

**AUSTRALIAN
SECURITY
LEADERS
CLIMATE
GROUP**

**SUBMISSION TO
THE PARLIAMENTARY**

INQUIRY INTO SUPPORTING DEMOCRACY IN OUR REGION

NOVEMBER 2022

Contents

1. Overview	3
2. Existential climate risks to democracy	4
3. The rapidly-changing climate context	7
4. Climate change, conflict and democracy	9
5. Global cooperation and mobilisation	11
6. Climate-proofing development	13

Submission to the Australian Parliamentary Inquiry into supporting democracy in our region conducted by the Joint Standing Committee on Foreign Affairs, Defence and Trade - Foreign Affairs and Aid Subcommittee.

Published 11 November 2022 by Australian Security Leaders Climate Group, Canberra ACT.

Admiral Chris Barrie AC (Retd), Air Vice-Marshal John Blackburn AO (Retd), Colonel Neil Greet (Retd), Cheryl Durrant, Major Michael Thomas (Retd) & Ian Dunlop.

www.aslsg.org

1. Overview

The Australian Security Leaders Climate Group (ASLCG) welcomes the opportunity to contribute to the Inquiry into supporting democracy in our region conducted by the Joint Standing Committee on Foreign Affairs, Defence and Trade — Foreign Affairs and Aid Subcommittee.

Recent history in the Middle East and North and East Africa shows that severe climate impacts have contributed to social conflict, social breakdown, state failure and conflict. In other places, large-scale forced migration as a consequence of climate change — such as that from Central America into the USA, and from Syria into Europe, for example — have triggered ultra-nationalist and xenophobic responses, and a rise in post-truth politics.

In both cases, and on most occasions, the consequences have been a rise in authoritarian politics and/or a diminution of the democratic space, whether in Syria and Egypt, or East Africa, in the USA, or in parts of Europe, from Hungary to the United Kingdom (Brexit).

What the world has witnessed so far is just the beginning. On current trends, fossil fuel emissions may be no lower in 2030 than 2010, whereas limiting global warming to no more than 2°C requires, as a rule of thumb, a halving of emissions over that time period. Some estimates put the likely warming to be in the range of 2.4–2.8°C,¹ but if the full range of system-level feedbacks are included, it is our assessment, consistent with the paleoclimate record, that warming may pass 3°C.

Such an outcome would likely lead to a world in chaos: social breakdown, nations and democracies destroyed, forced displacement of tens of millions — if not hundreds of millions — of people. Chatham House says by the 2040s cascading climate impacts will “drive political instability and greater national insecurity, fuelling regional and international conflict”,² whilst US security analysts say that in a 3°C world, “the internal cohesion of nations will be under great stress” and “armed conflict between nations over resources, such as the Nile and its tributaries, is likely and nuclear war is possible [with] social consequences rang[ing] from increased religious fervor to outright chaos”.³

Such a world will be one of war and conflict, and authoritarian responses to a global and human security crisis. To avoid such a scenario, climate mitigation must become the number one priority of politics and economics. In addition, nations must strive to build an international culture of “cooperation, not conflict” in order to maximise the global capacity to respond to this existential climate risk and its anti-democratic consequences. This is not a choice if democratic society is to survive and prosper, it is simply a necessity. We urge this inquiry to draw this conclusion overtly and in plain language.

ASLCG submits that:

- Global inaction has resulted in climate change becoming an immediate existential threat to humanity and, together with nuclear war, the greatest threat to the security of all nations, their people and to democratic processes;
- Planetary-scale climate disruption will produce social breakdown, conflict, mass-scale forced migration and the breakdown of democratic processes;
- Addressing that threat requires an emergency response, akin to wartime mobilisation. Key requirements are: to reduce carbon emissions extremely fast to reach zero emissions as close to 2030 as possible; to drawdown atmospheric carbon concentrations to a more stable

¹ <https://www.unep.org/resources/emissions-gap-report-2022>

² <https://www.chathamhouse.org/sites/default/files/2021-09/2021-09-14-climate-change-risk-assessment-quiggin-et-al.pdf>

³ <https://www.csis.org/analysis/age-consequences>

350 parts per million carbon dioxide (ppm CO₂) from the current unstable 420 ppm; and to assess potential climate intervention (geoengineering) mechanisms to cool parts of the planet, to buy time whilst other measures take effect;

- Strategic and economic choices between conflict or cooperation around climate risks will have to be made by all nations:
 - The existential nature of the climate threat requires a fundamental reframing of Australia's security strategy, away from traditional nation state geopolitics, to focus on unprecedented global cooperation rather than conflict. Likewise for the other G20 nations who are responsible for 80% of global emissions, and particularly leading powers such as China and the USA; and
 - Australia has a responsibility to reduce the risks for neighbouring states and enhance democratic capacity in Asia and the Pacific by climate-proofing development for fragile or brittle states with the aim of building climate resilience for challenges such as water security, food security and disaster preparedness.

