



## **Submission by The Center for Climate and Security**

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To:

**Australian Senate – Foreign Affairs, Defence and Trade Committee**

## **INQUIRY INTO THE IMPLICATIONS OF CLIMATE CHANGE FOR AUSTRALIA'S NATIONAL SECURITY**

### **Summary**

Climate change will fundamentally reshape the geophysical, geopolitical and security realities in the Asia-Pacific region. This high-probability, high-impact threat will exacerbate existing security challenges for Australia, and create new ones, particularly in the fragile Asia-Pacific neighbourhood. Australia's ability to protect its own national security and promote stability in the region will become increasingly difficult as the impacts of climate change accelerate in the coming decades.

Along with its counterparts in the United States, the Australian Department of Defence (DoD) has recognized these risks for almost a decade. To help shape a more stable regional security environment, the Australian Government must heed the warnings of the DoD and take more robust, whole-of-nation actions. This includes incorporating climate change risks more fully into its national security policies, plans and programs.

To that end, The Center for Climate and Security offers the following 10 recommendations:

**Recommendation 1. Elevate leadership on climate and security.** Prioritise climate security within existing [regional architecture](#); support second-track institutions that underpin this architecture to further examine climate security impacts; assign a Departmental Secretary to assume a publicly visible leadership role on climate security; designate a senior Climate Change and Security Lead within DoD; create a Climate and Security Office within the Department of Foreign Affairs and Trade.

**Recommendation 2. Publish a White Paper on the National Security Implications of Climate Change,** an overarching document to guide security agency responses to climate change.

**Recommendation 3. Deepen and further consider climate and security risks in national strategies** including the Defence White Paper series, Defence Planning Guidance and accompanying strategic threat assessments, Defence infrastructure and capability planning and all appropriate classified guidance documents.

**Recommendation 4. Improve the capacity to absorb climate and security information** collect, integrate, analyse, and disseminate climate change information, including data from both the physical and social sciences. Develop actionable intelligence in the Australian Intelligence Community.

**Recommendation 5. Continue to enhance the resilience of military infrastructure,** updating and identifying climate and sea level rise vulnerabilities.

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**Recommendation 6. Enhance staff capacity on climate change and security**, ensuring that the leadership and staffs of relevant departments and agencies have the capacity and resources to address the climate-security nexus.

**Recommendation 7. Match strategies and plans with budgetary support.** Annually conduct a cross-cut budget review and establish specific budget lines within the Department of Foreign Affairs and Trade (including AusAid) and the DoD.

**Recommendation 8. Continue to build capacity for proactive vs. reactive climate security risk management**, e.g. through DoD's web based climate and disaster preparedness collaboration platform, Analytic Exchange Edge (Edge).

**Recommendation 9. Integrate climate and security risks into security assistance programs.** Direct the ADF to coordinate with PM&C, DFAT, AGs, the Australian Federal Police and relevant intelligence agencies to fully integrate climate into the training, equipment, and other resources that will assist partner nations.

**Recommendation 10. Advance climate and security education** by incorporating climate and security and environmental security topics into the course offerings of defence sector educational institutions.

## **Introduction**

[The Center for Climate and Security](#) (CCS) is a non-partisan security policy institute with a distinguished Advisory Board of military and security experts. CCS envisions a climate-resilient international security landscape: this is a world which recognizes that climate change threats to international security are significant and unprecedented, and acts to **address those threats in a manner that is commensurate to their scale, consequence and probability**. To further this goal, CCS facilitates policy development processes and dialogues, provides analysis, conducts research, and acts as a resource hub in the climate and security field (see [ClimateSecurity101.org](#)). CCS is based in Washington DC but operates internationally, running the Climate Security Working Group – Asia-Pacific, which includes key members of the Australian climate security community of practice.

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## **Climate impacts on security dynamics in the Asia-Pacific**

The Asia-Pacific is one of the most climate-vulnerable regions of the world. Climatic changes will likely drive insecurity and instability in the region. Extreme hydro-meteorological events will continue to increase in frequency and severity, leading to deep and prolonged droughts, storms and flooding; changing precipitation patterns will negatively impact crop productivity and food security; sea level rise will continue to amplify the destructive power of storms and damage coastal infrastructure, including vital economic infrastructure; ocean acidification and warming will adversely affecting marine food resources, driving already-depleted fish stocks away from populations who rely on them as a primary source of protein; extreme heat events and changing disease vectors will affect human and animal health.

