

SPECIAL REPORT

Snapshot in a turbulent time
Australian HADR capabilities, challenges
and opportunities



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About the author

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Cover image: Australian Aid relief supplies are unloaded from a Royal Australian Air Force C-130J Hercules aircraft at the Beirut International Airport. Source: Defence image library, [online](#).

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Executive summary

Australia has demonstrated the capacity and capabilities for fast, scalable responses to disasters and humanitarian crises in recent history. Australian governments, agencies, NGOs and the public have proven determined and flexible in both domestic and regional disasters and humanitarian crises.

Looking forward, Australia's established capabilities are facing new and growing challenges in disaster preparedness and response. The Indo-Pacific is facing a complex network of established, evolving and intersecting climate, conflict and human-security risks.

Without innovation in strategy and capabilities, the financial cost of regional disasters will continue to vastly outpace the capacity of Australia to fund preparedness and response efforts comprehensively enough to mitigate the human and strategic security risks those disasters pose.¹

Australia's humanitarian assistance and disaster resilience (HADR) strategies need to consider how to increase capacities for speed, coordination, communication, agility, flexibility, mobility and capability by making better use of the resources already allocated to organisations involved in HADR work, and so that any additional funding has maximum impact.

In addition to maintaining the necessary crisis response capacity regionally and at home, Australia needs to build greater regional preparedness (capacity to endure) and resilience (capacity to recover from) the natural disasters that are coming and the cascading risks they'll bring. This report considers lessons learned during domestic and regional disaster responses but focuses on Australia's HADR capabilities and capacity to respond and mitigate risks through building preparedness and resilience regionally.

This is a challenging threatscape to prepare and respond to.

This report presents a snapshot view of the current Indo-Pacific threatscape looking forward for Australia; takes a retrospective look at how key Australian HADR capabilities have been developed through lessons from domestic and regional disasters; considers the possible value in a strategy for what value-add northern Australia can bring to national HADR capabilities; and presents three areas of 'low-hanging fruit' for HADR capability uplift.

The problem

Australia and Australians are adept at banding together in times of crisis, whether facing fires, floods or droughts. As a nation, from government agencies to civil society and community spirit, we have developed the kind of response frameworks that are all about pulling together at times of emergency. Australia's contemporary humanitarian assistance and disaster resilience (HADR) strategies have understandably been developed in response to lessons from disaster events and Australia's responses in recent history against this philosophy of 'we're all in this together'. In a practical sense, Emergency Management Australia (EMA), a division of the Home Affairs Department, delivers 'programs, policies and services that strengthen Australia's national security and emergency management capability'.² To do that, the Australian emergency-management architecture and arrangements (including but not limited to EMA³), draws on lessons learned from a range of humanitarian crises both in Australia and in the Indo-Pacific region, such as Cyclone Tracy (1974), the Bali bombings (2002) and the Indian Ocean (including Banda Aceh) tsunami (2004), the more recent events of the Australia bushfires (2019–20) and the many impacts—domestic and regional—of Covid-19 (2020–present).

Evolving national arrangements have been shaped by arguably less than stellar performances in response to some major disasters, an evolving regional risk context, the established importance of preparedness and a need for great regional cooperation and support. The last has become particularly pressing as the region reels from Covid-19 for a second year.

The Indo-Pacific region is experiencing a range of new political, economic, environmental and security trends. New challenges and established trends are converging and compounding to present risks, threats and vulnerabilities to which Australia's established HADR strategies aren't optimally adapted.

Australia's security, stability and prosperity are of course intimately linked to that of our region. Australia is invested in the security, stability and prosperity of our close neighbours. As the challenges from existing natural disaster hazards continue and are compounded by the effects of climate change, HADR demands in our near region will escalate, and do so in ways that current approaches will struggle to match. So, it's a simple national interest to recognise that a changed approach to HADR by Australia that increases our flexibility and capacity domestically and regionally is needed to support our own and our near region's wellbeing, prosperity and security.

Being good at coming together during times of emergency is no longer an adequate strategic 'insurance policy'.

Australia is set to face more frequent, complex and geographically dispersed claims against this 'policy' locally and in the Indo-Pacific, most notably because we and our Southeast Asian and South Pacific regional partners are living in the part of the globe that, while already prone to natural disasters, is a focal point for climate-change-induced disasters. Those regional relationships mean that Australian capabilities will be drawn on by our regional partners in this difficult future.

Aim and methodology

In this report, I aim to identify opportunities for innovation in Australian HADR strategy and capabilities in order to increase the impact of Australian efforts to build disaster preparedness and resilience in the Indo-Pacific region.

The report takes a qualitative approach to assess the projected regional strategic environment against current HADR capacity and capabilities in Australia. Based on that assessment, it identifies opportunities to increase the impact of Australian HADR efforts.

To that end, this report:

- presents a snapshot view of the current Indo-Pacific threatscape, looking forward for Australia, in order to understand the enduring trends and new challenges Australian HADR strategy, capacity and capabilities are facing
- examines how key Australian HADR capabilities have been developed through lessons from domestic and regional disasters in recent history, beginning with Cyclone Tracy (1974), in order to identify some key strengths and innovations of Australia in this field
- considers Australia's strategic geography, a key part of which is the physical and cultural proximity of our north to our regional neighbours, and whether a strategy for the north could increase national-level HADR capabilities
- presents three areas of 'low-hanging fruit' in terms of opportunities for innovation and uplift in HADR capabilities and strategy (strategy and innovation, regional engagement and resources); these options encourage the pursuit of a more integrated and preparedness-focused approach to HADR.

The three areas include six options that consider, where appropriate, ways for the north to better serve national efforts as a gateway and hub for resources, innovation and regional engagement. This isn't an exhaustive list of opportunities, but rather an examination of 'doing more with what we have' that focuses on one area of Australia because that area is within the Indo-Pacific region and shares a similar rate of disaster vulnerability. The scope of this report can't include a comprehensive listing of all geographical options.

Nor does this report suggest that these opportunities are a comprehensive response to mitigate the threats Australia faces. Rather, these ideas are presented as 'low-hanging fruit' options to increase Australian HADR impact in the short term with minimal increases in spending by leveraging existing connections and capabilities to greater effect.

Looking forward: Established capabilities meet new and growing challenges

This section draws on recent disaster events and credible forecasts of global trends affecting the Indo-Pacific region to understand the established, changing and intersecting challenges to which Australian HADR strategies will need to respond in future.

The Indo-Pacific is facing a complex network of established, evolving and intersecting security challenges. The future strategic environment involves a shifting threat spectrum to which Australian HADR strategies will need to respond.

The 2021 report of the Intergovernmental Panel on Climate Change (IPCC) found that *climate change* is already contributing to extreme weather events across the entire planet and that it's no longer possible to avoid global warming of at least 1.5°C.⁴ The IPCC found that the effects of that temperature rise will not only increase the frequency and severity of events but also the frequency of events occurring simultaneously or in close succession such that they compound one another's effects (such as droughts and heatwaves). The impact on human security of those compounded effects is projected to be significant.⁵ Key threats domestically are projected to be fire, floods and cyclones, and regionally to be rising sea levels, floods and cyclones.