The impacts of climate change will affect every aspect of the global and human security landscape, and require a fundamental rethink of Australia's strategic outlook.

For decades federal and state governments, along with corporate and financial leaders, have chosen to exacerbate climate risks by actions such as increasing fossil fuel use and export, and ignoring scientific advice. Those risks have never been officially assessed in Australia.

Hence ASLCG's 2021 proposal that a comprehensive Climate–Security Risk Assessment (CSRA) for Australia be carried out urgently, addressing the broad risks to human, national and regional security.⁴ This idea was accepted by the current Australian Government. It is understood that an assessment, focussing on global but not domestic risks is currently being undertaken by the Office of National Intelligence (ONI).

However, unless the full range of climate security risks, domestic as well as global, are properly understood and accepted, inappropriate policies across government will again result. This will undermine the future potential, and even the survival, of democracy around the world, and even in this country.

2. Existential climate risks to democracy

An existential threat is one posing permanent large negative consequences to humanity which may never be undone, either by annihilating intelligent life or permanently and drastically curtailing its potential.

Climate change and nuclear war are not the only existential threats now confronting humanity. The Council for the Human Future summarised them as follows:⁵

- Climate change leading to “Hothouse Earth” scenario;
- Nuclear war;
- Eco-breakdown and extinction;⁶
- Resource scarcity, particularly water;
- Unsustainable global food system;

⁴ https://www.aslcf.org/wp-content/uploads/2022/08/ASLCG_RiskAssessment_Implementation-Proposal.pdf

⁵ <https://humanfuture.org/megarisks>

⁶ <https://www.dccew.gov.au/science-research/soe>; <https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review>

- Global poisoning from chemical emissions;
- Overpopulation, beyond Earth's carrying capacity;
- Pandemic disease from overpopulation, wilderness destruction and social behaviour;
- Uncontrollable technologies;
- Mass delusion from human's inability to understand existential threats.

The concurrence of recovery from the bushfires, the arrival of the pandemic and subsequent floods demonstrates some of these events compounding, one upon another. The pandemic in particular has highlighted the fragility of a global economic system and supply chains built upon the constant increases in population, consumption and material use. For decades, concerns have been expressed about the implications,⁷ which have been ignored as the global community constructed an economic system of perverse incentives likely to ensure its own destruction.

The point has now been reached where that system is indeed destroying itself, in that it cannot handle the contradictions it has created. Multiple risks are compounding in inter-related ways never previously experienced.⁸ The lessons that the current pandemic has created must be used to rethink the road ahead, not just continuing business-as-usual. The likely impending failure of conventional economic growth, as a result of these compound threats, has fundamental implications for defence and security in our region.

If the strategic road ahead is to be navigated successfully, a strong light must be shone on climate change risks encompassing, inter alia, food and water crises, large-scale disruption, and social and political breakdown both within and between nations. These risks fundamentally change the security landscape. Globally, there will be potential conflict over shared resources, climate-change enhanced famine, breakdown in social cohesion, forced displacement of populations, state failure and a democratic deficit, particularly in our region.⁹

Hosting a climate and security panel on 22 April 2021 as part of US President Biden's Leaders Summit on Climate, US Secretary of Defence Lloyd J. Austin III commenced with these words: "Today, no nation can find lasting security without addressing the climate crisis. We face all kinds of threats in our line of work, but few of them truly deserve to be called existential. The climate crisis does".¹⁰ The October 2022 US National Security Strategy reiterates that "the climate crisis is the existential challenge of our time".¹¹

Likewise, Pacific island leaders have clearly and repeatedly identified climate change as the greatest threat to their peoples' future security. This has been confirmed in official declarations from the Pacific Islands Forum, such as the 2018 Boe Declaration, which states that "climate change remains the single greatest threat to the livelihoods, security and wellbeing of the peoples of the Pacific".¹²

