

Critical Infrastructure Centre
Department of Home Affairs
3-5 National Circuit
Barton ACT 2600

16 September 2020

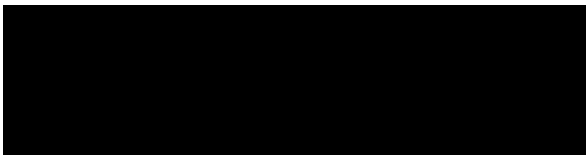
Submission made via online portal

Dear Sir/Madam

Protecting Critical Infrastructure and Systems of National Significance Consultation Paper

1. Thank you for the opportunity to provide feedback on the Protecting Critical Infrastructure and Systems of National Significance Consultation Paper.
2. As a Senior Associate in the Commercial Litigation and Agribusiness & Food Industry Groups at Clayton Utz, and as a member of the Queensland Law Society Water & Agribusiness Policy Committee, I appreciate the opportunity to contribute to this important consultation.
3. **Enclosed** is Annexure A, which contains my submission on issues relating to climate risk and natural disasters, and how these issues impact national security in the context of agricultural infrastructure.
4. Please do not hesitate to contact me if you have any queries regarding the contents of my submission.

Yours sincerely



Caitlin McConnel



Annexure A - Submission to Critical Infrastructure Centre on Protecting Critical Infrastructure and Systems of National Significance Consultation Paper

Issue: The security of agricultural infrastructure in light of climate risk and natural disasters.

By Caitlin McConnel¹

1. Introduction

In 2015, the Committee for Policy Development in Australia identified that 'no threat has ever been as permeating, persistent and omnipresent as climate change', and that it 'profoundly challenges that way we ensure' peace and security.² Climate change is now the 'defining issue of our time',³ particularly in light of the 'unsettled global landscape' we face in terms of geopolitical and geo-economic uncertainty,⁴ particularly in light of food and water security.

The Department of Home Affairs (the **Department**) has sought submissions in respect of proposed changes to the *Security of Critical Infrastructure Act 2018* (Cth). In particular, the Consultation Paper proposes a reform the definition of "critical infrastructure" as being:

"those physical facilities, supply chains, information technologies and communications networks, which if destroyed, degraded or rendered unavailable for an extended period, would significantly impact on the social or economic wellbeing of the nation, or affect Australia's ability to conduct national defence and ensure national security".

The primary objective of the proposed enhanced framework is to protect Australia's critical infrastructure from all hazards, including the dynamic and potentially catastrophic cascading threats enabled by cyber, physical, personnel and supply chain attacks. Underpinning the three key elements of the proposed enhanced framework are questions identified by the Department for consideration and submission, including:

- [4] What are the common threats you routinely prepare for and those you have faced/experienced as a business?

¹ Caitlin McConnel LLM (Hons) LLB (Hons)(QUT) BBus (Finance)(QUT) GDLP. I am a Senior Associate at Clayton Utz in Agribusiness & Food and Commercial Litigation. I explored the issues of critical human water needs, national security and natural disasters throughout my Master of Laws study at the University of Melbourne. The body of this submission has been prepared in correlation with my research papers (published and unpublished) on these topics, and is in keeping with a recent submission made to the National Water Reform Productivity Commission (as an annexure to the QLS Submission).

² Centre for Policy Development, 'The Longest Conflict: Australia's Climate Security Challenge' (Report), 2015, 9.

³ United Nations, 'Climate Change', United Nations (Web page) <<https://www.un.org/en/sections/issues-depth/climate-change/>>.

⁴ World Economic Forum, 'The Global Risks Report 2020' (Report) 15 January 2020, 9.

[19] How can Government better support critical infrastructure entities in managing their security risks?

I consider that in light of these questions, and the overarching purpose of the *Security of Critical Infrastructure Act 2018* (Cth) (being to protect critical infrastructure from the complex and evolving national security risks of sabotage, espionage and coercion posed by foreign involvement), the Department should also have regard to the security of critical agricultural infrastructure in light of natural disasters and ongoing climate risks.

In circumstances where food and water security, and the very infrastructure of supply chains which underpin agricultural resources, have a direct link to national security; the Department should ensure that any enhanced framework considers how climate risk, national disasters or food and water insecurity could heighten national security risks (including through sabotage or investment).

For the benefit of the Department, this submission provides:

- (a) a background to climate risks and natural disasters in Australia;
- (b) consideration of Australia's agricultural assets as critical infrastructure;
- (c) consideration of Australia's approach to natural disasters and national security; and
- (d) evaluation of how the protection of critical infrastructure should be directly linked to that of natural disaster and national security strategies.

