

Forward defence in depth for Australia

139

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Introduction

With the re-election of the Scott Morrison-led Coalition government in May 2019, the future shape of Australian defence policy needs to be examined. The strategic assumptions that underpinned defence policy choices in the *2016 Defence White Paper* were made in the years preceding the release of that document and extend from earlier white papers, including those released in 2009 and 2013. Their foundation goes back to the days of the 1986 Dibb Report and the 1987 Defence White Paper. In the next Defence White Paper, which could emerge as early as 2021, a continued approach that places too much emphasis on defending the inner arc—notably the ‘sea–air gap’—would not adequately address emerging strategic risks to regional stability. The strategic environment has evolved at such a pace that policies announced in 2016 have been overtaken by events. It’s time for a review of Australian defence strategy. It’s time for something new.



Uniform patches from participating nations at exercise Cope North 2018, Andersen Air Force Base, Guam. Image courtesy Department of Defence, [online](#).

The strategic outlook in 2019 is far more adverse than that suggested in the 2016 White Paper. A key challenge confronting Australian strategic planners that should directly inform future defence policy is the rise of an assertive Chinese state that's directly challenging US strategic primacy in Asia. President Xi Jinping is determined to establish the Chinese state's dominance across the Indo-Pacific, in part through displacing the established US-led rules-based order. Chinese political warfare and grey-zone actions below the threshold of military conflict are occurring against Australia and in the nations throughout the Indo-Pacific. The emergence of an increasingly powerful People's Liberation Army (PLA) is expanding the Chinese state's power-projection capabilities and its ability to threaten its neighbours with advanced anti-access and area-denial (known as 'A2/AD') capability that at the same time is eroding traditional US military–technological advantage in Asia.

Far from making a 'China choice' to surrender strategic presence to an increasingly aggressive Chinese state, the US under President Donald Trump is pushing back against Beijing, and a key speech by Vice President Mike Pence in October 2018 at the Hudson Institute highlighted an emerging era of strategic competition between the US and China.¹ That competition is being waged across all fronts:

- economic, as a trade war gathers pace
- military operations in the South China Sea
- a growing pivot by the US military away from a 'laser-like' focus on counterterrorism since 9/11 towards greater consideration of the possibility of major-power conflict with China as well as Russia
- military–technological competition in key horizon technologies such as artificial intelligence, autonomous systems, space, cyberspace and hypersonics.

The US National Defense Strategy of 2018 makes clear that the US seeks greater burden-sharing from its allies in this new period of major-power competition.² Australia needs to rise to this challenge—not simply because of US desires, but because it's in our national interests to be able to function free of the less-than-benign sides of Chinese power.

In considering the future of Australian defence policy, any new defence strategy needs to respond to the challenge posed by a rising Chinese state that's demonstrating how it intends to use its national power in the world, and also meet the strategic needs of our essential alliance relationship with the US. How can Australia do more across the Indo-Pacific region alongside the US to burden-share in a more challenging and dangerous time? How can the Australian Defence Force (ADF) be better prepared for the prospect of major-power war, which potentially could occur in the next decade?

Australian defence strategy traces its roots back to the 1987 *The defence of Australia* White Paper and the preceding 1986 Dobb Report and suggests a duality of thinking. On the one hand, the ADF's key task is the 'defence of Australia' mission, which emphasises a defence-in-depth approach based on securing and holding the sea–air gap that lies between Australia's northern and northwestern coast and maritime Southeast Asia. On the other hand, we engage in expeditionary operations in support of allies when and where such operations are in our national interests. This strategy sat well during the period of the Cold War and into the immediate post-Cold War period of the 1990s, when there was little or no direct threat to Australia's territory from a significant power. We had the luxury of counting on extended periods of strategic warning to prepare for any emerging threat, we were content to rely on the US to carry a fair degree of the burden for our defence, and our wider contributions to global security—think Iraq and Afghanistan—were part of Australian reasoning over that time.