To give an idea of the scale of vulnerability to humanitarian crises in just the Asia-Pacific region, the UN-sponsored multisector Covid-19 response plans for the region target 70 million people and are seeking US\$1.71 billion in funding.⁶

The health, economic and security effects of Covid-19 have substantially degraded many states' capacities to maintain HADR preparedness for natural disasters. This presents a significant risk in what's consistently the world's most disaster-prone region: it's home to 75% of disaster-affected people globally, and in the past five years nearly 800 million people have been affected and 50,000 people have died as a direct result of natural disasters.⁷

The US force posture pivot out of the Middle East / Central Asia and into the Indo-Pacific in response to the increasingly expansionist policies of the Chinese Communist Party (CCP) indicates a consolidation of the era of *great-power competition* between the US and China. The 2020 Defence Strategic Update advice that Australia can no longer rely on at least 10 years of warning time for a major conflict in the region demonstrates the volatility of this power dynamic and the capacity it has to cause new humanitarian crises in the region, which could occur at the same time as military confrontations.⁸ Australian national security interests highlight the strategic need to respond in this scenario, while Australian foreign policy and international aid and development traditions and historical behaviour highlight what's clearly felt at federal, jurisdictional and community levels as a deep moral responsibility to respond to the needs of our neighbours as well.

Independently of Covid-19 impacts, *regional conflict and instability* endure in the Indo-Pacific—examples include the 2020 military coup in Myanmar and the ongoing activities of transnational and serious organised criminals, particularly in Southeast Asia, who typically exploit instability, insecurity and gaps in jurisdictions to establish thriving businesses producing and trafficking illicit goods. This instability and strategic unpredictability are only exacerbated by the growing realisation that China provides a systemic challenge to many states and is a much broader issue than simply a bilateral struggle between the US and China, even as US power is clearly a core part of the response to that challenge.

The massive *health and economic costs of Covid-19* compound this instability and compromise disaster preparedness and resilience capabilities in the Indo-Pacific as the Delta variant surges across the region, causing record infections and deaths, pushing health systems to breaking point, severely compromising food security⁹ and pushing economies into dangerously low levels of functioning.¹⁰ Covid-19 has highlighted Australia's vulnerabilities in sovereign manufacturing capability as well as key vulnerabilities in regional health infrastructure, emergency management and disaster preparedness and resilience.

Terrorism remains a critical global threat,¹¹ and there are indications globally of increasing radicalisation by a range of different brands of violent extremism, particularly those under the umbrellas of right-wing violent extremism and Islamist violent extremism.¹² The significance for Australian HADR is the possibility of future attacks in the region like the Bali bombings (2002), to which Australia would respond.

Terrorists typically exploit fragile states and regional instability, which in the wake of Covid-19's economic and health effects in the region means an increase in amenable conditions for their narratives to resonate with long-suffering populations and an increase in locations where governments and law enforcement have reduced capacity for countering violent extremism preventive measures and counterterrorism policing responses. Islamist violent extremist ideologies and narratives that originated in the Middle East have historically resonated in Southeast Asia. The possible effects of the US and allies' complete withdrawal from Afghanistan and the Taliban government established in response (August 2021) on a resurgent terror threat in the region,¹³ plus already growing Islamic State elements in northern Afghanistan and other Central Asian states, suggest that this resonance into Australia's near neighbourhood could be similarly resurgent in years to come. This is particularly true, given that populations and cohorts that have experienced significant instability, insecurity and conflict are particularly vulnerable to recruitment and mobilisation by violent extremist ideologies and groups.¹⁴

These global trends have the capacity to and likelihood of intersecting in many ways that will exacerbate the already significant regional risks of human-made and natural disasters to which Australian HADR requirements will need to respond in future.

In terms of compounded vulnerabilities, it's not just about the strategic environment changing, but new and rising trends interacting and making threats more complex than HADR requirements have had to respond to in the past.

These compounded vulnerabilities will require more complex responses; for example, were a major weather event to occur during a humanitarian crisis resulting from a major terror attack or military conflict.

Looking back: Capabilities developed through domestic and regional lessons

Several major disasters affecting the Indo-Pacific region in recent history have informed the established Australian HADR strategies. The crises considered below showcase the key lessons learned, and requirements and strengths validated, through Australia's major HADR responses. This is how the modern emergency management architecture and arrangements have evolved.

Domestic lessons: various cyclones and 2019–2020 bushfires

Cyclone Tracy hit Darwin in 1974.

The ferocity of the cyclone¹⁵ and consequently the high cost in lives and destruction of the city have seared this event into the collective psyche of Australia.¹⁶ Cyclone Tracy was a pivotal moment in Australia's understanding of HADR strategies and initiated a renewed focus on disaster preparedness and resilience.

The national relief and reconstruction effort that occurred after Cyclone Tracy was one of the most significant disaster responses in Australia's history and set the precedent for many that followed. In the aftermath of the cyclone, the local community provided the immediate response while awaiting the mobilisation of defence, government and commercial support and assets, which delivered the national relief effort.

Lessons learned in a single disaster were then applied nationally in an effort to establish an acceptable baseline of disaster preparedness across Australia. This was intended to mitigate the impacts of future disasters.¹⁷

To that end, the *engineering and construction standards* for buildings, especially housing, were changed to increase their capacity to withstand cyclonic winds. This has been a success story for Australian industry and communities in which national policy forced the necessary investment in research to develop world-leading wind-resistance design practice. It's important to note that this doesn't comprehensively remove construction vulnerabilities to extreme weather events,¹⁸ but is a significant improvement in resilience compared to the period before those standards were implemented.

Local emergency plans were similarly changed to have a focus on preparedness, so that established procedures are known and observed in a crisis in order to enable a coordinated and effective response. This involves better communications between emergency services, local government and the community so that the mistakes of Tracy wouldn't be repeated. For example, designated shelters were locked and unable to be accessed, and police didn't take radios home, which hampered communication and delayed the response.

The further key insight from these challenges was that *adaptable processes are a key HADR capability* and are necessary to build preparedness (for example, so that fewer buildings would be destroyed) and resilience (so that more buildings would be available for post-crisis housing and more coordinated and effective emergency services responses) nationally. This incident demonstrated that at times this requires federal government policy to incentivise industry to invest in that adaptability, be that by policy mandates or public-sector investment in research and development. This resonates strongly with regard to climate change policies and contributing technologies and industries today.

National emergency plans, in this case the new and untested National Disasters Organisation (NDO), also required a focus on preparedness, procedures that enable national implementation yet with sensitivity to local logistics and communities, and a communications strategy that's adaptable to work at both national and local levels. As a result of this lack of tested preparedness, the NDO was implemented in a military-style command-and-control mode, which failed to recognise the achievements of locals in the immediate aftermath and in so doing impeded local psychological recovery and prevented optimal collaboration with jurisdictional agencies and services.

The emergency medical team sent to Darwin to evacuate the injured demonstrated that a *scalable response capability* that draws on national resources is critical in managing crises to reduce loss of life and psychological trauma, and to kickstart recovery.