**These geophysical impacts will have geoeconomic, geopolitical and security consequences.** Climate stressors, in the context of other ongoing challenges including poverty, rapid population growth, urbanisation, weak governance and institutions and the legacy of violent conflict will drive periods of fragility and pockets of fragility<sup>i</sup> within Asia-Pacific countries. These risks are acutely present for states that already struggle with these challenges, and **climate impacts are likely to generate stresses in new places and in new ways.** These situations could scale up into state failure and exacerbate the drivers of conflict, and could also weaken governments' territorial control and strengthen non-state armed groups.<sup>ii</sup>

The tertiary and higher-order security impacts of climate change in the Asia-Pacific are beginning to be explored in greater detail, but **there are many unknowns that could emerge in surprising ways** to affect Australia's security in the near- to medium-term. For example, governments turning to nuclear energy to meet their GHG mitigation targets increases the risks surrounding the proliferation of nuclear technologies to weak and unstable governments. Climate change will alter dynamics in China's relationships with its neighbours, potentially increasing conflicts over disputed maritime boundary delimitations as sea levels rise, and with riparian states on Himalayan river systems. Tensions between Australia and its neighbours may increase as a deteriorating regional economic and security situation drives more migrants and asylum-seekers to Australia. To avoid these tensions, to enhance Australia's partnerships with nations in the Asia-Pacific and to ensure that adversaries do not take advantage of climate-induced instability to increase their power and influence, Australia should do as much as it can to address these risks, both preventively and responsively.

Paradoxically, climate change **also presents new opportunities for nations to work together** in a collaborative fashion. Disaster-relief, capacity building and technology exchanges (especially around environmental monitoring tools), for example, are areas where the region's militaries can come together to play a central role. With the abatement of US international climate leadership, opportunities await those nations willing to put themselves forward.

Moreover, as both a regional and middle-power, Australia has a vested interest to provide foreign aid and investment commensurate with its status; targeted initiatives that strengthen the resilience of vulnerable nations to climate change. Capacity building measures in this form serve to build new relationships, strengthen existing alliances and reduce the risks of instability.

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## Climate security impacts for Australia

### The role of both humanitarian and military response in addressing climate change, and the means by which these responses are implemented

Climate change will impact ADF readiness, operations and strategy. It will change the nature of ADF operations, increasing demand for humanitarian assistance and disaster response (HADR) operations. This may impose downstream changes; from what type of equipment and capability the ADF uses and procures, to **'how' and for 'what' the ADF trains**. Through time, these facets may alter the actual force structure of the ADF, or as a minimum, increase inter-operability requirements with domestic and regional emergency services. Climate change may also **generate more and new types of complex emergencies**, which blend frequent and/or prolonged natural disasters, humanitarian crises, progressively weakened state capacities, insecurity and armed violence. ADF capacity may be strained as climate change generates multiple disasters of sufficient magnitude in geographically separate locations: cyclones in the South Pacific, floods in Queensland and bushfires and drought in the south-east and west. It is, what the military call, **the risk of 'simultaneity'**. The trajectory of existing ADF commitments, such as those in Afghanistan, may also be impacted as climate variability impacts water security, agriculture, development efforts, livelihood options and the strength of nonstate armed groups in that country. Managing these risks will involve a greater need for both mil-mil and civ-mil cooperation between Australia and its partner nations.

### The capacity and preparedness of Australia's relevant national security agencies to respond to climate change risks in our region

The Center for Climate and Security (CCS) recognizes that consistent with the U.S. Department of Defense, Australia's national security agencies, including the Australian Department of Defense (DoD), have **recognized the security implications of climate change** in a number of key documents. This has manifested itself most recently in a [2016 Australian DoD White Paper](#), wherein climate change was identified as a contributor to state fragility - one of "six key drivers" in the "development of Australia's security environment to 2035." In the same document, climate change was identified as a "major challenge for countries in Australia's immediate region." In addition to concerns regarding geostrategic consequences, the White Paper also highlighted climate change risks to military infrastructure, noting: "Climate change will also place pressure on the Defence estate, with sea level rises having implications for Navy bases and more extreme weather events more frequently putting facilities at risk of damage."