2. Common threat to critical infrastructure - Climate risks and natural disasters

The Department has asked for submissions in respect of common threats routinely prepared for, or experienced by business. It is arguable that the impact of the physical risks of climate change should be considered as a common threat to all critical infrastructure entities, in circumstances where such risks are now at the forefront of economic debate and consideration globally.

The physical risks of climate change, include drought, floods and bushfires; whilst transition risks include the ability or inability of emerging technologies utilised by business; or the development of government policy; to mitigate climate change.

On 15 January 2020, the World Economic Forum released its annual Global Risks Report, which lists the top 10 risks in terms of likelihood and impact that will affect the global economy. Significantly, the top five risks in terms of likelihood are all environmental, namely extreme weather, climate action failures, natural

disasters, biodiversity loss and human-made environmental disasters,⁵ which is 'the first time in the survey's history that one category has occupied all five of the top spots'.⁶

In 2017, climate related disasters caused food insecurity in 23 countries,⁷ whilst researchers have warned about the impact of climate change 'chokepoints',⁸ which involve issues associated with appropriate coastal infrastructure and inland transport networks for the distribution of food. Such chokepoints can be identified as not only affecting agricultural production and distribution, but alongside the overarching physical risks of climate change, could also be seen as a threat to national security.⁹

Whilst the proposed enhanced framework has been drafted for the protection of Australia's critical infrastructure from all hazards, including the dynamic and potentially catastrophic cascading threats enabled by cyber, physical, personnel and supply chain attacks; it is arguable that as climate risks and natural disasters continue to impact agricultural resources (in Australia, and globally), so too may the increased threat of sabotage, espionage or coercion be identified in our agricultural sectors, as food and water resources dwindle globally. In the circumstances, I consider that the common threat of climate risk and natural disasters to the agricultural sector, directly correlates to the protection of food and water resources (and associated critical infrastructure).

As described in more detail below, I consider that whilst it is important to protect agricultural infrastructure from the common threat of climate risk and natural disasters; so too should we consider the direct link that food and water insecurity globally will have on the security of our agricultural infrastructure. That is, as foreign countries feel the effects of food and water shortages due to the impact of climate risks or natural disasters (or growing populations), Australia needs to ensure that it is protecting its agricultural infrastructure from sabotage, coercion or foreign investment which may threaten our nation's food and water security (and in turn, it's national security).

3. Agricultural assets as critical infrastructure

The Department has sought submissions on how Government can better support critical infrastructure entities in managing their security risks.

⁵ World Economic Forum, 'The Global Risks Report 2020' (Report) 15 January 2020, Figure II.

⁶ World Economic Forum, 'The Global Risks Report 2020' (Report) 15 January 2020, 4.

⁷ World Food Programme, 'Food Crisis Continue to Strike, and Acute Hunger Intensifies' *World Food Programme News* (Article, 22 March 2018) <https://www.wfp.org/news/news-release/food-crises-continue-strike-and-acute-hunger-intensifies?_ga=2.212606612.1673780678.1521717841-1457329774.1504191251>.

⁸ Chatham House, 'Chokepoints and Vulnerabilities in Global Food Trade Project' (Web page)

<<https://www.chathamhouse.org/about/structure/eer-department/vulnerabilities-and-choke-points-global-food-trade-project>>.

⁹ Caitlin McConnel, 'Critical Human Water Needs: Failing to Comply with the Objects of the Water Act and Human Rights Obligations', (2019) 36 *Environmental and Planning Law Journal* 212, 219.

The Food and Agriculture Organisation of the United Nations has recently identified Australia as a country maintaining a level of food and water insecurity,¹⁰ which is arguably a result of current drought conditions on agricultural production,¹¹ as well as the breakdown of food systems linked to warming and flooding.¹² This is concerning, in circumstances where 'Australia is the 11th largest agricultural exporting country in the world'.¹³

Food security has been defined by the United Nations as being "the condition in which all people, at all times, have physical, social and economic access to sufficient safe and nutritious food that meets their dietary needs";¹⁴ whilst water security is defined as "being the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining human well-being, socioeconomic development, and for preserving ecosystems in a climate of peace and political stability."¹⁵