These lessons being applied nationally to HADR strategy and procedure saved many lives during the disasters that have followed. The benefits were clearly demonstrated in North Queensland when Cyclone Larry hit Innisfail in 2006 and when Cyclone Yasi hit Mission Beach in 2011. Both cyclones were of greater intensity than Tracy but, in both cases, there were no casualties. Just how successful the building codes are at strengthening and protecting became apparent in April 2021 when ex-Tropical¹⁹ Cyclone Seroja damaged approximately 70% of the homes in Kalbarri²⁰—an area previously believed to be outside the cyclone zone where buildings weren't required to be cyclone rated.

The response to Cyclone Tracy was arguably the first truly national response to any disaster in Australia—from the evacuation and the reconstruction to the implementation of lessons learned and the identification of critical capabilities.

The catastrophic 2019–2020 bushfire season taught Australia many lessons about disaster preparedness and resilience. The key lesson regionally was that Australia has deep, mutually valued relationships with states that are anxious to help.²¹ Regionally, material, personnel and financial assistance was offered and sent from New Zealand, Japan, Singapore, Papua New Guinea and Vanuatu. The US, Canada and France sent and offered assistance from further afield.

Domestically, operational lessons were captured in an extensive parliamentary report published in 2020.²² The report makes recommendations for changes to HADR capabilities that address preparedness and resilience, including to provide equitable access to funding for individuals through to governments for preparedness and resilience initiatives and workforce; to assess and address vulnerabilities in the insurance sector, given the significant risk of massive losses through disasters; to establish a sovereign, aerial firefighting capability; and to sustainably fund communications platforms that are critical during disasters.²³

Regional lessons: the Bali bombings (2002), Indian Ocean tsunami (2004) and Fukushima nuclear accident and tsunami (2011)

These disasters prompted reconsideration of Australia's capabilities looking out into the region.

Darwin and the Northern Territory played a critical role in each phase of Australia's response to the Bali bombings.²⁴ This showcased the benefits of using northern Australia as the closest, first point of contact through which scalable capabilities can be channelled. Darwin became the central hub for response efforts, both to support the deployment of medical teams to Bali and to receive casualties evacuated to Australia. Darwin was integral in facilitating what was then the largest Australian aeromedical evacuation since the Vietnam War. The operation involved transporting 66 critically ill patients from Bali to Darwin over a 21-hour period, plus the repatriation of many less critically injured victims. The patients were first evacuated from Bali to Darwin and treated at the Royal Darwin Hospital before being transported to burns units across Australia at the direction of EMA.²⁵ The proximity to the region meant that critically injured patients were able to be transported from the aircraft to the hospital quickly, while also reducing flight and turnaround times, which can affect pilot availability.²⁶ Cairns and Townsville are the logical critical gateways for logistics to the Pacific region, as Darwin is to Southeast Asia, showing that the success of Darwin provides opportunities to develop other northern hubs to similarly support responses in the Indo-Pacific region.

The enduring lesson for the federal government relating to counterterrorism strategies was that the agenda of Islamist violent extremism resonated fiercely in our close region, and the threat of terrorist attacks targeting Australians would persist and possibly even increase in frequency.

The *National Critical Care and Trauma Response Centre* (NCCTRC) was established to meet this response requirement.²⁷ Instigated by the Howard government and established in 2005, the Darwin-based centre ensures that Australia has a readily deployable medical workforce that can swiftly respond to emergencies both onshore in Australia and throughout Southeast Asia.²⁸ It does so by providing medical treatment and acting as a hub to move triaged patients to other hospitals in Australia according to the urgency of their injuries and the capacity and proximity of Australian hospitals.

The centre also works to build regional disaster response and trauma care capacity and capability through strategic partnerships, research, and education and training initiatives. It was no accident that the centre was established in northern Australia.

The NCCTRC remains a key element of the Australian Government's disaster and emergency medical response to national and regional disasters, for example to Vanuatu in the aftermath of Cyclone Pam (2015); to Solomon Islands during a dengue outbreak (2013); to the Philippines after Typhoon Haiyan (2013); and ongoing medical support and training to the governments of Timor-Leste and Indonesia.²⁹

The centre has been broadly celebrated, including in the 2012 *Australia in the Asian century* White Paper, as a 'northern Australia success story',³⁰ given its key role in Australian HADR responses regionally as well as its being a key asset and capability for the Northern Territory as a jurisdiction. It provides a key mechanism for connecting the federal government, multiple jurisdictional governments and multiple universities in efforts to improve crisis-response capability through research, development and policy.³¹

Australia's swift disaster response to the Fukushima nuclear accident and tsunami³² demonstrated the *strong relationship between the governments and people of the two nations*. The significant and diverse range of financial and resource assistance from the Australian Government, the RAAF and the aid and development NGO sector (World Vision AU and Save the Children AU) evidenced the flexibility of Australian response capability in the region.³³ Australia's response catalysed the future development of the relationship with Japan, and that's often mentioned by the Japanese Government as evidence of the shared values and friendship between the two governments and peoples.

This level and diversity of assistance was also a feature in the Australian multisectoral response to the Banda Aceh tsunami. Moments like these contribute to strengthening the broader relationship between nations that's now so critical to Australia's interests in the region, given the increasingly unpredictable strategic environment caused by China's expansionist policies.

The Australian response to Tropical Cyclone Seroja, affecting East Timor and Indonesia, in 2021 highlighted this community-level connection between northern Australians and close regional neighbours. Darwin's Timorese community mobilised to raise funds and gather food, clothing and other items to send to the flood- and landslide-devastated areas. The diaspora also called on the Northern Territory and Australian governments to provide aid and assistance.³⁴ Those calls were echoed in other areas, while some media commentators implied that the Australian response was too slow.³⁵ In this case, community expectations for disaster relief assistance outpaced official government-to-government channels and decision-making.

The successful evacuation of 13 Thais from a cave complex in Thailand in 2018 was a Thai-led response to which ADF and Australian Federal Police specialists (divers and disaster recovery experts) provided assistance.³⁶ This event showed Australia's capacity, capabilities and willingness to resource crisis responses and *collaborate under the leadership of regional partners*, and how crisis resilience can be optimised by deferring to local knowledge and leadership in some cases.

The 2004 Indian Ocean tsunami was one of the deadliest and most costly natural disasters in the region in recorded history.³⁷ Australia's HADR response was the biggest Australian peacetime operation ever launched internationally and the biggest since Cyclone Tracy hit 30 years before. The total financial contribution was A\$69.6 million, all given to neighbouring countries to fund short-term recovery and longer term resilience. This demonstrated a huge commitment from Australia to the resilience of the region and left no doubt that regional stability and Australia's capabilities to support it were understood as critical to Australian interests. It also showed how Australia's regional relationships prosper in response to actions that show care and investment in regional stability.

