Submission ...). ΔHeat integrates these two parameters into a spatial, mappable index of how much climate heat (not merely temperature increase) has been applied to a location or area. The ΔHeat distribution in the Bowen area reveals a climate hotspot centred on Bowen (Figures 21, 31-32).
- 4 There is evidence to suggest that the temperature rise in the Bowen area is accelerating. Sydney and Melbourne, both on the east coast of Australia with their climate change likewise heavily influenced by the East Australia Current, have accelerated respectively to 4.1 and 6.3°C per century in the past quarter century (Figure 33).
- 5 The World Heritage rainforest belt of north Queensland has been declared by Australia's Wet Tropics World Heritage Area Management Authority to be in accelerating decline [22] (Figure 34). This extends through the Bowen area to Eungella near Mackay. The decline is in both its floral and its faunal assets. The rainforest itself is being damaged possibly terminally, and a number of animal species are at imminent risk of extinction. For example, the lemuroid ringtail possum is unable to survive even one day above 29°C, yet Mount Bartle Frere in the centre of the Wet Tropics World Heritage Area

experienced an unprecedented 39oC on six (6) days last summer. These possums are most likely now extinguished in this central rainforest, and perhaps now extinct.

- 6 There has been an unprecedented incineration of rainforests in the Bowen region by bushfires. Rainforests at Japoon near Innisfail, and Eungella near Mackay, which have not been affected by fire in recorded history, have burnt in the past eighteen (18) months [23] (Figure 35). The prevalence of bushfires and rainforest burning will likely increase as a result of rising temperatures and the "slow-roasting" of Australia's anomalously-heating east coast. The widespread deep bushfire burning of habitat threatens a wide range of floral and faunal species (for example the Eungella Honeyeater (*Bolemoreus hindwoodi*) listed as near-threatened by habitat loss under Queensland legislation) [24].
- 7 The Coral Sea has heated along with the oceans peripheral to Australia, by approximately 1°C since the Bowen region's climate heating began (Figure 6).
- 8 This heating has raised the temperature of the cyclone spawning sea off Bowen by 1°C which, based on the cyclone spawning window of 5.5°C (26.5-32°C maximum summer temperature in the Coral Sea), increases the annual probability of cyclones for the Bowen area by an (indicative) 1/5.5 or 20%.
- 9 Climate change in the Bowen area coincides with a change in rainfall regime [25] (Figure 36). The rainfall from start of records to the startdate of climate heating (1954-65) was relatively constant, with a 5-year moving average between 440-800 mm with a short wavelength. After the startdate to the present, rainfall range expanded dramatically to 350-1000 mm with a much longer wavelength.
- 10 There has been a sea level rise in the Bowen region [26] (Figure 37). The global average sea level rose by 0.18 centimetres per year from 1961-2003 (Figure 8). The total global rise from 1901 to 2010 was 19 centimetres, higher than the average rate during the previous 2000 years. In the Great Barrier Reef region the fastest rates of sea level rise are in the north, in the Bowen-Cairns region. Sea levels on the Great Barrier Reef have already risen by approximately 3 millimetres per year since 1991. Since 1959, records of sea levels for Townsville, near Bowen, show an average increase of 1.2 millimetres per year; 7.3 centimetres total sea level rise since the start of climate heating in the Bowen-Townsville area. However, the rate of increase may be accelerating, with sea level records at Cape Ferguson between Townsville and Bowen showing an average increase of 2.9 millimetres every year between 1991 and 2006; 4.4 centimetres sea level rise in just 15 years, or 8.4 centimetres total if that rate has continued to the present. It is believed that sea levels had been very constant for the past 6000 years prior to the recent rise. Extreme sea level events (storm-driven waves and surge) also became about three times more frequent during the 20th century. The IPCC projects that global sea levels will rise by around 26 to 29 centimetres by 2030, and by around 47 to 62 centimetres by 2080. The Chair of the GBRMPA Local Marine Advisory Committee Townsville (LMAC) advised LMAC in November 2019 (see LMAC monthly meeting minutes) that sea level rise is a major concern for Townsville, citing the possible need for a stormwall with a length of 60 kilometres to protect Townsville and its region from sea level rise and storm surge [27]. He cited the huge cost of such a stormwall: notionally \$10 million per kilometre, or \$0.6 billion total, for a community of less than 300,000 people.

All ten impacts and their time-dependent nature support that climate change has become an extraordinary emergency.