In 2019, I published an article which explored the issue of water and food security in the context of the Murray-Darling Basin, entitled 'Critical Human Water Needs: Failing to Comply with the Objects of the Water Act and Human Rights Obligations', (2019) 36 *Environmental and Planning Law Journal* 212 (**EPLJ Article**). In the EPLJ Article, I considered the definition of national security as contained in the *Security of Critical Infrastructure Act 2019* (Cth) in the context of critical water assets, as follows (footnotes omitted):¹⁶

Significantly in 2018, Security of Critical Infrastructure Act 2018 (Cth) (SCI Act) was enacted for the purpose of imposing powers, functions and obligations applicable to the protection of critical infrastructure assets, which if damaged, would significantly impact the social or economic stability of Australia, its national defence or its national security. In accordance with s 5 of the SCI Act, national security was defined as being Australia's defence, security or international relations, whilst critical water asset was defined as including a water system or network which delivered services to at least 100,000 water connections. Despite the register of critical infrastructure assets remaining confidential, it is arguable that the Murray-Darling Basin would be deemed a critical infrastructure asset. What is significant, however, is that the

¹⁰ Food and Agriculture Organization of the United Nations, 'World Food and Agriculture Statistical Pocketbook 2018', (Web page) <<http://www.fao.org/3/ca1796en/CA1796EN.pdf>>.

¹¹ Caitlin McConnel, 'Critical Human Water Needs: Failing to Comply with the Objects of the Water Act and Human Rights Obligations', (2019) 36 *Environmental and Planning Law Journal* 212, 213.

¹² Thomas Clarke, 'The Widening Scope of Directors' Duties: The Increasing Impact of Corporate Social and Environmental Responsibility' (2016) 39 *Seattle University Law Review* 531, 532.

¹³ Caitlin McConnel, 'Critical Human Water Needs: Failing to Comply with the Objects of the Water Act and Human Rights Obligations', (2019) 36 *Environmental and Planning Law Journal* 212, 213.

¹⁴ International Food Policy Research Institute, 'Food Security' (Web page) <<http://www.ifpri.org/topic/food-security/>>.

¹⁵ Caitlin McConnel, 'Critical Human Water Needs: Failing to Comply with the Objects of the Water Act and Human Rights Obligations', (2019) 36 *Environmental and Planning Law Journal* 212, 214 citing UN Water, 'What is water security?' (2013) <<http://www.unwater.org/publications/water-security-infographic/>>.

¹⁶ Caitlin McConnel, 'Critical Human Water Needs: Failing to Comply with the Objects of the Water Act and Human Rights Obligations', (2019) 36 *Environmental and Planning Law Journal* 212, 219.

protection of critical infrastructure, such as water, did not extend to provision or discussion surrounding the protection of agriculture for the purposes of national security.

The total value of agricultural farm production to the Australian economy is \$56 billion. Despite maintaining a modest contribution of 12% to the Australian GDP, agriculture plays a significant role in Australian export income as the third largest export industry, exporting 70% of total agricultural production.

How does agricultural production relate to water use and management and national security? Agriculture is the largest user of water globally, accounting for almost 70% of all withdrawals; with irrigated agriculture contributing to approximately 40% of global food production. The Murray-Darling Basin is responsible for 39% of Australia's total agricultural production, using 78% of Australia's total water entitlements, to produce food and fibre.

Significantly, global water security has been recognised as a significant factor in food security. As a result, as the Murray-Darling Basin is arguably a critical infrastructure asset for the purposes of the Security of Critical Infrastructure Act 2018 (Cth), it is clear that the management of water resources in the Murray-Darling Basin is critical to Australia's national security. This is particularly in circumstances where the Murray-Darling Basin Royal Commission Report has identified that program, such as the Basin Plan, for the reduction of available water for agricultural is impossible without having some effect, sometime grievous, on agricultural enterprises.

I note that the Consultation Paper proposes a reform the definition of "critical infrastructure" as being:

"those physical facilities, supply chains, information technologies and communications networks, which if destroyed, degraded or rendered unavailable for an extended period, would significantly impact on the social or economic wellbeing of the nation, or affect Australia's ability to conduct national defence and ensure national security".

Whilst I agree with the proposed amendment to the definition, I would implore the Department to ensure that the scope of the definition is sufficiently broad to extent to the protection of agricultural infrastructure and assets (such as cropping and grazing land, or water assets), which if destroyed, degraded or rendered unavailable (due to foreign ownership etc.) would significantly impact on the social or economic wellbeing of the nation, or affect Australia's ability protect its national security.

4. Critical infrastructure in light of Natural Disaster Resilience

As described above, I consider that climate risk and natural disasters such as drought, bushfire and flood are inextricably linked to the management of critical infrastructure (such as water or food supply, or electricity), in Australia and globally.