Existential, civilisation-threatening risks are not amenable to the learn-from-failure approach of conventional risk management. Attention should be given to the question: what are the feasible, worse-case scenarios, and what actions are required to prevent, prepare and protect against their

⁷ <https://www.clubofrome.org/publication/the-limits-to-growth/>

⁸ <https://theconversation.com/natural-systems-in-australia-are-unravelling-if-they-collapse-human-society-could-too-187263>

⁹ https://www.breakthroughonline.org.au/_files/ugd/148cb0_8c0b021047fe406dbfa2851ea131a146.pdf;
<https://www.aspi.org.au/report/geopolitics-climate-and-security-indo-pacific>

¹⁰ <https://www.defense.gov/News/News-Stories/Article/Article/2582051/defense-secretary-calls-climate-change-an-existential-threat/>

¹¹ <https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf>

¹² <https://www.forumsec.org/2018/09/05/boe-declaration-on-regional-security/>

occurrence? The approach to climate-related security risks must be holistic, avoiding siloed, discipline-based analysis. Risk analysis must account for system complexity and deep uncertainty.

The 2022 UN report, *Our World at Risk: Transforming Governance for a Resilient Future*, comes to a sobering conclusion: despite commitments to build resilience, tackle climate change and create sustainable development pathways, current societal, political and economic choices are doing the reverse.¹³ It warns of the risk of collapse because “risk creation is outstripping risk reduction”.

The case for urgent action is clear. The scientific evidence is that the global average warming will reach 1.5°C in the next decade, irrespective of any emissions reductions in the meantime, and 2°C before 2050, even with higher-ambition emission reductions.

Currently, global emission-reduction actions will lead to around 3°C of warming, and more once significant carbon-cycle feedback loops — which are now becoming active — are taken into account. Impacts of 3–4°C of warming would be catastrophic.

So how will such risks manifest from a security perspective? A remarkable insight was provided fifteen years ago by Kurt Campbell, currently Coordinator for Indo-Pacific Affairs in the US National Security Council, and formerly Assistant Secretary of State for East Asian and Pacific Affairs in the Obama administration. Campbell led a team that produced climate scenarios in a 2007 report, *The Age of Consequences*.¹⁴ One scenario described the security impacts in a 3°C-warmer world, which is now on the cards:

Massive nonlinear events in the global environment give rise to massive nonlinear societal events. In this scenario, nations around the world will be overwhelmed by the scale of change and pernicious challenges, such as pandemic disease. The internal cohesion of nations will be under great stress, including in the United States, both as a result of a dramatic rise in migration and changes in agricultural patterns and water availability. The flooding of coastal communities around the world, especially in the Netherlands, the United States, South Asia, and China, has the potential to challenge regional and even national identities. Armed conflict between nations over resources, such as the Nile and its tributaries, is likely and nuclear war is possible. The social consequences range from increased religious fervor to outright chaos. In this scenario, climate change provokes a permanent shift in the relationship of humankind to nature.

And a 2017 survey of global catastrophic risks by the Global Challenges Foundation (GCF) found that: “In high-end [climate] scenarios, the scale of destruction is beyond our capacity to model, with a high likelihood of human civilisation coming to an end.”¹⁵ The GCF says that despite scientific evidence that risks associated with climate tipping points “increase disproportionately as temperature increases from 1°C to 2°C, and become high above 3°C”, political negotiations have consistently disregarded the high-end scenarios that could lead to abrupt or irreversible climate change. It concludes that “the world is currently completely unprepared to envisage, and even less deal with, the consequences of catastrophic climate change”.¹⁶

¹³ <https://www.undrr.org/gar2022-our-world-risk>

¹⁴ <https://www.csis.org/analysis/age-consequences>

¹⁵ <https://globalchallenges.org/wp-content/uploads/2019/07/Global-Catastrophic-Risks-2017.pdf>

¹⁶ <https://globalchallenges.org/wp-content/uploads/2019/07/Global-Catastrophic-Risks-2017.pdf>

3. The rapidly-changing climate context

The need to address climate change seriously is becoming accepted by regulators, corporate leaders, investors and some governments. Sound governance demands that the real climate risks are understood and properly mitigated if disastrous consequences are to be avoided, even in the short-to-medium term.