Some features that make the current climate change extraordinary include the following:

- a) Climate change has created a profound increase in the rates of our weather (the forest burning rate in the bushfires at Eungella, the unprecedented Townsville rain and flood event of 2019 which is linked to climate change (Australian Bureau of Meteorology). Climate change promotes more, and more severe, heavy rainfall events, which contribute proportionately more to our total annual rainfall) [28], and increasingly hot summers in the Queensland dry tropics in the Bowen region.
- b) Critical unstable equilibriums including "tipping points" (Figure 38) – for example, the tipping point and point of no return for the damage to the Great Barrier Reef. Lenton et al (2019) (Figure 16) highlight nine (9) current global tipping elements as particularly critical [13] (Figure 39), and these nine (9) include warm-water corals specifically of the Great Barrier Reef off Bowen and the northeast coast of Australia (Figure 39). The unstable equilibrium which we are now seeing, confirmed by science in just the past several years, in key components of climate change is analogous to the marble in the bowl. Stable equilibrium comprises the marble in the right-way-up bowl which when pushed upwards falls back to its original position; it wants to remain in its original state. Unstable equilibrium is the marble on top of an upturned bowl; when pushed it moves even further away from its original position, it cannot go back to it, and its behaviour might become unexpectedly unpredictable. Unstable equilibrium in any specific climate case might be an accelerating climate component (Figure 33), a tipping point (Figures 38-39), and/or a discontinuity or singularity where a process at a given rate is supplanted relatively "instantaneously" by another process at a different rate (eg a phase change ice-to-water) (Figure 38).
- c) Geographic displacement of communities around the world due to climate change has begun and is accelerating. The UN Refugee Agency reports that drought in Somalia in 2019 forced more than 49,000 people to flee their homes [28]. The UNHCR reports that worldwide, weather-related hazards, including storms, cyclones, floods, droughts, wildfires and landslides displaced 16.1 million people in 2018, and states "With climate change amplifying the frequency and intensity of sudden disasters, such as hurricanes, floods and tornados, and contributing to more gradual environmental phenomena, such as drought and rising sea levels, it is expected to drive even more displacement in the future."
- d) It threatens the existence of Homo sapiens. A former Australian international oil, gas and coal industry executive, chair of the Australian Coal Association and CEO of the Australian Institute of Company Directors, has declared [29] "Climate change is now an immediate existential threat to human civilisation and the greatest threat facing this country. An accelerating climate emergency, after three (3) decades of inaction, is locked-in for years to come. Early signs of irreversible climatic tipping points, which have concerned scientists for years, are starting to manifest themselves locally. To avert escalating disasters all fossil fuel expansion must stop; coal, oil, gas; Adani, NW Shelf LNG, fracking, Great Australian Bight oil, the long list of NSW and Queensland coal projects, etc. To do otherwise is simply suicidal."

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Figures - shown in *large numbering inside the bottom right corner of the figure*

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ADDENDUM OCTOBER 2020

Analysis of a recently published "argument" that we do not face a Climate Emergency

1. This "argument"

The most recent publication(s) to argue publicly that we do not face a Climate Emergency are:

(1) A petition "European Climate Declaration" (*below*) and a synchronous letter to the UN Secretary General. 75 Australian signatories form the second highest national group of signatories, after Italy with 113 of the total 506 signatories. <https://clintel.nl/wp-content/uploads/2019/09/ED-brochureversieNWA4.pdf>

(2) Since its posting on Facebook, petition (1) has been re-released with over 700 signatories including 109 Australians, and rebadged the "World Climate Declaration".

European Climate Declaration September 26, 2019

THERE IS NO CLIMATE EMERGENCY

A global network of 500 scientists and professionals has prepared this urgent message. Climate science should be less political, while climate policies should be more scientific. Scientists should openly address the uncertainties and exaggerations in their predictions of global warming, while politicians should dispassionately count the real benefits as well as the imagined costs of adaptation to global warming, and the real costs as well as the imagined benefits of mitigation.

Natural as well as anthropogenic factors cause warming

The geological archive reveals that Earth's climate has varied as long as the planet has existed, with natural cold and warm phases. The Little Ice Age ended as recently as 1850. Therefore, it is no surprise that we now are experiencing a period of warming. Only very few peer-reviewed papers even go so far as to say that recent warming is chiefly anthropogenic.

Warming is far slower than predicted

The world has warmed at less than half the originally-predicted rate, and at less than half the rate to be expected on the basis of net anthropogenic forcing and radiative imbalance. It tells us that we are far from understanding climate change.