In 2018, the Department of Home Affairs and the National Resilience Taskforce released the National Disaster Risk Reduction Framework (the **NDRRF**) for the purposes of outlining 'a national, comprehensive approach to proactively reducing disaster risk'. The NDRRF has been described as being the policy framework for reducing disaster risk,¹⁷ and the Australian Government's implementation of the first three priorities of the Sendai Framework.¹⁸

The drivers for the development of the NDRRF were identified as being that:

- (a) natural hazards, such as increasing temperatures, severe fire weather and flooding, are more frequent and intense;
- (a) essential services, such as food, water, energy, telecommunications and transport networks are all interconnected and interdependent;
- (b) growing populations have led to more people and infrastructure being exposed and vulnerable to natural disasters;
- (c) the impacts of natural disasters are now long term and more complex, including reduced education, workforce participation, physical and mental health and diminishing economic resources;
- (d) the costs of natural disasters to Australia are approximately \$18 billion each year; and
- (e) the momentum to address the financial climate-related risks is building throughout Australia.¹⁹

The NDRRF, which 'establishes a 2030 vision, goals and priorities for Australia', warns that it is 'not exhaustive nor prescriptive', but that it should be applied holistically across built (physical and social infrastructure), social (networks and essential services), natural (ecosystems and resources) and economic environments (public, private and individual economic activities),²⁰ with the understanding that

¹⁷ Parliament of Australia, 'Emergency management a disaster resilience: a quick guide', (Webpage) <https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1920/Quick_Guides/EmergencyManagementDisasterResilience>.

¹⁸ Department of Home Affairs, 'National Disaster Risk Reduction Framework' (Framework) 2018, 6.

¹⁹ Department of Home Affairs, 'National Disaster Risk Reduction Framework' (Framework) 2018, 5 - 6.

²⁰ Department of Home Affairs, 'National Disaster Risk Reduction Framework' (Framework) 2018, 6-7.

climate change is a key driver in disaster risk.²¹ It is designed to provide decision-makers with guidance in relation to investment and spending, public policy, development and land use, legislation and resource allocation.²²

I consider the NDRFF should be considered when determining how critical infrastructure will be protected, (particularly those pertaining to food, water and electricity) in circumstances where the very objective of the proposed enhanced framework is to protect Australia's critical infrastructure from all hazards, which as aforementioned should extend to the impact of climate risks and natural disasters on threats enabled by cyber, physical, personnel and supply chain attacks.

Indeed, I am of the view that security risks to Australia's food and water resources are likely to become more prevalent, in circumstances where there is an increased level of food and water security globally, and where climate risks and natural disasters are affecting our own production levels. As a result, and as described above, Australia needs to ensure that it is protecting its agricultural assets from sabotage, coercion or foreign investment which may threaten our nation's food and water security (and in turn, it's national security as described below).

5. Natural Disasters & the National Security framework

Climate change and natural disasters have been identified in Australia as a national security risk.²³ In recent years, we have seen an escalation in the loss of life, infrastructure, species, ecosystems and income as a result. As our population grows, and the impacts of climate change increase, the disaster risks will only continue to increase.²⁴

Despite Australia's long-standing awareness and experiences with natural disasters, and the effect they have on its society, economic and environment; as well as its acknowledgement that climate change is increasing the severity of such natural disasters (arguably since its adoption of the UNFCCC in 1992), it is concerning that Australia's national security strategies remain largely silent as to the impact of climate change and natural disasters.

The World Economic Forum has highlighted the urgent reality of climate change and its effect on governments, markets and societies in its recent Global Risks Report. It has advised that 'climate-related natural disasters such as ... flooding and wildfires are becoming more intense and more frequent', and that near-term existential challenges include:

²¹ Department of Home Affairs, 'National Disaster Risk Reduction Framework' (Framework) 2018, 7.

²² Department of Home Affairs, 'National Disaster Risk Reduction Framework' (Framework) 2018, 21.

²³ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 9 and 30.

²⁴ Climate Council, 'The Burning Issue: Climate Change and the Australian Bushfire Threat' (Reports) 17 November 2015, 10.