ASLCG's current assessment of those risks, based upon the latest science, concludes:

- A 1.5°C global average temperature increase will occur by 2030 regardless of the emissions trajectory this decade. This is the lower boundary of the 2015 Paris Agreement;
- The upper boundary of 2°C is now likely prior to 2050, even with actions better than the current Paris commitments. 3°C is likely early-to-midway through the second half of this century given the current emissions trajectory;
- The war in Ukraine and the US–China tension over Taiwan, unless rapidly resolved, will distract from climate being a global political priority. Weakened or delayed emission-reduction commitments may result in a global temperature increase in the 3–4°C range by 2100;
- Rapid emission reductions will have limited impact on the warming trend over the next 25 years due to the offsetting effect of reducing aerosols from fossil fuel use, which have been moderating the planet's warming thus far – the “Faustian bargain” of fossil fuel use;
- A “Hothouse Earth” scenario of non-linear, irreversible, self-sustaining warming may be triggered at 1.5–2°C of warming, noting that some climate system tipping points have likely already been triggered, leading to catastrophic implications even in the short-term;¹⁷
- In summary: current global warming of 1.2°C in 2022 is already dangerous; 2°C would be extremely dangerous; 3°C would be catastrophic; and 4°C unimaginable.

3.1 Tipping points

Tipping points are the most critical climate risks. Some large-scale elements of the climate system do not change in a linear manner with increasing atmospheric carbon concentrations; but rather at a critical boundary point they “tip” abruptly from one relatively stable state to another that may be far less conducive to human prosperity or survival. For example, Arctic sea ice is melting rapidly as Arctic temperatures rise four times faster than the global average. As a result, less solar radiation is reflected back to space by the white ice and instead it warms the oceans, which in turn also warms the seabed and surrounding land. This melts permafrost and ice sheets, leading to further carbon emissions and accelerated warming, contributing to changes in ocean circulation and in the Arctic jet stream, with major global implications.

Fifteen non-linear tipping points were identified around the world some years ago.¹⁸ They represent the greatest risks of climate change in that, once triggered, they are irreversible on relevant human timeframes, with catastrophic outcomes. Some are interrelated and may cascade.

The implications of tipping points are yet to be properly assessed in the periodic reports of the Intergovernmental Panel on Climate Change (IPCC),¹⁹ in part because the mechanisms are not well understood or cannot be quantified. This underlines the importance of exercising the precautionary principle and an emergency-scale mitigation mobilisation. Professor Hans Joachim

¹⁷ <https://www.pnas.org/doi/10.1073/pnas.1810141115>

¹⁸ <https://www.pnas.org/content/105/6/1786>

¹⁹ <https://www.ipcc.ch>

Schellnhuber, founder of the Potsdam Institute for Climate Impact Research, emphasises: “This is particularly true when the issue is the very survival of our civilisation, where conventional means of analysis may become useless”.²⁰

A 2019 assessment by leading scientists suggests that tipping points may occur earlier than previously thought.²¹ They identified nine inter-related tipping points under way and concluded:

In our view, the evidence from tipping points alone suggests that we are in a state of planetary emergency; both the risk and urgency of the situation are acute. We argue that the intervention time left to prevent tipping could already have shrunk toward zero, whereas the reaction time to achieve net zero emissions is 30 years at best. Hence we might have already lost control of whether tipping happens. A saving grace is that the rate at which damage accumulates from tipping – and hence the risk posed – could still be under our control to some extent. The stability and resilience of our planet is in peril. International action – not just words – must reflect this.

Further analysis published this year increased these concerns, identifying five climate system tipping points which may have already moved beyond human influence,²² emphasising the need to focus far more attention on preparing for worst-case scenarios, which are increasingly likely.²³

3.2 Impacts

Climate change is taking an increasing social and economic toll, as witnessed in Australia and around the world, often well in advance of scientific expectations.²⁴

Whilst Australia has never conducted a comprehensive official assessment of climate risks, other countries are doing so on a regular basis. In 2021, Chatham House, Britain’s eminent international affairs think tank, warned that the world “is dangerously off track to meet the Paris Agreement goals”, that the risks are compounding, and that “without immediate action the impacts will be devastating in the coming decades”, especially for food security. The think tank’s report, *Climate change risk assessment 2021*,²⁵ concluded that:

- Impacts likely to be locked in for the period 2040–2050 unless emissions rapidly decline include a global average 30% drop in crop yields by 2050;
- The average proportion of global cropland affected by severe drought will likely rise to 32% a year (where severe drought is defined as greater than 50% yield reductions);
- By 2040, almost 700 million people a year are likely to be exposed to droughts of at least six months’ duration, nearly double the global historic annual average.
- Cascading climate impacts will “drive political instability and greater national insecurity, fuelling regional and international conflict”.

