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Opinion Article: Collision Course: Can We Pull the Brakes on 3 Degrees?

Introduction

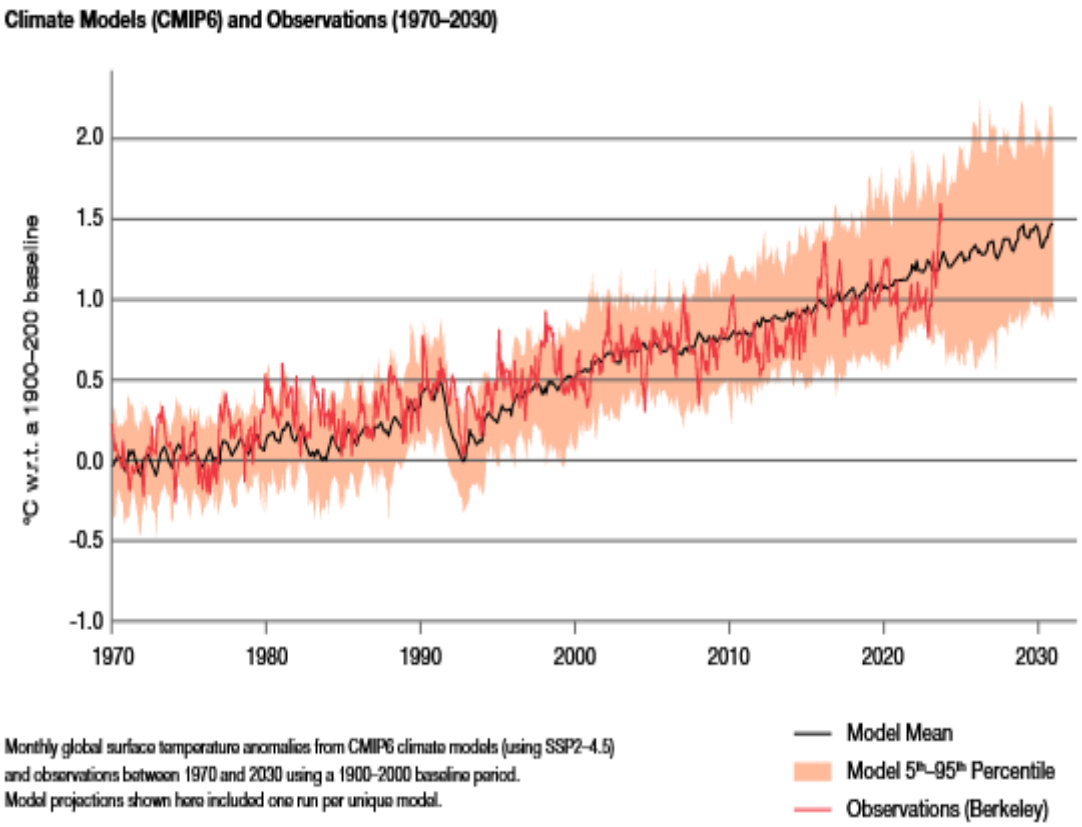
The recent report titled *Can We Pull the Brakes on 3 Degrees?* by Breakthrough Australia (www.breakthroughonline.org.au) and authored by David Stark , offers a stark and sobering assessment of the current trajectory of global warming and its implications for humanity. The discussion in February 2025, grounded in the latest scientific evidence, paints a picture of a world hurtling towards a 3°C increase in global temperatures—a scenario that would render large parts of the planet uninhabitable, trigger mass displacement (unsustainable with project population growth), destabilising global food and water systems. This article summarises the key issues raised during the report, critiques the current policy responses, and argues for an urgent, radical rethinking of our approach to climate change.

The New Climate Reality: 1.5°C is Already Here

The report began with a grim acknowledgment: the world has already reached 1.5°C of warming; a threshold once thought to be the upper limit of what humanity could safely endure. The data presented, including records from Berkeley Earth and Copernicus/ECMWF, show that 2023 was approximately 1.5°C warmer than pre-industrial levels, with 2024 now recognised as the highest average temperatures ever recorded - in a

race to hells bottom. This acceleration in warming is occurring faster than many climate models predicted, with the rate of warming increasing from 0.18°C per decade between 1970 and 2008 to 0.3°C per decade from 2010 onwards (Spratt, 2024).

The implications of this acceleration are profound. Extreme weather events—heatwaves, floods, and droughts—are becoming more frequent and severe, often surpassing the predictions of climate models.