- (a) loss of human life,²⁵ loss of species,²⁶ and stress on ecosystems;²⁷
- (b) food and water crisis through an inability to meet world food production requirements by 2050;²⁸
- (c) increased migration due to extreme weather events;²⁹
- (d) exacerbation of geopolitical tensions;³⁰ and
- (e) economic and capital market risks, such as lower GDP due to climate-related economic damage,³¹ and trade, labour and supply chain disruption.³²

Climate-related natural disasters are recognised as a threat multipliers in Australia, in circumstances where they are, 'influencing and exacerbating geopolitical risks in our region and in the boarder international community'.³³ Significantly, Australia has already been identified as being 'in the region most vulnerable to the impact of climate change, including security threats, resulting from both the onset of long term trends and increased extreme weather events', and that 'the security and humanitarian risk' in Australia 'is significantly higher than in other regions of the world'.³⁴

Indeed, over 10 years ago, the Australian Strategic Policy Institute recognised and forewarned that the physical effects of climate change have 'the potential to effect water shortages, increase health problems including the spread of disease, and increase potential for property damage, (for example, through more flooding, coastal erosion, storm surges and extreme weather events) and disrupt critical infrastructure' ... whilst 'increased heat, pests, water stress and diseases will pose adaptation challenges for crop and livestock production ...' in Australia. All consequences, of which are starting to be experienced now in the face of the ongoing drought and bushfires, are significant national security threats.³⁵

A. National Security

Section 5 of the *Security of Critical Infrastructure Act 2019* (Cth) only defines national security as being "Australia's defence, security or international relations".

²⁵ World Economic Forum, 'The Global Risks Report 2020' (Report) 15 January 2020, 30.

²⁶ World Economic Forum, 'The Global Risks Report 2020' (Report) 15 January 2020, 46.

²⁷ World Economic Forum, 'The Global Risks Report 2020' (Report) 15 January 2020, 31.

²⁸ World Economic Forum, 'The Global Risks Report 2020' (Report) 15 January 2020, 31.

²⁹ World Economic Forum, 'The Global Risks Report 2020' (Report) 15 January 2020, 31.

³⁰ World Economic Forum, 'The Global Risks Report 2020' (Report) 15 January 2020, 31.

³¹ World Economic Forum, 'The Global Risks Report 2020' (Report) 15 January 2020, 31.

³² World Economic Forum, 'The Global Risks Report 2020' (Report) 15 January 2020, 33.

³³ World Economic Forum, 'The Global Risks Report 2020' (Report) 15 January 2020, 9.

³⁴ World Economic Forum, 'The Global Risks Report 2020' (Report) 15 January 2020, 10.

³⁵ World Economic Forum, 'The Global Risks Report 2020' (Report) 15 January 2020, 13.

I consider that in order for the definition of 'national security' to be sufficiently broad to include all common risks faced by critical infrastructure entities, consideration should be given to the interpretation of national security at a national level.

National security is currently defined by the Australian Government as an ability to keep individuals 'safe and secure' by making decisions on how to 'deal with threats to the nation's security'; 'protect Australia's borders' and 'prevent organised crime'.³⁶ In considering the Australian Governments national security policies and initiatives, it appears that the threats to Australia's national security are only currently recognised as being terrorism, violent extremism, cyber security, data retention and transport and critical infrastructure.³⁷ This is despite the Australian Government, under leadership of the then Prime Minister Kevin Rudd, issuing Australia's first national security statement in 2008, which remarkably identified that 'over the long term, climate change represents a most fundamental national security challenge for our future' (**2008 National Security Statement**).³⁸ He warned that 'significant climate change will bring about unregulated population movements, declining food production, reductions in arable land, violent weather patterns and resulting catastrophic events. This is an area of emerging consequence which will require the formal incorporation of climate change within Australia's national security policy and analysis process'.³⁹

However, it could be arguably inferred that the Australian Defence Force (**ADF**) recognises climate change, or at the very least the ramifications of climate change, as being linked to national security, in circumstances where it defines national security as 'including state and human security', and as 'being inherently linked to the security of health, water energy, food and economic systems at the local, national, regional and global level'.⁴⁰

In 2013, the Australian Government under the leadership of the then Prime Minister Julia Gillard, released, but did not table to Parliament,⁴¹ a strategy for Australia's national security (the **National Security Strategy**); which has since been removed from government websites.⁴² The National Security Strategy aimed to develop 'a unified national security system that anticipates threats, protects the nation

³⁶ Department of Prime Minister and Cabinet, 'National Security', Australian Government (Webpage) <<https://www.pmc.gov.au/national-security>>.

³⁷ Australian Government, 'Australian National Security', (Webpage) <<https://www.nationalsecurity.gov.au/WhatAustraliaIsDoing/Pages/default.aspx>>.