²⁰ <https://www.breakthroughonline.org.au/whatliesbeneath>

²¹ <https://www.nature.com/articles/d41586-019-03595-0>

²² <https://www.breakthroughonline.org.au/climatedominoes>

²³ <https://www.pnas.org/doi/10.1073/pnas.2108146119>; <https://www.science.org/doi/10.1126/science.abn7950>

²⁴ <https://www.carbonbrief.org/mapped-how-climate-change-affects-extreme-weather-around-the-world>;
<https://www.jbcs.co/iieraustralia-projects>

²⁵ <https://www.chathamhouse.org/sites/default/files/2021-09/2021-09-14-climate-change-risk-assessment-quiggin-et-al.pdf>

Other studies have highlight similar concerns,²⁶ but are largely ignored by political leaders despite the escalating devastation and cost of climate impact. Further, these analyses do not allow for the possible worst case tipping point scenarios discussed above.

4. Climate change, conflict and democracy

Recent history, including in the Middle East and North and East Africa, shows that severe climate impacts have contributed to social conflict and breakdown, state failure and conflict. In other places, large-scale forced migration as a consequence of climate change has triggered nationalist and xenophobic responses, and a rise in post-truth politics. In both cases, and on most occasions, the consequences have been a rise in authoritarian politics and/or a diminution of the democratic space.

Where climate impacts have significantly affected state stability and politics, the consequences have been poor for democracy.

A 2020 adelphi/PIK report, *10 insights on climate impacts and peace: A summary of what we know*,²⁷ concluded that the impacts of climate change include:

- Extreme weather events challenge government effectiveness and legitimacy. Adequate relief responses can avoid grievances and large negative responses following disasters.
- The unintended consequences of poorly designed climate and security policies carry their own risks. Military responses to conflict can add further pressure on climate-sensitive livelihoods if planning disregards climate vulnerability.
- Climate-related security risks are particularly significant where governance mechanisms are weak or failing. Context and governance play a large role in determining how climate-related security risks manifest, and climate change impacts inhibit peace by adding to existing pressures.
- Climate-related security risks will increase and multiply in the future. Impacts will intensify with further warming, and climatic tipping points are creating large uncertainties over future climatic changes and their effects on societies, and might be a source of sudden and large risks.
- Our capacities to assess and manage climate-related security risks lag behind the changing risk landscape. Assessment tools and early warning systems rarely address climate-related security risks. Conflict-affected countries are not sufficiently accounted for in funding and programming.

In 2010, an extreme heatwave, lack of rain and unprecedented wildfires devastated more than a third of cultivable land in Russia, the world's fourth largest grain exporter, and reduced wheat production by 30%. In response, the Russian government banned wheat exports for several months. At the same time, severe droughts in China and the Ukraine contributed to a global wheat shortage and a doubling of the global price in late 2010. In those countries most dependent on wheat exports — which are in the Middle East and North Africa — the tripling of the spot price triggered food riots and the Arab Spring uprisings in late 2010.

²⁶ <https://unfccc.int/news/united-in-science-we-are-heading-in-the-wrong-direction>;
<https://www.aspistrategist.org.au/simultaneous-climate-hazards-are-supercharging-global-systemic-risk>;
<https://ad-aspi.s3.ap-southeast-2.amazonaws.com/2021-04/Emerging%20crisis%20FINAL.pdf>;
<https://www.swissre.com/dam/jcr:e73ee7c3-7f83-4c17-a2b8-8ef23a8d3312/swiss-re-institute-expertise-publication-economics-of-climate-change.pdf>

²⁷ <https://www.adelphi.de/en/publication/10-insights-climate-impacts-and-peace>

The Middle East, North Africa and Mediterranean regions have experienced a drying trend over the last few decades. 60% of Syria saw the worst long-term drought in millenia from 2007-11, and severe crop failures. By 2009, more than 800,000 Syrians in rural areas had lost their livelihood, and 2–3 million people had been driven into extreme poverty. Approximately 1.5 million people migrated to the cities which, on top of another 1.5 million refugees who had fled from the war in Iraq, forced up rents dramatically and created social unrest. Facing a food and economic crisis, and government reductions in subsidies for basic goods, Syrians erupted in protest in early 2011, inspired by the Arab Spring. What followed was social breakdown, state failure, civil war and the rise of Islamic State. After ten years, Syria remains the world's largest refugee crisis. More than half the population has been displaced: more than 6.6 million Syrians have been forced to flee their country since 2011 and another 6.7 million people remain internally displaced.