Covid-19 2020–present

The Covid-19 pandemic has been a 'once in a century' global public health crisis. The last pandemic of this magnitude and reach was the 'Spanish flu' (influenza A, H1N1) in 1918, in which global troop movements during World War I spread the virus globally and rapidly, despite the comparatively slow and small rates of international travel in that less globalised era. Mitigating the effects of Covid-19 in the profoundly globalised system of trade and travel we live in today has been an unprecedented challenge to all governments. Unlike in 1918, though, global capabilities to rapidly develop vaccines and to maintain a high volume of trade and travel thanks to the enormous technological resilience of modern society (for example, through digital remote working and education) have provided means to reduce the possible levels of suffering and deaths per capita due to Covid-19.

Key to Australia's capacity and capabilities to manage the virus, the responsibility to bring citizens home and the need to have some travel for business activities have been lessons about effective quarantine as a critical capability during a public health crisis. The Howard Springs facility, initially built to house construction staff for the INPEX-operated Ichthys LNG Project,³⁸ proved an effective quarantine facility used by the federal government to evacuate Australians from Wuhan in the initial stages of the pandemic.³⁹

Quarantine facilities in city hotels have since proven to be a consistent vulnerability, causing multiple outbreaks due to the difficulty in preventing contagion within a single building with shared hallways and ventilation systems not designed for quarantine purposes. In contrast, the Howard Springs facility in the Northern Territory demonstrates that the facility's separate, scalable, cabin-style structures (as opposed to rooms in a single building) and location outside of a metropolis (yet near to a hospital 30 minutes away) are effective in containing the virus.

The recent decision by the Queensland Palaszczuk government to build a regional quarantine facility based on the lessons of Howard Springs has validated this approach as best practice.⁴⁰ Queensland is progressing that facility using state funding, in addition to the planned federal facility in Brisbane's populous centre,⁴¹ and despite quarantine being the financial responsibility of the federal government. This decision highlights the divergent views of state and federal governments on best practice as a key area for capability uplift.

The lessons learned from Covid-19 are too extensive to cover comprehensively here, but, for the purposes of this report, establishing secure supply chains (from Woolworths through to building construction materials) and sovereign capabilities and industries (such as vaccine production) have been central and enduring challenges at every step of responding to this unprecedented global public health crisis. Broadly, Covid-19 and the 2019–2020 bushfires evidenced the Australian capacity for flexible response, but also revealed vulnerabilities in inadequate disaster preparedness.

Alignment of expectations with capacity for assistance

Over the 40 years these disasters spanned, both the need and community expectations for disaster relief assistance (for example, by diaspora communities in Australia such as the Timorese-Australian community in Darwin in the wake of Tropical Cyclone Seroja) have often outpaced official government-to-government channels and decision-making.

A contributing factor is that the frequency and severity of disasters are creating a need that is, according to the Department of Foreign Affairs and Trade (DFAT), impossible to comprehensively meet:

The magnitude and complexity of disasters and crises have changed the humanitarian landscape. Despite record levels of humanitarian support, donors are not able to keep pace with the rising need—funding requirements rose 430% in the decade to 2013 and continue to escalate.

Disasters are increasing in frequency, scale and impact. Since 2005, disasters have killed more than 700,000 people globally and left nearly 23 million homeless. The impacts have been greatest in the Indo-Pacific region.⁴²

Given the complexity of the threatscape in the Indo-Pacific region, the already challenging alignment between regional need and the Australian HADR capacity to respond is likely to become even more so.

With Covid-19 causing havoc for a second year running, the projected frequency of disasters in the region highlights the truly complex threatscape that the region is facing. If a major disaster were to occur regionally now, Australia's regional emergency response capacity and capabilities would be limited and logistically complicated as a result of the pandemic. The December 2020 assistance by Australia to Fiji after Tropical Cyclone Yasa was able to implement COVIDSafe protocols to ensure that resources were distributed at the necessary pace while also mitigating the spread of the virus.⁴³ While possible in response to a cyclone that killed four people and warranted an A\$4.5 million response package, it would be extremely difficult and perhaps not possible to implement COVIDSafe protocols in a response like that necessary for the Indian Ocean and Banda Aceh tsunami, which killed 230,000 people and resulted in an Australian HADR response to six countries and costing A\$69.6 million.

The possibility of reduced or slower capacity to respond to a major disaster could result in significantly worse outcomes for a disaster-affected area, which could interact with a range of other present health and security risks due to limited access to recovery resources. For example, damage to housing and hospital buildings, as seen extensively in the Banda Aceh and Fukushima tsunamis, could result in increased Covid-19 infection rates in places with low vaccination access due to reduced public health response capacity, resulting in the higher likelihood of new Covid-19 variants; or reduced access to resources could result in competition for resources, which could fuel existing security threats such as budding violent extremist groups, political or ethnic conflicts, increased organised crime activity, or authoritarian governments such as the current Myanmar military junta becoming more desperate and violent as population control becomes even harder. The possible impact of these cascading risks makes the regional threatscape even more significant and complex, and Australia's preparedness and response efforts more costly and risky.

Low-hanging fruit for capability uplift

Below are six opportunities to enable HADR capability and capacity uplift at the national level. They are grouped into three areas: strategy and innovation; regional engagement; and resources.

The six options consider, where appropriate, opportunities for the north to better serve national efforts as a gateway and hub for resources, innovation and regional engagement. This is by no means an exhaustive list of opportunities, but rather an examination of ‘doing more with what we have’ that focuses on one area of Australia that’s within the Indo-Pacific region and shares a similar rate of disaster vulnerability.

Given the severity and complexity of the threatscape discussed in this report, these opportunities aren’t presented as a comprehensive response to mitigate the threats Australia faces, but rather as ‘low-hanging fruit’ options to increase Australian HADR impact in the short term with minimal increases in spending by leveraging existing connections and capabilities to greater effect.

Strategy and innovation

Opportunity 1: A strategy for the north

In the major HADR responses in recent history, such as the 2019–2020 bushfires, Australia has mounted responses from the federal level to the states and territories and through to local governments. This has involved the activation of Australia’s multijurisdictional disaster response framework for a range of humanitarian crises resulting from weather events in Australia and the region discussed above (see ‘Looking back’) and now Covid-19.

Guiding this framework are a set of strategies and agencies: DFAT’s 2016 *Humanitarian strategy*⁴⁴ guides international efforts; and four strategies, plans and arrangements,⁴⁵ and three agencies and bodies, guide national efforts.⁴⁶

The internationally focused DFAT strategy shows a deep and appropriate understanding of the fundamental need to enable disaster preparedness and resilience for Australia’s neighbours by working with partner governments and funding initiatives in the region, and that those efforts serve Australia’s security and geostrategic interests, as much as the altruistic interest in responding to humanitarian crises and need where possible.⁴⁷

However, despite northern Australia being an established part of HADR capabilities in the region due to proximity and both logistical and community connections, there’s no discussion of the possible benefits of the roles that northern Australian cities, institutions or resources could play within Australia’s broader HADR and emergency management strategies to support the region, which has seen the greatest global impact of humanitarian disasters since 2005.⁴⁸ Nor has there been detailed consideration of the fundamental links between national security, economic and HADR interests and approaches vis-a-vis northern Australia, how they interact to produce positive outcomes and methods to get there.