The DoD White Paper built on attention to this issue from Australia's national security agencies stretching back to at least 2009. This includes:

2013: [Strong and Secure – A Strategy for Australia's National Security](#)

2013: [Defence White Paper](#)

2009: Defence White Paper, [Defending Australia in the Asia Pacific Century: Force 2030](#)

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These are strong starts. **Non-traditional security threats however—including climate change—still remain underexplored and that has left Australian security agencies under-prepared.** However, given the DoD's recognition of the significance of climate change risks to its operating environment and the Defence Estate, as well as overwhelming evidence in the scientific consensus, it is clear that this particular risk requires a more robust, whole-of-government approach. This approach should build on the example of the U.S. DoD, which has a long history of addressing climate change risks [stretching back to 2003](#), and who [continues that approach](#) in the current Administration under the leadership of Secretary of Defense James Mattis, and other senior officials across the Department. One recommendation for furthering a national and whole-of government approach is for the Australian Government to **publish a White Paper** on the National Security Implications of Climate Change. This could serve as an over-arching document to guide the security agencies' responses and communicate the risks to the public.

In addition, Australia's security agencies could improve the mechanisms to share knowledge of climate risks. This could be aided by a forum that pulls together the key agencies to collaborate on climate security matters and informs them on the latest science. Secondly, research on climate security matters can be enhanced to aid strategy development and prioritization. Thirdly, the security agencies can play a more visible and proactive role in the public discourse surrounding climate change. In short, climate risks to security are a community and social problem that requires transparency, engagement and stimulation. Security agencies have a significant role to play in expanding the base of the knowledge generated from a deep well of expertise. Lastly, as a non-traditional security issue, climate change could be better integrated into Defence strategic planning cycles. It remains, for example, **not fully incorporated into the ADF strategic threat assessments process, nor in infrastructure and capability assessments, in force structure planning, force posture reviews and is inadequately integrated into energy security planning.** Overall, climate change remains to be fully accepted as a mainstream risk sufficient to become part-and-parcel of ADF operational and strategic planning. If the ADF and the respective security agencies at large are to be sufficiently prepared and have capacity to deal with regional climate risks, then homefront changes are urgently required.

### **The role of Australia's overseas development assistance in addressing climate security risks**

CCS recognizes that Australia's broader development assistance contributions in the area of climate change mitigation and adaptation, including Prime Minister Turnbull's pledged A\$300 million to Pacific countries (2015-2020) to help them build climate resilience, is likely to play an **important role in supporting regional security.** In addition to the A\$200 million commitment to the Green Climate Fund, example projects include helping the Pacific better understand climate impacts through investment in science and adaptation planning and support to national weather and climate services in 14 Pacific countries (\$39.8 million until June 2018); improved forecasting and reporting on climate, tides and the ocean as well as targeted information on drought conditions, water storages, and malaria and other health risks; increased participation of Pacific women in climate-related decision-making processes (\$0.6 million in 2015–2017); and contributions to the Climate Risk Early Warning System, a global initiative to help protect lives and livelihoods in Small Island and Least Developed Countries (\$5 million over four years from 2016 to 2020).<sup>iii</sup>

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While these efforts are to be applauded, Australia can continue to find additional opportunities to hedge against the indirect security risks climate change can accelerate. Its aid budget is a good example. As the Lowy Institute affirms: the 2016/17 federal budget cut aid by \$224 million (6<sup>th</sup> largest cut ever), which came atop of the largest ever single-year cuts in 2015-16 (aid was cut by 20%, roughly A\$1 billion). A decision to peg aid to the rate of inflation will also see a real-term decline in aid, even as Australia's economy is forecast to grow. In addition, there appears to be some confusion as to whether the climate funds will portend cuts in other areas of aid. Lastly, Australia has slashed its aid to more distant countries (sub-Saharan Africa by 70%, Middle East by 43% and Asia by 40%).<sup>iv</sup> While these are decisions that each country must make, there is merit in re-examining this in the context of climate change and its attendant security risks. Reduction in foreign aid programs (especially those designed to help vulnerable nations prepare for climate risks) serve to increase the likelihood that that **some states may become more fragile and potentially an incubator of local, regional and global instability.**