In 2019, that situation has changed. Far from being in a strategic backwater, Australia is very much now a state in the front line, geographically, strategically and politically. The rapid development of Chinese military capabilities is emphasising long-range, high-speed power projection and A2/AD, which increasingly is expanding in a manner that would enable the PLA's long-range strike capacity to envelop Australia's key bases, particularly our northern base infrastructure. The geographical barriers and the 'tyranny of distance' are being eroded with the onset of technological innovation in new military domains, such as space, cyberspace and across the electromagnetic spectrum. Add to this the new ability to reach more easily into the domestic affairs of states through technology and the Chinese state's investment in organs of state designed to covertly influence others' policies and decision-making. A mindset of assuming we can defend the sea–air gap is becoming less and less credible.

The deployment of US forces into northern Australia, along with key nodes such as the joint facility at Pine Gap and those at North West Cape, make it likely that in a broad future military conflict between the US and China such forces, along with Australian military and civilian infrastructure, would come under direct threat. A direct military attack against Australia would no longer necessarily occur after a warning period of 10 years. With active flashpoints in Asia, including Taiwan, the Korean Peninsula, the South China Sea and the East China Sea, making the prospect of a US–China conflict in the next decade a real possibility—particularly when misunderstanding of each other’s strategic calculations and lack of escalation-control mechanisms are added into the mix—we can’t assume that such a war is a ‘low probability/high consequences’ contingency.³ Recourse to war in the 21st century is likely to be more rapid than in the last decades of the 20th century. That’s because of the blurry line between activities meant to stay below the threshold of conflict and acts that are seen as escalatory, along with the lethality of modern long-range weapons and the complexity of modern warfare. These factors combine to make a purely operationally defensive posture less and less relevant.

Rather than continuing to base our defence policy on the current strategy, which places great faith in defending the inner arc and contributing to global coalition operations, the ADF should develop a new military strategy: *forward defence in depth*. This seeks to ensure that the ADF can rapidly project power deep into the maritime Indo-Pacific region to deny a potential adversary the initiative from the outset and prevent them from bringing long-range, high-speed military effects to bear. Such a strategy would inform changes in force posture, as well as demand consideration of additional force structure beyond that suggested in the 2016 *Defence White Paper* and its accompanying Integrated Investment Program. It would imply that the next Defence White Paper process, perhaps finishing as early as 2020–21, must be more ambitious, be strategy-led and be driven by a realistic examination of the emerging strategic environment and a recognition that we’re heading towards a more dangerous future. It would also demand a review of defence spending and a willingness by government to consider spending more on defence than is currently planned for under the 2016 White Paper.

Forward defence in depth

Forward defence in depth builds upon the military strategy outlined in the 2016 *Defence White Paper*, which was centred on three strategic defence objectives:

- Deter, deny and defeat attacks on or threats to Australia and its national interests, and northern approaches.
- Make effective military contributions to support the security of maritime Southeast Asia and support the governments of Papua New Guinea (PNG), Timor-Leste and Pacific island countries to build and strengthen their security.
- Contribute military capabilities to coalition operations that support Australia’s interests in a rules-based global order.⁴

Forward defence in depth would integrate the first objective—essentially the ‘defence of Australia’ mission—with the second objective, which would see the ADF playing a far more visible and regular role throughout maritime Southeast Asia and the South Pacific. In doing so, we’d extend our defence in depth far forward, rather than basing the defence of Australia task on being able to defend the comparatively narrow strategic moat that is the sea–air gap. The third objective—more far-flung operations in support of a global rules-based order—should be prioritised to contingencies across the Indo-Pacific region and so be much more clearly defined in the light of Australia’s actual threat environment. The objective of forward defence in depth would be to expand our regular military presence and meet any threat that emerges much further from Australia’s shores.