For instance, the 2023 floods in Spain and the unprecedented heatwaves across the Northern Hemisphere are clear indicators that the climate system is behaving in ways that are increasingly difficult to predict. As Prof. Johan Rockström noted, "The planet is changing faster than expected, hitting harder on people across the world. We must admit we have underestimated risks" (Rockström, 2024).

Tipping Points: The Dominoes Are Falling

One of the most alarming aspects of the report was the focus on tipping points—thresholds beyond which the climate system undergoes abrupt and irreversible changes. According to the report these include:

- The Greenland Ice Sheet likely reached its tipping point 20 years ago.
- The West Antarctic glaciers have passed a tipping point;
- the Paris Agreement temperature target of 1.5°C is sufficient to drive the runaway retreat of WAIS
- In May2024, scientists warned that Thwaite's Glacier, nicknamed the "Doomsday Glacier", is near collapse.
- Parts of East Antarctica might be similarly unstable. 50Denman Glacier has been identified as susceptible to collapse of its ice shelf and inundation of the glacier itself, which sits on a retrograde base below sea level.
- Summer Arctic sea-ice, where three-quarters by volume has already been lost, and is in a death spiral.
- Arctic permafrost, which is now a net source of major greenhouse gases.
- Canada's boreal forests are one of Earth's largest terrestrial carbon storehouses. Long a reliable "sink" for carbon, the forests since 2001 have become instead an increasing carbon "source", and passed their tipping point. In the 2020s, Canada's forests have raised the country's total emissions by 50%.
- Tropical forests are also nearing critical temperature thresholds.
- The forest systems are oscillating to non-forest ecosystems in eastern, southern and central Amazonia. 57The Amazon has become a net carbon source during recent climate extremes and the south-eastern Amazon was a net land carbon source over the period 2010–2020.
- The South American monsoon is heading towards a "critical destabilisation point" or tipping point likely to cause Amazon dieback.

The paper highlighted that several critical tipping points have already been breached or are perilously close to being crossed. These include the destabilisation of the Greenland and West Antarctic ice sheets, the thawing of Arctic permafrost, and the potential collapse of the Atlantic Meridional Overturning Circulation (AMOC).

The AMOC, in particular, was identified as a major concern. A collapse of this ocean current system, which regulates heat distribution across the Northern Hemisphere, could lead to a dramatic cooling of Europe, disrupt monsoon patterns in Africa and Asia, and cause a

significant rise in sea levels along the eastern coast of North America. According to Prof. Tim Lenton, "If damaging tipping cascades can occur and a global tipping point cannot be ruled out, then this is an existential threat to civilisation" (Lenton, 2024). Most scientists agree that ocean warming is having a significant impact on weather patterns throughout the world as polar regions ice-melt accelerate influencing interconnected currents interlacing the oceans.

The World is Not Decarbonising- nor is Australia

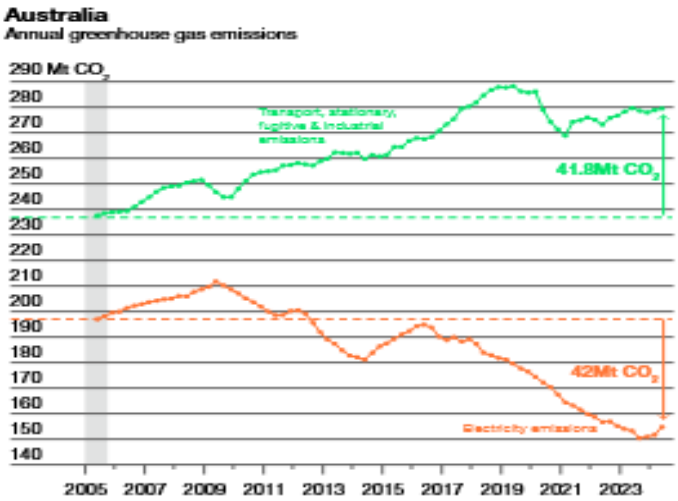


Figure 2: Australian emissions: Reductions in the electricity sector are cancelled out by rises in other sectors (Australia Institute).

Despite the dire warnings, the report underscored that the world is not decarbonising at the pace required to avoid catastrophic warming. Global greenhouse gas emissions continue to rise, driven by increasing energy demand and the expansion of fossil fuel production. The International Energy Agency (IEA) projects that under current policies, emissions will only decline by 10-20% by 2050, far short of the 50% reduction needed every decade to limit warming to 2°C (IEA, 2024).

Petro states and major oil companies are doubling down on fossil fuel production, with plans to expand output in the coming decades. For example, Saudi Arabia, the United States, and Russia are all projected to increase oil and gas production significantly by 2050.