Climate policy relies on inadequate models

Climate models have many shortcomings and are not remotely plausible as policy tools. Moreover, they most likely exaggerate the effect of greenhouse gases such as CO₂. In addition, they ignore the fact that enriching the atmosphere with CO₂ is beneficial.

CO₂ is plant food, the basis of all life on Earth

CO₂ is not a pollutant. It is essential to all life on Earth. Photosynthesis is a blessing. More CO₂ is beneficial for nature, greening the Earth: additional CO₂ in the air has promoted growth in global plant biomass. It is also good for agriculture, increasing the yields of crops worldwide. There is no statistical evidence that global warming is intensifying hurricanes, floods, droughts and suchlike natural disasters, or making them more frequent. However, CO₂-mitigation measures are as damaging as they are costly. For instance, wind turbines kill birds and insects, and palm-oil plantations destroy the biodiversity of the rainforests.

Climate policy must respect scientific and economic realities

There is no climate emergency. Therefore, there is no cause for panic and alarm. We strongly oppose the harmful and unrealistic net-zero CO₂ policy proposed for 2050. If better approaches emerge, we will have ample time to reflect and adapt. The aim of international policy should be to provide reliable and affordable energy at all times, and throughout the world.

2. Assessment of this "argument"

The European Climate Declaration makes a suite of statements, essentially all of which are unsupported by evidence. Some statements can be immediately falsified via longstanding, readily-available published evidence. The remaining statements reduce longstanding rational technical premisses to meaningless, value-laden statements. I can analyse each of these as required. One example: "*politicians should dispassionately count the real benefits as well as the imagined costs of adaptation to global warming, and the real costs as well as the imagined benefits of*

mitigation". There is nothing imaginary about the millions of words and thousands of conclusions/position statements in the set of IPCC Reports.

The rational value of the petition(s), as with any publication on a scientific/technical issue, may be assessed on the basis of (1) its rational content, plus (2) the intellectual rigour and professional history of its signatories, including their career positions as creating real or potential conflicts of interest vis a vis their vested interest.

Re the professional credibility test (1); the European Climate Declaration fails. This incidentally does not render it invalid - it simply totally fails to rationally argue (demonstrate) its conclusion.

Re the professional credibility test (2); the European Climate Declaration is signed by a group of individuals whose professional rational credibility has been assessed by the RMIT ABC Fact Check (<https://www.abc.net.au/news/2020-02-27/who-are--scientists-professionals-who-say-no-climate-emergency/11734966?nw=0>).

The RMIT ABC Fact Check group reached the following general conclusions:

- 1 Of its 506 signatories, only 10 identified as climate scientists and 4 as meteorologists (2.8%).
- 2 Of the 75 Australian signatories who were contactable, only 1 with a confirmed current or former academic position has published peer-reviewed science related to climate change.
- 3 Verification that 14 of the Australian signatories either held an academic position or published peer-reviewed research. 9 of them had done both.
- 4 11 had neither held an academic position or published peer-reviewed research.
- 5 For the remaining 50, no academic position or peer-reviewed research was found or could be independent verified.

The RMIT ABC Fact Check group listed studies by other fact-checking organisations, all signatories to the International Fact Checking Networks' Code of Practice:

- German fact checkers Correctiv
- Italy's Pagella Politica
- Quebecois (French Canadian) fact checkers Decrypteurs
- Belgian magazine Knack fact checkers

Each of these reported among the signatories, combinations of

- professional biographical information which is misleading, partly false, and false, including unverified professorships
- a small minority having held an academic position, or published peer-reviewed research
- the majority as working or previously working in fields unrelated to climate science or the environment
- over 90% of Australians are male, which clearly implies that they are a small group clearly unrepresentative of the scientific community generally and the climate science community specifically
- a significant number of signatories having links with climate sceptic sites and/or a right-wing nationalist opinion site
- current or former connections to the mining industry.

3. My conclusion vis a vis the presence of an Extraordinary Climate Emergency

The most recent publication of purported scientists (self-identifying as "knowledgeable and experienced scientists and professionals in climate and related fields") purporting to profess a scientific position that there is no climate emergency, in September 2019, is a Petition and a synchronous Letter to the United Nations. I conclude that these publications have no rational basis (contain no evidence-supported statements or argument), and are authored by people the overwhelming majority of whom demonstrate no scientific capacity to make this statement.

These publications fail to demonstrate that there is no Climate Emergency. They thus fail to demonstrate that there is no Extraordinary Climate Emergency. I conclude that my Affidavit, positing that we face an Extraordinary Climate Emergency, faces no credible opposition.