This isn’t meant to discount the requirement or significance of Australia’s vast inland areas as a natural defensive advantage, or to wholly discount the continuing advantages of our strategic geography. One of the principal reasons modern Australia has never been invaded is because of the difficulty of projecting enough forces to occupy the Australian continent, combined with the problems posed by the vast and hostile terrain between our northern coasts and our southern population centres.

But defence infrastructure in our north is too sparse and too vulnerable. It’s a very thin front line with very long internal lines of supply to southern defence infrastructure and force concentrations. That posture is increasingly in need of review.

In an age of new types of weapons and new types of warfare, it's not at all clear that the sea–air gap gives Australia the same advantage as it did in the days of the Dibb Report in 1986 and *The defence of Australia* in 1987, when the threat environment was drastically different.⁵ In those days, the Chinese state was an introverted, inward-looking and backward power that was just beginning to break free of its Maoist disasters. Deng Xiaoping's 'four modernisations', most notably military modernisation, were moving slowly. The Chinese state's authoritarian leaders had yet to be shocked by the pace and precision of modern warfare, as demonstrated in the 1991 Gulf War, which would kickstart the rapid modernisation of the PLA from the late 1990s onwards—although the shock of the power of the internal democracy movement that was so ruthlessly repressed by the Chinese Communist Party leadership in 1989 was at least equally responsible for planting the seeds of what we now see from President Xi's ruling regime. The PLA's mindset was still 'people's war under modern conditions', and its primary strategic direction focused on the Soviet threat to China's northern borders. The PLA Navy was at best a brown-water coastal defence fleet, and the PLA Air Force was largely made up of decrepit MiGs to support the ground forces. There was no long-range missile capability beyond a few old liquid-fuelled intercontinental ballistic missiles.

By contrast, in 2019 a forward Chinese military presence, expanding out from military bases in the South China Sea through the archipelago to our north and potentially into the South Pacific between Australia and the US, would fundamentally change our strategic calculus for the worse. This presence could come from forward military bases of the sort seen now on disputed rocks and reefs in the South China Sea and dual-use facilities such as Hambantota in Sri Lanka, or potentially in somewhere like Vanuatu through increasing presence that over time starts to look a lot like basing, through to powerful PLA Navy carrier battlegroups, submarines and long-range forward-deployed PLA Air Force air power.

The PLA's task is now to prepare to fight and win informatised local war with a maritime focus, and to deter and deny US (and allied) intervention in any regional military contingency—read Taiwan and the South China Sea—through exploiting A2/AD capabilities.⁶ The PLA also has a strong role in 'political warfare'—including operations to achieve strategic gains below the threshold of armed conflict.