This is consistent with a broader trend in which federal government strategies don't consider the role and opportunities of the north in strategic planning for Australia's economic, national security or disaster management interests, beyond a relatively narrow perspective on the location and resourcing of armed forces. The recent ASPI report⁴⁹ considering the economic and national security implications of the lease of Darwin Port to Chinese-owned and CCP-linked company Landbridge Group argues that Australia's economic and security interests have been minimised by this historical trend to consider the north as a territory that the federal government must tend to keep afloat, as opposed to a strategically significant and valuable part of Australia that sits at the centre of the Indo-Pacific region, not at the edge of Australia.

There is as yet no national strategy for northern Australia, and HADR strategy is a part of that omission. This isn't to say that the answer to all Australia's concerns about regional instability and disaster vulnerability can be addressed with a 'silver bullet' strategy delivered by northern Australian governments, communities and resources, but, rather, that the historical perspective at the federal level of thinking of the north as a mere launch pad for logistics into the region doesn't necessarily best serve national or jurisdictional interests in all cases.

Australia has a key role to play in the region as a democracy, a partner, an ally and a middle power. Northern Australia isn't only central within the region, but our bridge to many of our neighbours. Our cultural and community links to the region in our northern centres illustrate this point. This isn't to say that other parts of Australia don't have similar connections, or that resources need to all go through northern cities rather than just northern air and sea space. Rather, the northern connections could be better used in building resilience and preparedness in the region.

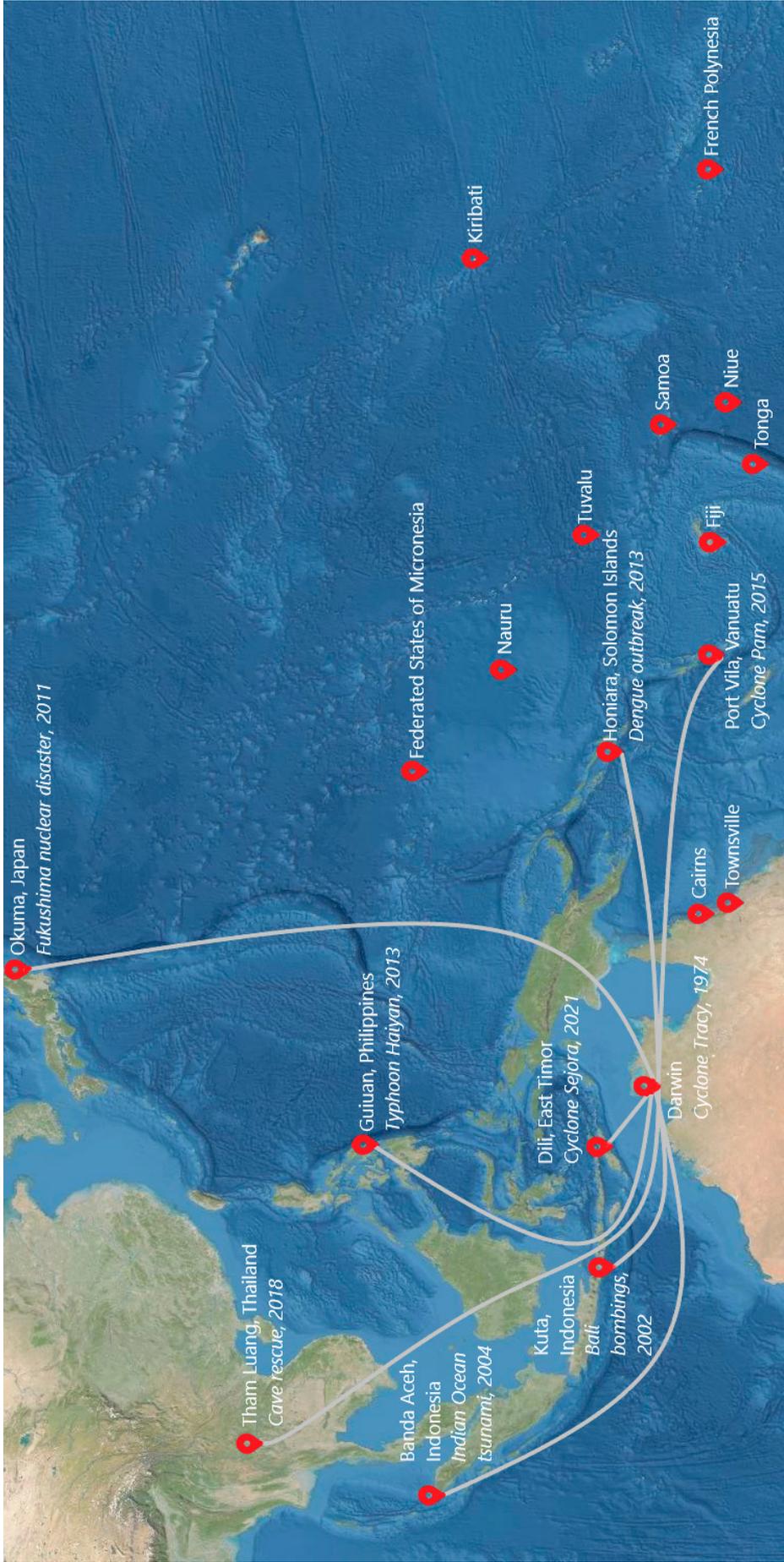
The current debates about the leasing of Darwin Port to a foreign company with close ties to the CCP have highlighted the absence of a broad strategic plan for the national security and economic role that northern Australia should, rather than could, play in furthering Australia's interests in the region and further abroad. Australia's security and economic interests are affected by the capacity and capabilities of Australia and our neighbours to prepare for, endure and recover from humanitarian crises, both environmental and political. And, given northern Australia's centrality in the region, physical and cultural proximity to close regional neighbours and shared experience of many growing risks in the region, a strategy for the north should consider an active role for the north.

This means using the north of Australia as more than a storage and launching point for sending resources into the Indo-Pacific region.

Northern Australia has a smaller population and economy than the southeast of Australia and has featured a historical trend of Canberra taking a strong financial and decision-making role in Northern Territory governance. This has nurtured the perspective for many Australians that the north is a place of less resources, consequence and power at the edge of the country—a weight to be carried, rather than a force multiplier through which strategic outcomes should be achieved, including, for example, Australian engagement in the region.

The HADR efforts illustrated in Figure 1 clearly show that northern cities provide the logistics capability for regional responses. Until now, this has been the necessary outcome of *ad hoc* responses to individual crises in the region.

Figure 1: Australian HADR missions into and out of the north



Source: ASP/Grace Stanhope.

Putting all HADR resources and capabilities in the north isn't a solution, given that international HADR responses require significant capacity in the major southern cities and ADF bases, and both human and material resources need to be brought in from the south to deploy and distribute in the region. But incorporating the north's role as a logistics and innovation connection to the region would encourage better linkages and force multiplication between established HADR capabilities in the north.