### **The role of climate mitigation policies in reducing national security risks**

Effective climate mitigation policies are essential to reducing the national security risks posed by climate change. While climate mitigation is often viewed through an economic or 'energy-security' lens, we at CCS argue that climate mitigation must also be considered in terms of its contribution to national security. The premise is simple: policies that reduce greenhouse gas emissions will diminish the likelihood and severity of climate risks. *Ipsa facto*, policies that reduce climate risk, are likely to enhance security.

### **Recommendations**

Given these challenges, CCS proposes the following 10 key actions the Australian Government can take in the near term to ensure that the nation and region are resilient to the security implications of a changing climate:

**Recommendation 1. Elevate leadership on climate and security.** Five key actions that Australia can do to extend their leadership:

1. Prioritise climate security within existing [regional architecture](#) including the ASEAN, ASEAN Regional Forum, East Asia Summit, Asia-Pacific Roundtable, Jakarta and Seoul Defence Dialogues, and other regional security fora.
2. Support second-track institutions that underpin this architecture to further examine climate security impacts on the region, including the Council for Security Cooperation in the Asia-Pacific, ASEAN Institute of Strategic Studies, and [others](#).
3. Assign a Departmental Secretary to assume a publicly visible leadership role on domestic and regional climate change and security issues. This position would coordinate directly with the Prime Minister, the National Security Committee of Cabinet, and the leadership and staffs of relevant departments and agencies. These would include but not be limited to Department of Prime Minister and Cabinet, Department of Foreign Affairs and Trade, Department of Immigration and Border Protection, the Attorney-General's Department, CSIRO, BoM and the Department of Defence (DoD). This post would amplify the existing work of the Secretaries Group on Climate Risk, currently led by the Secretary of the Department of the Environment and Energy. In conjunction, consideration should be given to:
4. Within the **Department of Defence**, designate a senior Climate Change and Security Lead and appropriately staffed office to cover all aspects of climate change and security risks (infrastructural,

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operational and strategic), including how those risks interact with other security priorities. A natural fit for this position would be Head Force Design within Vice Chief of Defence Force Group, responsible amongst other things for ADF preparedness and future force design.

5. Within the **Department of Foreign Affairs and Trade**, create a Climate and Security Office. This Office would promote inter-departmental integration of climate change and security concerns, working with international partners and embassies on climate change and security issues

**Recommendation 2. Publish a White Paper on the National Security Implications of Climate Change.** The Australian Government should build on existing efforts and publish a White Paper on the national security implications of climate change. This would act as an overarching document to guide security agency responses to climate change. The report would: a. establish the basis and context of the climate security risks to Australia and the region; b. identify the key agencies and their roles to deal with climate risks in a more coordinated, systemic and strategic fashion; c. synthesize the national security effort into a whole-of-nation and whole-of-region framework; and d. clearly communicate the security risks to the Australian public.

This latter point is crucial in developing national awareness and knowledge of the risks. Relatedly, and similar to what has already occurred in the US, the Australian government should de-classify and release existing intelligence community reports on the threat of climate change (specifically those developed by the Office of National Assessments). Likewise, the Department of Defence should release recent modelling on climate change impacts to humanitarian and disaster relief missions, frequency, location, scale and duration as well as analysis of sea-level rise impacts to base infrastructure.

**Recommendation 3. Deepen and further consider climate and security risks in national strategies.** Direct the continued consideration of the full range of climate change projections and associated risks in all future national strategic documents, including the Defence White Paper series, Defence Planning Guidance and accompanying strategic threat assessments, Defence infrastructure and capability planning, and all appropriate classified guidance documents. In addition, the ADF should build upon this work and, like the US DoD, publish a Climate Adaptation Roadmap and accompanying emissions reduction strategy that mitigates the effects of climate change.