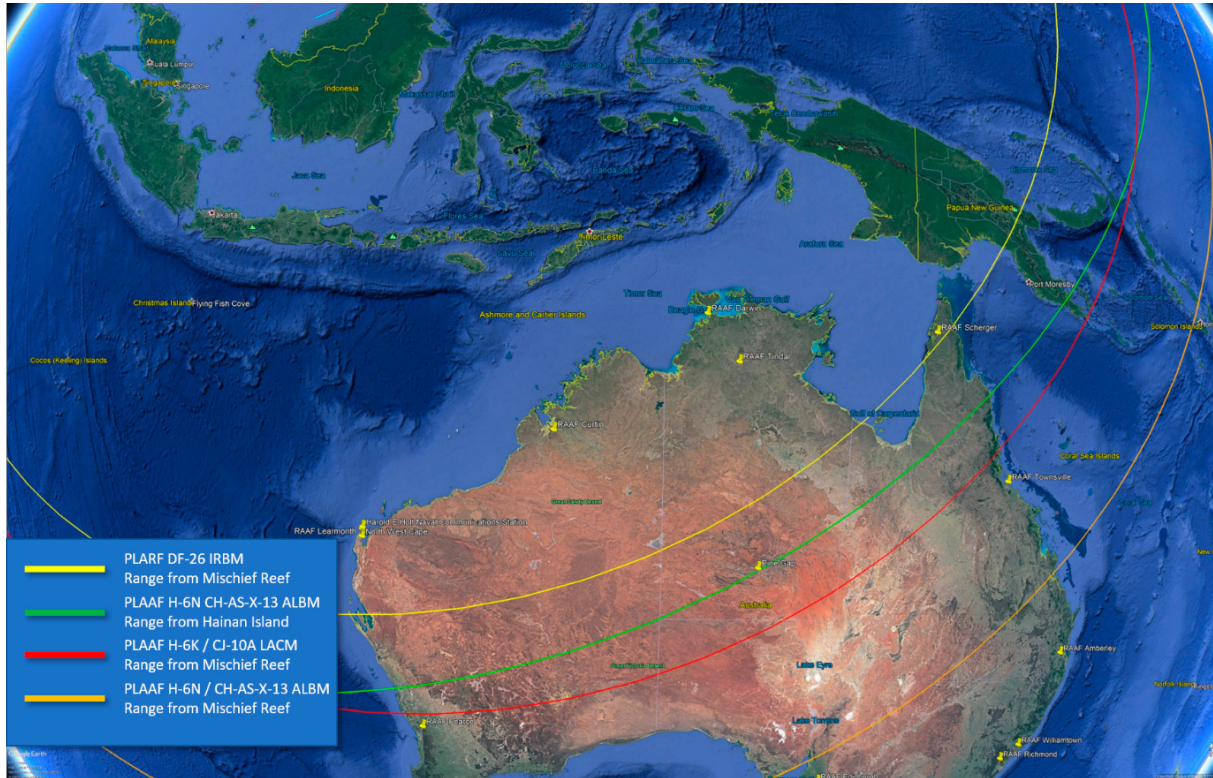
Future war is now likely to occur in new operational domains, including cyberspace and, most significantly, in space. China's military has established the PLA Strategic Support Force to control an ever more sophisticated space force, including a full suite of satellites to understand the distant battlespace on far seas, and counterspace capabilities to deny access to vital space support to the US and its allies.⁷

The role of the PLA Rocket Forces continues to expand with more advanced conventionally armed ballistic-missile systems complementing nuclear forces, particularly in A2/AD capabilities. Those capabilities are steadily expanding in reach and improving in accuracy. Chinese DF-26 anti-ship-capable intermediate-range ballistic missiles (IRBMs), together with advanced submarine, air and surface-ship-launched supersonic anti-ship cruise missiles, are raising the cost of access to potentially unacceptable levels (depending on US countermoves) for the US as far out as Guam.⁸ Were such a system to be forward-deployed into the South China Sea, it could strike at RAAF Tindal, RAAF Darwin and base at Scherger, Learmonth and Curtin, as well as the facilities at North West Cape (Figure 1).

The PLA Air Force is developing true strategic air power, including through updates to its bomber and long-range land-attack and anti-ship cruise-missile capabilities. Most recently, China has developed the H-6N bomber, which can carry the 3,000-kilometre-range CH-AS-X-13 air-launched ballistic missile, and is working on an even more capable and stealthy H-20 bomber. If deployed into the South China Sea, such a combination could strike at ADF bases almost as far south as RAAF Edinburgh, near Adelaide.⁹

Chinese investment in hypersonic weapons R&D, as part of President Xi's 'civil–military fusion' agenda, adds to the challenge. The speed and complex flight profile of hypersonic weapons make ballistic-missile defence (BMD) more challenging, dramatically reduce warning time and extend strike range.¹⁰ In a recent dialogue on Chinese hypersonic weapons at the Hudson Institute, it was noted that 'hypersonic glide weapons can hold at risk carriers [and] bases in an attempt to change US behavior in places like the South China Sea [and] it is the hypersonic missile capability that will keep us out of the Indo-Pacific and [will have] rendered

Figure 1: Chinese ballistic-missile and air-launched cruise-missile strike ranges



Source: Google Earth.

aircraft carriers operationally useless'.¹¹ In the Australian context, facing Chinese forces equipped with such weapons in the coming decade, the sea–air gap would be overflowed by hypersonic weapons in a matter of minutes. In an age of hypersonic weapons, the sea–air gap offers reduced defence in depth.