Opportunity 2: Research and training to build preparedness

Research, education and training are force multipliers, as is well evidenced and documented in aid and development research and policy. The future of HADR as it stands is to always be on the back foot. Adjusting HADR funding to adequately prioritise research and training will allow us to make the most of what we have. An example of what this adjustment could look like is spending less on the ADF's capacity to respond to crises and more on research, education and training, which can increase preparedness in the areas in which Australia will then be called on to respond in crises.

The lessons learned in the domestic and regional HADR responses detailed above demonstrate the importance of capturing the preparedness and resilience lessons during the response and recovery and implementing them on the national level as soon as possible. Historically, that has happened in two ways: on an *ad hoc* basis, and with a tendency to learn lessons over again, rather than optimally capturing and implementing lessons to inform future preparedness; and, since 2008, much more efficiently and effectively through the Australian Civil-Military Centre in NSW, which is mandated to 'support civil-military-police capabilities to prevent, prepare for and respond more effectively to conflicts and disasters overseas'.⁵⁰

It's a valuable preparedness capability to have a dedicated research and analysis team in the established research infrastructure tasked with capturing and developing implementation strategy and with direct playback links into all levels of government. The centre is situated within the Defence organisation and staffed by relevant agencies. This presents opportunities for greater partnership and stakeholder engagement with non-defence agencies, and, in doing so, to enable research and lessons to move between the government, university and NGO sectors and the communities across the region. Defence has been able to leverage the established connections that the university and NGO sectors have with other institutions, NGOs and communities in the region.

To that end, established government research bodies within the emergency-management architecture (the Australian Civil-Military Centre, the National Recovery and Resilience Agency and the Australian Institute for Disaster Resilience) could partner on HADR research and development with the range of institutions already working in this field in the north.

For example, in the Northern Territory, that would include the THRIVE Lab (Transforming Human Resilience in Vulnerable Environments) at Charles Darwin University⁵¹ and the NCCTRC,⁵² especially the disaster preparedness and response team.

Innovation outside the government sector is by no means limited to Darwin. In Queensland, for example, the University of Queensland's Visualising Humanitarian Crises: Transforming Images and Aid Policy project⁵³ is working with the International Committee of the Red Cross, the Australian Red Cross and Médecins Sans Frontières to innovate established humanitarian assistance practices in order to produce 'policy initiatives that seek to develop local capabilities, build autonomy and value non-Western ways of being'.⁵⁴

Universities in northern Australia have developed national and international relationships with contemporaries in both Australia and the Indo-Pacific in areas such as tropical medicine, disaster relief and risk reduction. Federal research funding for those institutions would provide improved preparedness and resilience methods and fortify the partnerships between institutions and communities in northern Australia and regional partners. Given the differences in local capacity, institutional capabilities and needs across the region, partnerships that appreciate this nuance are critical to having the impact that Australian HADR efforts aspire to.

This focusing and strengthening of institutions and partnerships dedicated to research, education and training in the field of HADR would enable Australia and our neighbours to improve preparedness and long-term recovery. Disaster response is directed at reacting to a specific event, while humanitarian assistance is an ongoing task, an important part of which is the education and training of decision-makers and responders and raising public awareness. Currently, this relies on the aid and development spending of countries such as Australia. Meanwhile Australia's aid budget has been steadily reduced over the past decade, and the economy faces multiple, significant challenges: Covid-19 recovery, a rapidly ageing population, and significant climate-change effects at home.

Regional engagement

Opportunity 3: International relationships are a safety net

DFAT's *Humanitarian strategy* rightly articulates Australia's valuing of and respect for our relationships with our neighbours, the need for that understanding and knowing when to defer to local leadership in order to achieve outcomes and impact from HADR efforts.⁵⁵

Strong relationships enable working together in crises and in preparation to endure them.

Relationships are a safety net and, in a time of increased risk, Australia should actively invest in fortifying that safety net at all levels, from communities up to governments.

Japanese Government officials, as recently as during the Japanese Ambassador's National Press Club speech on 21 July 2021, consistently reference Australia's aid to Japan after the Fukushima accident. This shows how Australian HADR responses can exponentially enable dynamics that are critical to national security interests. For Australia and Japan, the current momentum of the Quadilateral Security Dialogue as a nascent but fervent meeting of shared values and interests in maintaining a free and open region stands in no small part on the evidenced commitment to one another's security and prosperity and the honest understanding that the security and prosperity of the region rely on cooperation, it being a region of many islands where none can afford to behave like one.⁵⁶ This example highlights that the size of financial support isn't always the most powerful part of HADR assistance or of the long-term relationships that it supports. Rather, the key resources and encouragement that the Australian RAAF mission gave the Japanese people and government was the most valuable contribution. The fortitude and energy to stand back up and move forward is a key element of assisting in resilience, and, while this isn't independent of finances, it isn't always the same thing.

Australia should put more effort into nurturing regional relationships like this in order to foster a regional international community that can better support and share lessons and responses to disasters as we weather more of them together. Given the catastrophic risk to stability, security and economies that natural disasters pose, fostering a sense of being 'in it together' in the face of humanitarian crises is consistent with the 'in it together' logic that the Quad is guided by in the face of geopolitical instability and unpredictability, and no less important.

There's considerable room to grow and fortify Australia's relationships regionally in a similar way through nurturing the naturally occurring links between northern Australian communities and our close neighbours, which, for example, the Darwin Timorese community clearly demonstrated in how fiercely its members clamoured for Australia to help East Timor recover from Tropical Cyclone Seroja (2021).

There are immediate opportunities for the federal government to invest in fortifying regional relationships through the following means:

- Working with state and territory governments and the tertiary education sector to build an *education and training relationship* between northern Australia and Southeast Asia and Pacific islands institutions. This could mean facilitating greater capacity for international students to enrol in affordable study in northern Australian TAFE and university degrees.⁵⁷ For example, James Cook University in Townsville could connect with the Pacific Islands, and Charles Darwin University could connect with Indonesia.

- Working with state and local governments to foster *greater collaboration between northern Australian communities and close neighbours in the arts*, such as the initiative in Cairns between Papua New Guinea and Far North Queensland artists and arts communities.⁵⁸
- Working with state and local governments, educational institutions and community organisations to enable *greater recruitment of northern Australians*, including Aboriginal and Torres Strait Islander Australians, into the ADF and into civil forces to staff HADR efforts (see ‘Workforce’ below).

This isn’t to say that diaspora communities in southern parts of Australia don’t share equally deep, rich and profound connections with communities in the Indo-Pacific. Rather, the above options are made possible by the close proximity between Australian diaspora and international communities (for example, opportunities for cost-effective educational exchanges for tertiary students from Indonesia to Darwin), and the historical connections between northern Aboriginal and Torres Strait Islander communities and people from Australia’s near north island nations (such as the creative arts connections between Indigenous artists in Far North Queensland and Papua New Guinea).

Resources

Opportunity 4: The role of the ADF

Increased national security tensions in the Indo-Pacific pose the risk that military confrontations could occur at the same time as climate-related humanitarian crises in the region.