The wider consequences of the Syrian war included regional destabilisation, and mass migration which contributed to the rise of authoritarian governments in Europe, and impacted on the Brexit referendum in which almost three-quarters of prospective “Leave ” voters cited immigration as the most important issue in the referendum.²⁸

The Arab Spring, the Syrian war and Europe’s refugee dilemmas are good examples of how reciprocal interactions between intersecting crises become accelerant to instability in unexpected ways. There are climate change components to the conflicts in many countries across the Maghreb, the Sahel and the Middle East, in many cases leading to the rise of fundamentally anti-democratic Islamist groups across north Africa, from Mali (Islamic State in the Greater Sahara, Jama’at Nusrat al Islam wal Muslimin) to Somalia (Al-Shabab).

In a complex world, social shocks are rarely singular in cause or effect. As with the physical world of climate change, disruption in one part of the system can cascade to produce a domino effect across the system as a whole, producing systemic risks, including to governance systems and democracy.

Such risks may be defined as “risks that can trigger unexpected large-scale changes of a system, or imply uncontrollable large-scale threats to it” and arise from interactions between changes in the physical climate and human systems; not only the direct impacts of changes in the physical climate, but also the response of complex human systems such as the global economy, food markets, and the system of international security.²⁹

4.1 Regional snapshot: Pakistan, Himalayas, Central Asia

Pakistan, with a chequered democratic history and frequent military interventions, is a clear example of a country where the social and political landscape and susceptibility to climate harm are a potentially unstable mix. Increasing instability in Pakistan would contribute to the risk of instability in India and even China, which are key economic partners for Australia.

Pakistan is a pivot state between Central and South Asia. Salafist Islamist non-state actors play a significant role in conflict in Pakistan’s immediate neighbourhood and within the country. Armed opposition groups target energy infrastructure, particularly in the China Pakistan Economic Corridor. The military and intelligence have a powerful say in Pakistani politics, and the Pakistani state has a direct interest in war-torn neighbouring Afghanistan and in disputed Kashmir. In addition, Pakistan is nuclear armed, as are neighbouring China and India.

²⁸ <https://www.aspistrategist.org.au/preparing-for-the-era-of-disasters/>

²⁹ <https://www.csap.cam.ac.uk/projects/climate-change-risk-assessment/>

Climate change has contributed to recent record-breaking drought events. On 30 May 2017, the thermometer in Turbat, Balochistan hit 54°C, the hottest reliably measured temperature ever recorded in Asia. In 2010, devastating floods affected one-fifth of the Pakistan land area and 20 million people, destroyed 1.7 million homes, and damaged 5.4 million acres of arable land. The damage was made worse by a shift in the distribution of monsoonal rainfall to areas of the country with poorer flood mitigation measures. The 2022 floods were even more damaging.

Pakistan will face severe water scarcity by 2025 and is “one of the most water-stressed countries in the world”³⁰, driven by changing snow melt from the Himalayan/Karakoram ranges, more variable monsoons, increases in population, inefficient drainage practices, a shift in agriculture towards more water-intensive export cropping, and competing demands for water by the agriculture and power generation sectors.

The loss of the ice sheets (already well underway) in the Hindu Kush, Himalayan and Tibetan Plateau regions — where all the major rivers of Asia arise — will exacerbate regional geopolitical tensions as water shortages in India, Pakistan and China become more critical and dam construction and control of rivers flowing from the Himalayan plateau through several nations become flashpoints.

China has almost 20% of the world’s population but less than 7% of potable water. There are long-standing border disputes between India, Pakistan and China, and all three are nuclear-armed. Water disputes between India and Pakistan have ebbed and flowed, even with the Indus Waters Treaty.

China’s cloud-seeding programs and attempts to hydro-engineer the sky “could ease [water] shortages in the dry north of China but may exacerbate problems in south-east Asia and India if it affected the flow of the Mekong, Salween or Brahmaputra rivers – all of which have their sources on the Qinghai-Tibet plateau”.³¹

To the north-west, Central Asia, including Afghanistan, will suffer increasingly dire water insecurity, and internal displacement and regional conflict over water rights is possible in this strategic zone — with a history of authoritarian politics — that stretches to Iran.