The growth of the PLA's forward presence would mean that the Chinese state would likely be able to project and position military power in a manner that could hold at risk our northern bases in a crisis, particularly if our defence rests on responding only if an opponent enters our northern air and maritime approaches.¹² That's certainly what's suggested in the *2016 Defence White Paper*, with the statement that 'the ADF needs to be able to decisively respond to military threats to Australia, including incursions into our air, sea and northern approaches'.¹³ It's a reactive strategy that waits for an opponent to approach Australia's shores and, in doing so, surrenders the operational initiative—which isn't in line with the history of Australian strategy or action since Federation, which is full of examples of Australian governments recognising that dealing with threats at a distance, in partnership with allies, is often the best approach.

It also rests on assumptions about the strategic geography of a 'land girt by sea' offering us a decisive defensive advantage. Yet the growth of long-range cruise- and ballistic-missile capabilities and the emerging threat of hypersonic weapons, cyberattack and Chinese anti-satellite weapons make possible new types of coercion that simply bypass the strategic moat to our north. It also fails as a credible response to the ability of the PLA Navy to interdict our vital fuel and energy lifelines, which all exist offshore and traverse maritime chokepoints and narrows within maritime Southeast Asia.¹⁴ The risk must be that a defence of Australia policy based on defending the sea–air gap could potentially become the Maginot Line of the 21st century.

Forward defence in depth would see the ADF develop and extend an A2/AD perimeter outwards. The sea–air gap is still important, but it's the starting point of a deep forward-defence posture. It's the main rear area, while Australia's landmass is the 'deep rear'. The strategic direction of our military activities should be deep into maritime Southeast Asia, with an operational focus on the

South China Sea, the Philippine Sea between the first and second island chains, and the South Pacific. The objectives of the new strategy are first to ensure an ability to prevent an adversary from using long-range strike capabilities against us unmolested, and second to deny that adversary the ability to enter Australia's air and maritime approaches by controlling the key maritime straits within the Southeast Asian archipelago. A third objective is to be better positioned to be able to respond in the event that a major power were to interfere with Australia's maritime trade and energy security across the Indo-Pacific region.

As discussed below, there's a strong diplomatic dimension to this new strategy that expands and enhances regional defence engagement. Australia can't do this alone, and we need to work with key partners in the Southeast Asian region, as well as the Southwest Pacific. Any new strategy must be developed as a regional effort, rather than as a purely Australian defence activity.

Embracing a forward-defence-in-depth strategy seeks to deny any adversary a cost-free ability to manoeuvre close to Australia and would constrain the adversary's ability to exploit long-range strike weapons effectively or threaten our energy security. It shifts our strategy to be more in line with 21st-century multidomain operations and emphasises a requirement for the ADF to become a power-projection force in every sense. It allows us to strengthen cooperation with the US and do more to share the burden with our essential strategic partner, while opening up new opportunities for greater defence cooperation with key partners across the Indo-Pacific and into the South Pacific, notably Japan. The 2018 agreement by the US, Australia and PNG to jointly develop the Lombrum naval base at Manus Island is an excellent start, but that defence diplomacy needs to go much further.¹⁵