**Recommendation 4. Improve the capacity to absorb climate and security information.** Enhance the capacity of the Australian government to collect, integrate, analyse, and disseminate climate change information, including the creation of a central government-wide climate change information repository for consolidating and assessing multiple climate forecasts and associated risks (including data from both the physical and social sciences). In this context, the Government should reconsider axing the National Climate Change Adaptation Research Facility (NCCARF) that provides advice on climate risks, and potentially re-role the program with a focus on strategy, policy advice and tools to address climate change security risks.

Part of this is developing actionable intelligence in the Australian Intelligence Community: increasing understanding of factors linking climate events to outcomes of security concern, and generating greater granularity at the national and subnational levels to support the provision of actionable intelligence on climate-related security risks, especially in the near to mid-term.

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**Recommendation 5. Continue to enhance the resilience of military infrastructure.** Continue to build on existing work by updating and identifying climate and sea level rise vulnerabilities to infrastructure that will reduce DoD's ability to generate and sustain military readiness, and invest in required adaptation. Within reason, ADF climate vulnerabilities should be socialised with community groups, local councils, business, as well as state governments, to ensure comprehensive and transparent approaches to adaptation.

**Recommendation 6. Enhance staff capacity on climate change and security.** Ensure that the leadership and staffs of relevant departments and agencies (listed above) have the capacity and resources to address the climate-security nexus within their scope of responsibilities. As the largest of the security agencies and the one carrying most risk, the AS DoD and ADF should be provided the guidance, tools, training and resources they need to address climate change risks.

**Recommendation 7. Match strategies and plans with budgetary support.** Annually conduct a cross-cut budget review as required to ensure the adequacy of agency budget requests relating to identifying and responding to the security risks posed by climate change, as well as identify and address associated budgetary gaps and duplications. Establish specific budget lines within the Department of Foreign Affairs and Trade (including AusAid) and the DoD for developing plans, tools and strategies to support conflict prevention programs in at risk countries and regions.

**Recommendation 8. Continue to build capacity for proactive vs. reactive climate security risk management** through e.g. DoD's web based climate and disaster preparedness collaboration platform, Analytic Exchange Edge (Edge). Edge will facilitate collaboration on shared climate and disaster preparedness problems between Government, academic and private sector organisations.

**Recommendation 9. Integrate climate and security risks into security assistance programs.** Direct the ADF to coordinate with PM&C, DFAT, AGs, the Australian Federal Police and relevant intelligence agencies on measures to fully integrate within the overall security assistance programs the training, equipment, and other resources that will assist partner nations in strengthening their capacity to protect key defence installations and infrastructure and to respond to and provide assistance to civil authorities in disaster risk reduction and response actions.

**Recommendation 10. Advance climate and security education. Incorporate climate and security and environmental security topics** into the course offerings of defence sector educational institutions to enhance understanding among Australian and partner-nation military officers of the effects of climate change on military strategy, operations, operational energy, installations, and readiness.

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<sup>i</sup> Lukas Rüttinger, Gerald Stang, Dan Smith, Dennis Tänzler, Janani Vivekananda, et al., "A New Climate for Peace – Taking Action on Climate and Fragility Risks", Berlin/London/Washington/Paris: adelphi 2015, International Alert, Wilson Center, EUISS. Accessed at <https://www.newclimateforpeace.org/>.

<sup>ii</sup> Katharina Nett and Lukas Rüttinger, "Insurgency, Terrorism and Organised Crime in a Warming Climate. Analysing the Links Between Climate Change and Non-State Armed Groups," 2016, adelphi. Accessed at <https://www.adelphi.de/en/publication/insurgency-terrorism-and-organised-crime-warming-climate>.

<sup>iii</sup> DFAT. 2017. "Overview of Australia's assistance for climate change." Australian Government, accessed 1 August. <http://dfat.gov.au/aid/topics/investment-priorities/building-resilience/climate-change/Pages/climate-change.aspx>.

<sup>iv</sup> Lowy Institute. 2017. "The State of Australian Aid." Lowy Institute, accessed 1 August. <https://www.lowyinstitute.org/issues/australian-foreign-aid>.