³⁸ The Hon. Kevin Rudd MP, 'House of Representatives National Security Speech', Commonwealth of Australia (4 December 2008) <https://parlinfo.aph.gov.au/parlInfo/genpdf/chamber/hansardr/2008-12-04/0045/hansard_frag.pdf;fileType=application%2Fpdf>..

³⁹ The Hon. Kevin Rudd MP, 'House of Representatives National Security Speech', Commonwealth of Australia (4 December 2008) <https://parlinfo.aph.gov.au/parlInfo/genpdf/chamber/hansardr/2008-12-04/0045/hansard_frag.pdf;fileType=application%2Fpdf>..

⁴⁰ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 2.

⁴¹ Samuel Bashfield, 'Australia Needs a New National Security Strategy', The Diplomat (Article, 1 February 2019) <<https://thediplomat.com/2019/02/australia-needs-a-new-national-security-strategy/>>.

⁴² Samuel Bashfield, 'Australia Needs a New National Security Strategy', The Diplomat (Article, 1 February 2019) <<https://thediplomat.com/2019/02/australia-needs-a-new-national-security-strategy/>>..

and shapes the world in Australia's interest',⁴³ and defined national security as 'a board and evolving concept, which concerns environment, and prevention and preparation for, and the response to, threat to people, assets, infrastructure and institutions'.⁴⁴ Whilst the National Security Strategy acknowledged that 'there is a mutually reinforcing link between our national security and our economic wellbeing',⁴⁵ and that our Australian Defence Force assets 'could be used to assist ... to respond to natural disasters',⁴⁶ climate change (or the effects of climate change) was not recognised as a pillar reflecting the evolution of Australia's national environment.⁴⁷ This is despite the 2008 National Security Statement, which identified climate change as threat to national security.⁴⁸ Moreover, whilst the National Security Strategy acknowledged the existence of the National Strategy for Disaster Resilience which was developed by the Council of Australian Governments (**COAG**) in 2011 for the purposes of implementing a 'national, coordinated and cooperative effort' to 'enhance Australia's capacity to withstand and recover from emergencies and disasters',⁴⁹ it was only referred to in the context of building 'disaster resilient communities',⁵⁰ and did not allude to climate change as an immediate risk factor for Australia. Rather, climate change was listed as a broader global challenge with the potential for 'longer term national security implications', through 'the increase in frequency and severity of natural disasters, compounded by competition over scarce natural resources', which 'may contribute to instability and tension around the globe'.⁵¹

In 2016, the Department of Defence, released the 2016 Defence White Paper (the **Paper**), which explained how the Australian Government 'is investing in Australia's defence capabilities to strengthen Australia's security in the more complex strategic environment Australia will face in the years ahead'.⁵² Whilst climate change is identified in the Paper as being attributable to state fragility, and despite the ADF's recognition of climate change as a national security threat; it is only in the context of states within Australia's immediate neighbourhood (such as the Indo-Pacific Region) which the Department of Defence considers will be impacted by 'uneven economic growth, crime, social, environmental and

⁴³ Department of Prime Minister and Cabinet, 'Strong and Secure - A Strategy for Australia's National Security', Commonwealth of Australia (Report) 2013, 5.

⁴⁴ Caitlin McConnel, 'Critical Human Water Needs: Failing to Comply with the Objects of the Water Act and Human Rights Obligations', (2019) 36 *Environmental and Planning Law Journal* 212, 218.

⁴⁵ Department of Prime Minister and Cabinet, 'Strong and Secure - A Strategy for Australia's National Security', Commonwealth of Australia (Report) 2013, 4.

⁴⁶ Department of Prime Minister and Cabinet, 'Strong and Secure - A Strategy for Australia's National Security', Commonwealth of Australia (Report) 2013, 5.

⁴⁷ Department of Prime Minister and Cabinet, 'Strong and Secure - A Strategy for Australia's National Security', Commonwealth of Australia (Report) 2013, 15.

⁴⁸ The Hon. Kevin Rudd MP, 'House of Representatives National Security Speech', Commonwealth of Australia (4 December 2008) <https://parlinfo.aph.gov.au/parlInfo/genpdf/chamber/hansardr/2008-12-04/0045/hansard_fraq.pdf.fileType=application%2Fpdf>..

⁴⁹ Council of Australian Governments (COAG), 'National Strategy for Disaster Resilience', Commonwealth of Australia (Strategy Paper) February 2011, v.

⁵⁰ Department of Prime Minister and Cabinet, 'Strong and Secure - A Strategy for Australia's National Security', Commonwealth of Australia (Report) 2013, 21.