That scenario would put Australia in the position of having to support military and HADR capabilities simultaneously, which would place huge stress on Australian capabilities and resources, particularly when major HADR responses in recent history have all relied heavily on the ADF for resources, capability and strategy (most recently, the 2019–2020 bushfires and the Covid-19 vaccine rollout). This presents a clear vulnerability in Australia’s HADR strategies and capabilities moving into this era because, when push comes to shove, a military confrontation in defence of national security would have to take priority over regional or even domestic humanitarian crises.

There’s a stark disproportion between regional vulnerability and need in the aftermath of disasters and the limited Australian response capacity.⁵⁹ And the current, reflexive, ‘go-to’ strategy of the federal government of relying on the ADF for disaster response and crisis management (as seen with the recent major bushfires and the Covid-19 vaccine rollout) could become increasingly less feasible, given the increased likelihood and reduced warning time of the ADF being committed to so many other tasks, least among them being actual war fighting.

The role of the ADF in supporting emergency responses is also changing. ADF involvement has increased steadily since the 2019–2020 bushfire crisis, during which the ADF was involved across multiple jurisdictions in providing logistical support, evacuating people and assisting local authorities along with other tasks. It was also the first time the reserves had been called up for duty for a national emergency.

The utility and flexibility of the ADF mean that the expectation that there will be more ADF involvement in crisis situations in the future makes sense. But the driving forces behind that expectation are in fact public demands, public confidence in uniforms and a lack of other choices.

During his address to the National Press Club in January 2020, Prime Minister Morrison said that:

There is now a clear community expectation that the Commonwealth should have the ability to respond in times of national emergency and disasters, particularly through deployment of our defence forces in circumstances where the life and property of Australians has been assessed to be under threat at that scale.⁶⁰

He added that:

... an enhanced, and more proactive role for our defence force in response to domestic natural disasters will have implications for our force structure, for its capability, development, its command, its deployment and the training of our defence forces.

In the event of the ADF deploying into the Indo-Pacific for HADR or military efforts, this presents the possibility of the force being stretched in too many directions, strategic and geographic, at once.

Rather than shaping that expectation, or identifying a way to address the capability shortfalls, the ADF is being thrust into the non-military capability void, and ADF leadership is being consistently deferred to by the federal government for crisis management. It's not that the ADF shouldn't contribute to managing national emergencies; it's the increasing level of dependence on it in the absence of alternatives that's a problem.

This was evident in the months that followed the bushfire crisis, and the ADF immediately began support for Australian Government and state and territory authorities in the Covid-19 pandemic. ADF involvement stretched from making personal protective equipment to monitoring people in home quarantine, to providing support in quarantine hotels, and to delivering and administering vaccines and managing hospitals. Since the Prime Minister's speech, the ADF has also been called on to provide cyclone recovery in Western Australia, flood assistance and recovery in New South Wales and storm recovery support to Victoria.

This enhanced role is being met with caution in some areas, as the ADF is currently neither structured nor trained for civil defence and emergency roles and is far more expensive to mobilise for those purposes than other organisations, such as state emergency services. Furthermore, there's concern that the added responsibilities for civil defence will distract the ADF from its core defence role. It also highlights a risk that state and territory jurisdictions could reduce their investment in preparedness in the belief that the ADF will always be there to assist.

A federally led effort to reduce this exclusive reliance on the ADF would be a critical capability uplift for Australia, given the complex and intersecting threatscape discussed above (see 'Looking forward'). To avoid ADF involvement in HADR efforts in Australia and the region and to avoid corroding the ADF's war-fighting capability, Defence requires adequate resourcing, strategy and structure to lead HADR in addition to its core role.

Opportunity 5: Workforce

The issue of a HADR workforce is perhaps the biggest problem in the reliance of the federal government on the ADF for HADR response.

A key example is that the RAAF is the only organisation in Australia that can conduct aeromedical evacuation (AME) on a large scale for mass casualties.⁶¹

The RAAF maintains aircraft, aircrews and critical-care AME teams on standby ready to respond in the event of an emergency. The critical-care AME teams are composed of both full-time Air Force members and specialist medical personnel who are members of the Air Force Reserve. The reservists are typically located in state capitals across Australia and are employed in major hospitals. For the limited number of critical AME personnel in Australia, even the RAAF relies on reservists employed in other frontline healthcare jobs. What would happen if the RAAF were acting in its defence role during a humanitarian crisis?

Given the cascading risks possible in the region and the possibility of simultaneous or close natural and man-made disasters, Australia can't afford to rely on the ADF as a catch-all HADR capability insurance policy.

The US Force Posture Initiative aims to improve the interoperability between US and Australian armed forces and enable opportunities for US forces to further engage with regional partners. The US Marine Rotational Force in Darwin⁶² has generously assisted in some recent ADF disaster responses in the north,⁶³ in addition to the extensive exercises undertaken with the ADF in the region. It's possible that this relationship and instances of assistance

have generated the problematic idea in the Australian public sector of assuming that the defence ally relationship between the two nations and common security concerns about China's expansionist policies in the region extend to the US armed forces having the resources, capacity and intention to generally assist Australia's HADR efforts, which is surely and understandably not the case.

The current defence force 'pivot to the north', both Australian and American, needs to be accompanied by a HADR plan or Australia will rely on the ADF for two problems that we can't simultaneously address. Australia needs a distinct non-military capability, and, given the cascading risks associated with natural disasters possibly interacting with military confrontations in future (see 'Looking forward'), there's a need for the significant defence spending in the north to be accompanied by, if not shared with, necessary civilian response capability and preparedness efforts.

While the ADF surely has clarity that it isn't available to lead or even assist HADR efforts at all times, the federal government's expectation, as shown consistently in the 2019–2020 bushfires and throughout Covid-19, is that it will. As a result, not much else is being done to establish a civil defence capability. Despite that, the opportunity costs of defence in the current strategic environment are too high, making it truly imperative that alternative, civil capabilities be developed to face the projected threatscape for the region and Australia domestically.

New and novel ways of generating a surge capacity of trained emergency personnel need to be developed.

An example of great bang-for-buck action to that end would be to establish an Indigenous civil defence force, based in the Top End, similar to the ranger programs and regional force surveillance units operating in the Northern Territory. This idea has been called for by a range of voices⁶⁴ and makes sense in terms of this key capability requirement. This would provide socio-economic opportunities for northern citizens, leverage the strengths and knowledge of Aboriginal and Torres Strait Islander northern Australians, and be based on deep historical connection to country and to close, regional neighbouring communities and countries.

A civil force like this would surely require a range of support and enablers from the Defence organisation. However, it presents a new pool for recruitment by providing a non-defence option for engaging in a security career that draws on and champions connection to country, meaning that the human resource base drawn on to staff this force would be in addition to Defence, rather than relying on Defence personnel to completely resource both military and HADR efforts.

Opportunity 6: Resource distribution

Recent disaster responses have used Darwin as a central hub for regional AME to Darwin Hospital and onwards to other hospitals in Australia in line with patient capacity. Establishing similar AME capability in Cairns, Townsville, or both, would enable Australian HADR responses to the Pacific (less Papua New Guinea). Having more than a single AME hub in the north would enable more efficient AME responses in the region. This approach would mean patients would be transported less distance to a hub and then onwards to a hospital with patient capacity. Multiple northern hubs would also improve the scalability of AME responses to meet the need presenting in different areas.