5. Global cooperation and mobilisation

Climate change does not fit readily into the traditional definition of a national security threat. Historically it has been viewed as a “threat multiplier”, just one among a multitude of strategic considerations. Today, as a result of the global policy failure, it is the greatest threat facing humanity and democracy. It cannot be solved within the mindset of geopolitical competition because it is a global threat which transcends both national boundaries and great powers.

Climate change requires unprecedented levels of global cooperation to dramatically reduce carbon emissions and atmospheric carbon concentrations, and manage climate interventions constructively. Cooperation may seem fanciful at a time with war in Ukraine, increasing tension between the US and China, and other countries moving toward isolationism. However this is an existential threat that is bigger than any individual country, and unlike anything humanity has previously experienced.

³⁰ <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/315851468285362706/pakistan-country-water-resources-assistance-strategy-water-economy-running-dry>

³¹ <https://www.theguardian.com/world/2020/dec/03/china-vows-to-boost-weather-modification-capabilities>

Every corner of the globe and every continent is already experiencing escalating climate impacts. The question is whether, and how, traditional security mindsets can be set aside and leadership emerge to trigger cooperation and avoid collapse. It is in Australia's interests to foster such cooperation, particularly within the G20 group of nations — whose economies account for around 80% of global greenhouse gas emissions — and with leading powers such as China and the USA and other global leaders.

China continues to be Australia's major trading partner, around which much of our national wealth has been created over recent decades, built up through long-term diplomatic and business initiatives. This long-term diplomacy and relationship-building contrasts with the anti-China rhetoric which has emerged relatively recently from US, UK and Australian political and security leaders as China has become more assertive.

Certainly China might have handled its emerging global role less aggressively, but that has to be seen against the current accepted Western paradigm that Western dominance must be maintained and China's influence "constrained".³² China's rise is inevitable and should be welcomed, particularly given the crucial role it must play addressing climate change. Our relationship with China should not be seen as a zero-sum game to preserve the status quo; Australia's challenge is to position our nation as a constructive player in addressing the existential climate threat that all nations face.

Australia could take a lead from its Pacific island neighbours. The community of Pacific Island nations has made it abundantly clear, including in the 2018 Boe Declaration, that climate impacts and not China are its biggest concern. Yet for decades Australia ignored the evidence that climate change represents the single greatest threat to the livelihood, security and wellbeing of Pacific nations.

Australia should put climate and security concerns at the centre of Pacific security and defence policy if it is to regain trust in the region. ASLCG has publicly recognised that: "Pacific governments have long argued that climate change and security are inter-linked. The key to Australia's successful re-engagement in the Pacific is a Pacific Climate and Security Initiative that would give priority to the Pacific's needs".³³ This would include new commitments to the Green Climate Fund, and mitigation actions consistent with the Pacific's focus on constraining warming to less than 1.5°C.

As the pace and intensity of extreme events accelerates, political panic, conflict and blame-shifting over the global climate policy-making failure will likely take hold.

This crisis could only be resolved by a collective determination to step up climate action to an emergency level, akin to a wartime mobilisation, in which climate mitigation becomes the first priority of climate and politics in Australia and around the world. Such a mobilisation will mean economic disruption and large-scale social and political change, but this can no longer be avoided; the alternative, of escalating climate impacts and self-sustaining warming, will be far worse. In these circumstances, the defence sector has the experience and capacity to be a significant contributor to enacting such a mobilisation. Defence should ensure it is well prepared for such a task.

An emergency implies acting early rather than later, otherwise mitigation becomes secondary to adaptation as incumbencies throw their resources at managing symptoms, rather than paying adequate attention to the underlying climate change cause. This may lead into a "death spiral" toward societal collapse, as climate impacts escalate unconstrained. The beginnings of this

³² <https://www.penguinrandomhouse.com/books/678193/dismantling-global-white-privilege-by-chandran-nair/>

³³ https://www.aslcf.org/wp-content/uploads/2022/04/ASLCG_Media_Release_27422.pdf

are already seen in responses around the world, not least in the lack of preparation for the uncharted territory manifested in 2019-20 Australian bushfires, in the ongoing east coast floods, and in the continued political willingness to expand Australia's fossil fuel industry despite the fact that this will make similar future events even worse.