⁵¹ Department of Prime Minister and Cabinet, 'Strong and Secure - A Strategy for Australia's National Security', Commonwealth of Australia (Report) 2013, 31.

⁵² Department of Defence, '2016 Defence White Paper', Commonwealth of Australia (Report) 2016, 13.

governance challenges and climate change', and not, according to the Paper, Australia.⁵³ Moreover, whilst the Paper denotes that 'climate change will see higher temperatures, increased sea-level rise and will increase the frequency and intensity of extreme weather events', the consequences such as environmental degradation and food shortages are identified as challenges only applicable to countries 'in Australia's immediate region',⁵⁴ and again, according to the Paper, not Australia. Indeed, in the Paper the only impact in the context of climate change is identified as being that sea level rises and more extreme weather events will put ADF 'facilities at risk of damage'.⁵⁵

B. Enquiry into Australia's National Security

In May 2018, the Senate conducted an inquiry into the implications of climate change on Australia's national security (**2018 Senate Inquiry**), in circumstances where countries such as the United States of America and the United Kingdom have overtaken Australia 'comprehensively in terms of including climate change priorities in national security'.⁵⁶

Significantly, the 2018 Senate Inquiry recognised that climate change is a 'current and existential national security risk' affecting the Australian community and economy.⁵⁷ The threats to Australia's national security were identified as being:

- (a) extreme weather and physical effects, including recurring and longer fire seasons;⁵⁸
- (b) the risk of physical and mental illness, infectious diseases, and death due to exposure to the increased intensity, duration and frequency of extreme weather events,⁵⁹ as well as aeroallergens and air pollution;⁶⁰
- (c) food and water security through the reduction of available water sources and agricultural production,⁶¹ which could lead to social and political unrest;⁶²

⁵³ Department of Defence, '2016 Defence White Paper', Commonwealth of Australia (Report) 2016, 41.

⁵⁴ Department of Defence, '2016 Defence White Paper', Commonwealth of Australia (Report) 2016, 56.

⁵⁵ Department of Defence, '2016 Defence White Paper', Commonwealth of Australia (Report) 2016, 102.

⁵⁶ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 30.

⁵⁷ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 9.

⁵⁸ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 11 - 12.

⁵⁹ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 13 - 14.

⁶⁰ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 14.

⁶¹ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 14.

⁶² The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 17.

- (d) direct damage to the economy through climate change litigation, direct damage to assets and the collapse of markets;⁶³ and
- (e) climate-related displacement which could directly affect Australia's ability to manage and control its border and migration,⁶⁴ and could also lead to conflict.⁶⁵

Through consideration of the opportunities for improvement to Australia's approach to national security in light of climate change, the 2018 Senate Inquiry identified 11 recommendations to increase national resilience, which relevantly included the following:

- (a) that the Commonwealth Government develop a climate security white paper to guide a whole of government response to climate change risks;⁶⁶
- (b) that the Commonwealth Government consider the need for a dedicated climate security leadership position in the Home Affairs portfolio to facilitate coordination on climate resilience issues, including disaster risk reduction, infrastructure planning, community health and well-being, and emergency management;⁶⁷
- (c) that the Department of Defence consider the need for a senior leadership position to assist in planning and managing the delivery of domestic and international humanitarian assistance and disaster relief;⁶⁸ and
- (d) that the Commonwealth Government review the National Partnership Agreement on Natural Disaster Resilience (entered into in 2009 for the purposes of developing the National Disaster Resilience Framework).⁶⁹

As aforementioned, and in the same year at the 2018 Senate Inquiry, the Department of Home Affairs released the National Disaster Risk Reduction Framework (the **NDRRF**), which could arguably be described as a review into the National Partnership Agreement on Natural Disaster Resilience, in circumstances where it draws upon the NDRS, whilst also implementing the first three priorities of the Sendai Framework.

⁶³ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 15.

⁶⁴ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 22.

⁶⁵ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 25.

⁶⁶ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 92 - 93.

⁶⁷ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 95.

⁶⁸ Ibid.

⁶⁹ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 96 - 97.