Having multiple northern hubs that coordinate responses in line with their proximity to disasters could also ensure that best practice of systems and processes is improved on an ongoing basis. With multiple facilities acting, interacting and capturing and implementing lessons, the capacity for ongoing best practice development is far greater than that of a single hub acting alone.

Conclusion

Australia and the Indo-Pacific are experiencing a complex network of established, evolving and intersecting security challenges and cascading risks. Realistically, our capacity and capabilities can't possibly match the projected threatscape.

Yet Australian interests remain inextricably linked to the stability and prosperity of the region, while our role and responsibilities as a middle-power in the region are guided by having an equal concern for our neighbours' security and prosperity as for our own.

As ever, there's no magical or comprehensive fix to this challenging outlook, but there are opportunities for innovation in strategy and capabilities in Australia's existing emergency-management architecture and arrangements. Those opportunities can be leveraged in order to increase preparedness and resilience in ways that might look small in comparison to the significance of the threatscape but nevertheless have important impact—impact achieved by making better use of the resources already allocated to organisations involved in HADR work and by growing and leveraging strong relationships, from communities, through education institutions and NGOs, up to governments, which enable working together in times of crises and in preparation to endure them with minimised cost.

Notes

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- federal funding from the Emergency Response Fund allocated annually to states and territories to establish a ‘dedicated hazard reduction workforce’, including research and hazard reduction activities
 - the Australian Prudential Regulation Authority to assess the financial vulnerability of the insurance sector, including potential capital inadequacy in the event of catastrophic insurance losses resulting from disasters
 - the Australian Government to establish a ‘permanent, sovereign aerial fire-fighting fleet.
- And regarding resilience:
- the Australian Competition and Consumer Commission to monitor and ensure appropriate and equitable insurance prices and profits relating to climate-change-driven disasters
 - the Australian Government to reverse the defunding of the Australian Broadcasting Corporation (ABC) and add specific funding for emergency broadcast services.
- And regarding preparedness and resilience:
- improving equitable access to and reporting on funding for governments, individuals and organisations for preparedness and recovery initiatives
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- 60 Scott Morrison, 'Address, National Press Club, transcript', Australian Government, 29 January 2020, [online](#).
- 61 Air Force AME is carried out in specially equipped C-17 Globemaster or C-130 Hercules aircraft accompanied by specially trained and qualified Air Force medical personnel. Along with the evacuation of Bali bombing victims, the RAAF has undertaken large-scale AMEs in Australia in recent times. Those operations included the evacuation of 173 hospital patients from Cairns Hospital to Brisbane in February 2011 as Cyclone Yasi approached the city and the evacuation of 90 patients from Bundaberg Hospital when it was threatened by rising floodwaters in 2013. Royal Australian Air Force, 'Recent history of Air Force humanitarian assistance', Australian Government, 2021, [online](#).
- 62 The main component of the US Force Posture Initiative is the Marine Rotational Force—Darwin (MRF-D). The MRF-D is an annual rotation of marines to exercise in northern Australia. The 10th MRF-D rotation in 2021 numbered around 2,200 personnel. With a ground and air component, the MRF-D is well equipped and positioned to support many response contingencies. Linda Reynolds, 'Arrival of the 2021 Marine Rotational Force', media release, 6 February 2021, [online](#).
- 63 The US MRF-D and ADF regularly conduct exercises to enhance their skills and levels of cooperation. In late 2019 and again in early 2021, they conducted the Crocodile Response exercise. Using a devastating cyclone as the scenario, the forces practised providing services such as power generation, construction, road clearing and water purification to remote areas. The exercises were observed by Australian and US government agencies and officials from Indonesia's armed forces along with Jakarta's disaster management agency and national search

and rescue agency. Representatives from the Philippines and Malaysia also took part in the 2021 exercise. The marines assisted the Northern Territory community in the wake of Cyclone Marcus in March 2018. The MRF-D members cleared debris from Robertson Barracks and HMAS Larrakeyah and also provided off-base support to the residents of Darwin and Palmerston. Gordon Carr-Gregg, 'Exercise hones coordination of joint forces', Defence News, 4 June 2021, [online](#).

- 64 John Coyne, 'The case for an Indigenous Australian civil defence force', The Strategist, 24 May 2021, [online](#); Dion Devow, Louisa Bochner, 'The value of diversity in the defence of northern Australia', The Strategist, 12 June 2020, [online](#); Huon Curtis, Dion Devow, Khwezi Nkwanyana, Matthew Page, 'How to bring Indigenous expertise and experience into Defence and the digital economy', The Strategist, 2 June 2021, [online](#).

Acronyms and abbreviations

ADF	Australian Defence Force
AME	aeromedical evacuation
CCP	Chinese Communist Party
DFAT	Department of Foreign Affairs and Trade
EMA	Emergency Management Australia
HADR	humanitarian assistance and disaster resilience
IPCC	Intergovernmental Panel on Climate Change
NCCTRC	National Critical Care and Trauma Response Centre
LNG	liquefied natural gas
NDO	National Disasters Organisation
NGO	non-government organisation
RAAF	Royal Australian Air Force

WHAT'S YOUR STRATEGY?

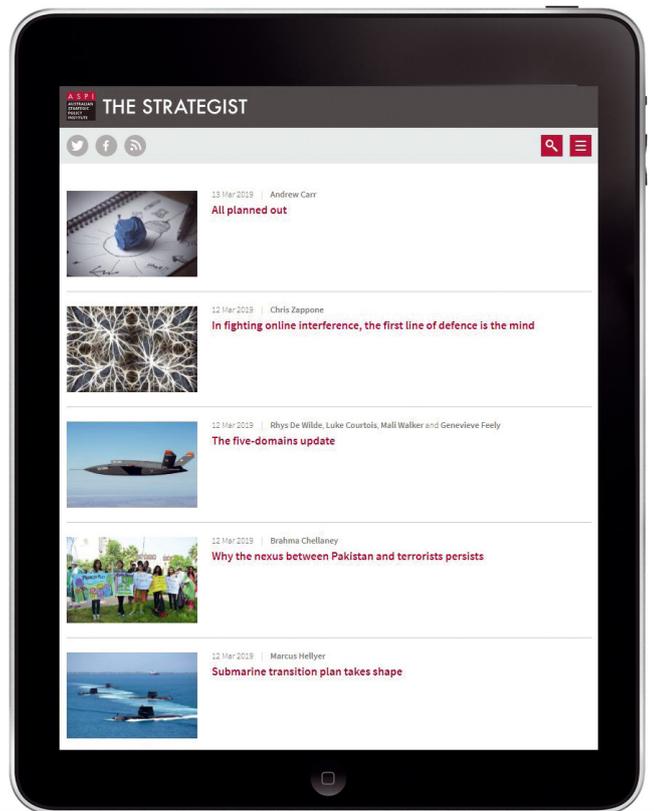


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