Unexpected strong demand for oil has stiffened the industry's opposition to government and activist demands to phase out fossil fuel development. Policymakers also have *shifted their focus* to energy supply security and affordability since Russia invaded Ukraine and during the latest conflict in the Middle East.

Marianna Parraga and Arathy Somasekhar, 19 March 2024[85]

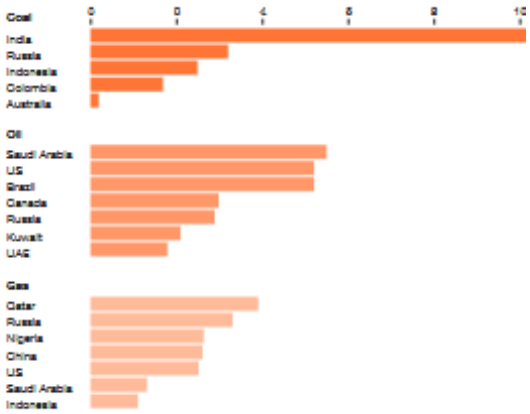


Figure 4: Planned increase in fossil fuel production for 2030 relative to 2021, exajoules (UNEP *Production Gap* report/*The Guardian*)

This is in stark contrast to the rhetoric of net-zero commitments, which are increasingly being watered down, green washed or abandoned entirely. As Saudi Aramco CEO Amin Nasser bluntly stated, "We should abandon the fantasy of phasing out oil and gas, and instead invest in them adequately" (Nasser, 2024).

The Physical Risks: Cascading and Systemic

The report emphasised that the physical risks of climate change are not linear but cascading and systemic. Changes in one part of the climate system can trigger a chain reaction of events, leading to widespread disruption. For example, the loss of Arctic sea ice is accelerating global warming by reducing the Earth's reflectivity, while the thawing of permafrost is releasing vast amounts of methane, a potent greenhouse gas.

These feedback loops are not adequately captured in current climate models, which tend to underestimate the risks.
People on most measures are hardwired to poorly assess risk. They tend to generalise and react to statistically rare events yet dismiss the mathematics that point to probable outcomes. Examples abound globally of settlement in known flood plains or with high fire risk

LEFT— LEFT— A person stricken by the severe heatwave fights for survival in the 'heat stroke emergency ward' of a Karachi hospital amid life-threatening temperatures on June 27, 2024.

As Prof. Michael Mann noted, "We argue that the models are underestimating the impact that climate change is already having on these extreme events" (Mann, 2024). This underestimation is particularly concerning given the potential for "Hothouse Earth" scenarios, where self-reinforcing feedbacks push the climate system into a state of runaway warming.

The Plausible Worst-Case Scenarios

Given the non-linear and cascading nature of climate risks, the report argued that policymakers must pay particular attention to plausible worst-case scenarios. These scenarios, while not certain, represent the greatest potential for damage and disruption. For example, a 3°C world would see large parts of the tropics become uninhabitable due to extreme heat, while the dry subtropics would experience severe drought and desertification.

Facing a future of accelerating climate change while blind to *worst-case scenarios* is naive risk management at best and fatally foolish at worst.

Dr Luke Kemp and colleagues, 1 August 2022[128]

Sea levels would rise by several metres, inundating coastal cities and displacing hundreds of millions of people.

The report also highlighted the risk of simultaneous crop failures across major food-producing regions, which could trigger a global food crisis. As Chatham House warned in its 2021 Climate Risk Assessment, "Cascading climate impacts will drive political instability and greater national insecurity, fuelling regional and international conflict" (Chatham House, 2021).

This is a projected world map with at 2.7^0 increase: the dark deemed to become ‘near unliveable’.