The NDRRF vision is for all sectors of Australian society to make disaster risk-informed decisions; be accountable for reducing risks within their control; and invest in reducing disaster risk.⁷⁰ To do so, the NDRRF provides 4 priorities for the purposes of taking action in Australia to reduce disaster risk,⁷¹ and then provides detailed examples of the recommended actions to be taken in accordance with each priority. Arguably, the following recommended actions have the potential to impact national security, or at the very least demonstrate how natural disasters data or planning could - and should - intertwine with national security strategy:

- (a) understand disaster risk through the identification of data, information and resource gaps pertaining to climate change impacts on natural disasters;
- (b) make accountable decisions through the identification of the highest priority disaster risks and mitigation opportunities, whilst also maintaining planning and development practices that adapt to rapid social, economic, environmental and cultural change;
- (c) enhanced investment through the identification of current and future potential income and funding streams; and
- (d) the establishment of clear government pathways and responsibility for the pursuit of disaster reduction projects.

The NDRFF did not, however, recognise in any way the explicit threats to Australia's national security as identified by the 2018 Senate Inquiry which can be linked to natural disasters, namely:

- (a) that extreme weather and the physical effects of climate change are resulting in longer fire seasons;⁷²
- (b) the natural disasters increase the risk of physical and mental illness, infectious diseases, and death,⁷³ as well as aeroallergens and air pollution;⁷⁴

⁷⁰ Department of Home Affairs, 'National Disaster Risk Reduction Framework' (Framework) 2018, 8.

⁷¹ Department of Home Affairs, 'National Disaster Risk Reduction Framework' (Framework) 2018, 8.

⁷² The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 11 - 12.

⁷³ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 13 - 14.

⁷⁴ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 14.

- (c) that food and water security is compromised through the reduction of available water sources and agricultural production,⁷⁵ which could lead to social and political unrest;⁷⁶
- (d) that there is direct damage to the economy, through damage to assets and the collapse of markets;⁷⁷ and
- (e) that displacement could directly affect Australia's ability to manage migration.⁷⁸

6. Evaluation

Despite Australia's long-standing awareness and experiences with natural disasters, and the effect they have on its society, economic and environment; as well as its acknowledgement that climate change is increasing the severity of such natural disasters (arguably since its adoption of the UNFCCC in 1992), it is concerning that Australia's strategy for the protection of critical infrastructure is largely silent as to the impact of climate risks and national disasters, and fail to adequately consider the impact food and water insecurity could have on our national security.

This is despite the Australian Strategic Policy Institute advising over 10 years ago that the physical effects of climate change will increase water shortages, increase health problems, damage property and damage critical infrastructure and food and fibre production.⁷⁹ All impacts of which, have been identified as a national security risk in the 2018 Senate Inquiry, in circumstances where all Australian's are increasingly vulnerable to the impact of natural disasters due to the 'increasing complexity and interdependencies of social, technical and infrastructure systems'.⁸⁰

The *Security of Critical Infrastructure Act 2019* (Cth) seeks to manage the complex and evolving national security risks of sabotage, espionage and coercion posed by foreign involvement in Australia's critical infrastructure. In circumstances where food and water security, and the very infrastructure of supply chains which underpin those resources, have a direct link to national security; the Department should ensure that any enhanced framework considers how climate risk, national disasters or food and water

⁷⁵ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 14.

⁷⁶ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 17.

⁷⁷ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 15.

⁷⁸ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 22.

⁷⁹ The Senate Foreign Affairs, Defence and Trade References Committee, 'Implication of climate change for Australia's National Security', Australian Government (Report), May 2018, 13.

⁸⁰ Council of Australian Governments (COAG), 'National Strategy for Disaster Resilience', Commonwealth of Australia (Strategy Paper) February 2011, 1.

insecurity could heighten national security risks (including through sabotage or investment). This is particularly in circumstances where:

- (a) similar western countries, including the United Kingdom have adopted national security strategies which acknowledge and plan for the impacts on its national security, including climate change,⁸¹ natural disasters,⁸² and water security;
- (a) despite Australia's national security focus being on terrorism, extremism and cyber security, Australia's critical infrastructure assets are defined in s 9 of the *Security of Critical Infrastructure Act 2018* (Cth) (**SCI Act**) already extend to assets pertaining to water;
- (b) the NDRRF has identified that Australian's are highly depended upon essential services such as food and water, which are all interconnected and interdependent; and susceptible to the impacts of climate risks and natural disasters; and
- (c) as climate risks and natural disasters become more prevalent globally, Australia is the 11th largest agricultural exporting country in the world, will become susceptible to national security risks including sabotage, coercion or unbeneficial foreign investment.

⁸¹ HM Government, 'National Security Strategy and Strategic Defence and Security Review 2015', (Report) November 2015, 65.

⁸² HM Government, 'National Security Strategy and Strategic Defence and Security Review 2015', (Report) November 2015, 21.