6. Climate-proofing development

Food insecurity is one of the immediate outcomes of escalating climate change. Australia is ill-prepared for the resulting global food crises and their systemic, cascading risks to human and global security.³⁴

Food scarcity has already become a contributing factor to major conflicts around the world, including the Syrian civil war. Climate change will exacerbate rising food prices and shortages. Food and water insecurity will increasingly become major drivers of global conflict and instability, particularly in the Middle East and North Africa; with a rise in authoritarian politics a likely response.

A cascading climate security crisis initiated by chronic water shortages, crop failures and diminishing yields, and amplified by more extreme climate events and supply-chain dislocations, is likely to emerge globally, including in strategically important areas in the Indo-Pacific, posing a security and democratic challenge.

Similarly, climate change and conflict can combine to make food even more expensive and scarce, as is the case with Ukraine's role as a major wheat exporter. Likewise record-breaking heat waves across south Asia have led India to ban wheat exports, worsening the food crisis.

There will be big consequences for Australia's economic and human security. Australia's own food growing systems will be disrupted, and food insecurity in the region will drive political instability, conflict, and people displacement.

Prof. Brendan Sargeant has argued that climate change is a system-wide challenge for which no single country can resolve without the assistance of other countries:

"Climate change emphasises the interdependencies of countries and the need to respond in an integrated way that ensures that each country's individual response strengthens the response of all countries. As a security issue, climate change challenges traditional security frameworks that privilege national interests over the collective interest. Traditional security frameworks bias policy towards national responses that focus on the manifestations of climate change, rather than the causes. If climate change is the existential threat, then all other policy frameworks that might shape security agendas become subordinate."³⁵

In this context, and facing climate-change enhanced global food crises, the world needs to establish methods to better forecast potentially disruptive climate change events — such as severe drought — well in advance. Such a facility may have helped prevent or mitigate the Syrian disaster. Only then can the capacity be developed to reduce risks through building global and community resilience and strength before the world encounters systemic food crises.

Strengthening the resilience of vulnerable nations to climate impacts is critical; however this will only reduce long-term risk if improvements in resilience are accompanied by strong actionable agreements to stabilise the climate.

³⁴ <https://www.aslcf.org/wp-content/uploads/2022/06/ASLCF-Food-Fight-Report-June-2022-1.pdf>

³⁵ https://www.griffith.edu.au/__data/assets/pdf_file/0027/1407447/RO68-Sargeant-web.pdf

To enhance the capacity of neighbours to withstand climate-changed driven food shocks and their security and democratic processes, Australia should contribute to deploying a monitoring system to identify potential food insecurity hotspots, and commit to a programme to enhance food production capacity and resilience in the region.

The *World climate and security report 2021* identifies both the changing nature of climate-security risks, and some key responses. The impact of climate stressors or shocks is dependent on exposure and vulnerability, so “climate-proofing development for fragile or brittle states should be a priority for conflict prevention. Assistance should be aimed at climate resilience challenges such as water security, food security, and disaster preparedness, as well as ‘green recovery’ mechanisms that encourage investments in renewable energy and adaptive capacities.”³⁶

At the COP27 meeting in Egypt, the UN Secretary General Antonio Guterres warned that humanity was on “a highway to climate hell with our foot on the accelerator” and that bogus net-zero pledges were a “toxic cover-up that could push our world over the climate cliff”.³⁷ That would also push the world over a democratic cliff. In a world of “outright chaos”, mass death and displacement, democracy also dies.

Guterres told delegates “humanity has a choice: cooperate or perish”; to work together now to cut emissions or condemn future generations to climate catastrophe.³⁸ Working together means cooperation — climate cooperation — on a global scale. Enhancing democracy in Australia’s region means enhancing the capacity of developing nations to adapt successfully to the changing climate, to “climate-proof” development. And it means a global mitigation mobilisation to end the fossil fuel era and prevent humanity passing climate system tipping points that would not only initiate a period of uncontrolled warming, but also rampant authoritarianism.

³⁶ <https://imccs.org/wp-content/uploads/2021/06/World-Climate-and-Security-Report-2021.pdf>

³⁷ <https://thehill.com/homenews/3723070-un-chief-we-are-on-a-highway-to-climate-hell-with-our-foot-on-the-accelerator;>
<https://news.un.org/en/story/2022/11/1130317>

³⁸ <https://news.un.org/en/story/2022/11/1130317>