Critique of Current Policy Responses

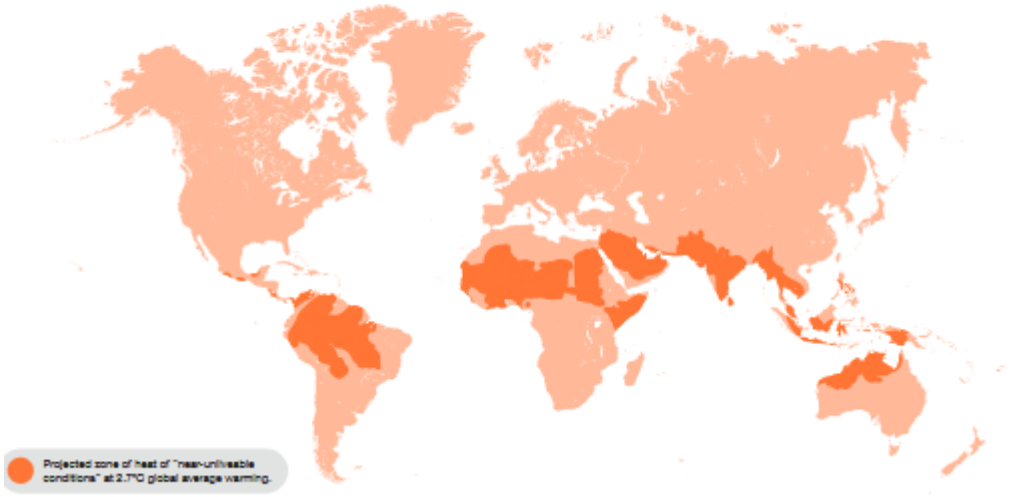
The report was highly critical of current climate policy, which is characterised by incrementalism, market-driven mechanisms, and a reliance on long-term goals like "net zero by 2050." These approaches, while politically palatable, are structurally incapable of addressing the scale and urgency of the climate crisis. As Prof. Kevin Anderson argued, "The trend line tells us that we are heading towards 3 to 4°C of warming across this century—an absolute climate catastrophe, and it's a catastrophe for all species, including our own" (Anderson, 2024).

The reliance on carbon pricing and offset schemes has also been criticised as ineffective and prone to abuse. For example, the report highlighted that many countries systematically underestimate their emissions, while carbon capture and storage (CCS) technologies remain unproven at scale. As Prof. Anderson noted, CCS is "a rhetorical device for maintaining business-as-usual and delaying real-world emission cuts" (Anderson, 2024).
The UK government whilst promising to adhere to net zero values has recently endorsed the opening of a third runway at Heathrow. The argument used is the 'likelihood' that airline fuel will transition to greener alternatives such as waste oil. Most on the left see this a direct betrayal of their mandate which places societal values above profit and growth.
Critics argue that the expansion would threaten the UK's climate targets and have a severe impact on noise and air pollution.

- *Climate Concerns*: Environmental groups, including Greenpeace and Friends of the Earth, have expressed strong opposition to the third runway, citing the potential increase in carbon emissions and the threat to the UK's climate targets.
- *Economic Benefits*: Backers of the project, including Chancellor Reeves, argue that the expansion would lead to economic growth and create up to 100,000 jobs, with the potential to add £78 billion to the UK's economy by 2035.
- *Government Support*: The government has announced its support for the project, with Chancellor Reeves stating that the Cabinet is "united" behind the plans, despite some reports of opposition from within the Labour party, including from Energy Secretary Ed Miliband.
- *Legal Challenges*: The project is likely to face legal challenges, with campaigners warning that they will take the government to court over the decision, citing concerns over climate change, air pollution, and noise pollution.

Conclusion: The Need for Emergency Mobilisation

The report concluded with a call for an emergency mobilisation to address the climate crisis. This would require governments to prioritise climate action above all else, redirecting resources towards decarbonisation, cooling the planet, and ensuring food and water security. It would also require a fundamental rethinking of the role of the state, moving away from market-driven solutions, towards a more planned, and coordinated approach.



As the report made clear, the stakes could not be higher. Without immediate and radical action, we are on a collision course with a 3°C world—a world that would be unrecognisable and uninhabitable for much of humanity. The time for incremental change is over. The time for emergency action is now.

On our current path, civilisation as we know it will disappear. If we meet current commitments only – net zero by 2050 – perhaps some form of humanity will survive, managing the challenges of continued *extreme weather events*, ice loss, and sea-level and temperature rises.

Appendix: Citations

1. Spratt, D. (2024). *Collision Course: 3-degrees of warming & humanity's future*. Breakthrough National Centre for Climate Restoration.
2. Rockström, J. (2024). "The planet is changing faster than expected." *Potsdam Institute for Climate Impact Research*.
3. Lenton, T. (2024). "Climate tipping points—too risky to bet against." *Nature*.
4. IEA (2024). *World Energy Outlook 2024*. International Energy Agency.
5. Nasser, A. (2024). "We should abandon the fantasy of phasing out oil and gas." *CNBC*.
6. Mann, M. (2024). "Climate models are underestimating extreme events." *The Guardian*.
7. Chatham House (2021). *Climate Change Risk Assessment 2021*. Chatham House.
8. Anderson, K. (2024). "The trend line tells us we are heading towards 3 to 4°C of warming." *Resilience.org*.