The diplomatic dimension

Australia can certainly acquire the military forces to project power in a more substantive and robust manner, but a forward-defence-in-depth strategy will only work if it's done in close collaboration with partners in Southeast Asia and the South Pacific and if it has a solid diplomatic foundation. The redeveloped Lombrum naval base will ensure US and Australian access to a geostrategically important deepwater port and counterbalance growing Chinese influence and presence.¹⁶ The deal over Manus is vitally important, given the geostrategic location of the base.¹⁷ It provides a key forward operating base for US and Australian naval forces, strengthens the security of PNG and provides a highly visible presence that is obvious as a deterrent to the risk posed by Chinese forward air and naval forces in the future. As ASPI's Peter Jennings argues, it's also important to pursue the development of the Momote air base to support US Air Force, US Navy and RAAF aircraft when necessary.¹⁸

Manus can provide a starting point for a diplomatic approach in which a new strategy of forward defence in depth could be developed and enacted with Southeast Asian and South Pacific states as fully active participants, not merely as passive observers. The overriding objective should be to improve Australia's ability to make effective military contributions to ensure the security and stability of maritime Southeast Asian and South Pacific states and provide them with alternatives to greater coercion from Beijing, accompanied by debt and dependency.

The diplomatic dimensions of forward defence in depth for the South Pacific would involve negotiating not only an enhanced program for air and naval visits to PNG's Manus Island, but greater access to other states' air and port facilities (for example, in Vanuatu). Australia could assist South Pacific states to expand their intelligence-gathering capabilities and their ability to achieve more comprehensive maritime domain awareness. This could be done through practical measures such as providing intelligence, surveillance and reconnaissance (ISR) platforms like unmanned aerial vehicles (UAVs) and boosting the Pacific Maritime Security Program, as well as through joint training and exercises, along with staff exchanges. Australia's approach should also see deepening partnerships with New Zealand, Britain and France to respond to a range of non-traditional security threats facing South Pacific states.

The approach to Southeast Asia will be different from that to the South Pacific. It will require the ADF to work with increasingly capable military forces and build greater commonality between forces. In Southeast Asia, our priority should be strengthening our defence relations with Indonesia. Some practical measures could include reciprocal access for the RAAF and the Indonesian Air Force (TNI-AU) to each other's bases for joint training, more regular military exercises and joint patrolling by developing multinational naval flotillas. As in the Pacific states, working to advance our partner's national security needs to sit at the heart of this approach for it to be viable.

A key step at the diplomatic level must be developing a formal alliance relationship with Japan that complements and enhances both states' alliance structures with the US (Figure 2). Building a formal 'trilateral defence alliance' between Washington, Tokyo and Canberra would be a step towards Japan becoming a 'sixth eye' in the Five Eyes group. Under such an alliance, Washington, Tokyo and Canberra would boost intelligence sharing, expand joint exercises and extend joint operations in critical regions of interest, notably in the South China Sea.

Australia has excellent training ranges in the Northern Territory that would allow US, Japanese and Australian forces to develop common tactics using common platforms such as the F-35A Joint Strike Fighter.¹⁹ Japan's decision to purchase 105 F-35As (together with 42 F-35B short take-off and vertical landing aircraft) from the US, together with Australia's purchase of at least 72 F-35As, increases the opportunity for Australia and Japan to engage in joint training on common systems.

Much closer Japanese and Australian defence cooperation, and the establishment of a formal trilateral alliance, could also see forward deployments of Japanese and Australian air and naval forces along the second island chain in a crisis, pivoting around Manus and Momote, as well as Darwin–Tindal in the south, Guam and Micronesia in the centre, and Okinawa to the north. Agreeing on reciprocal access to Japanese and Australian, as well as US, defence facilities for each state's forces would make such a step possible. This outer perimeter has to be defended, and the best way to defend it is by projecting power well forward towards the first island chain to 'attack at source' using capabilities that are less vulnerable to Chinese A2/AD systems, notably submarine forces, and advanced long-range air power equipped with stand-off weapons.

Figure 2: Australia–Japan defence cooperation at Red Flag Alaska 11-2



Source: Department of Defence, [online](#).

The sharing of intelligence is important and acquiring common maritime domain awareness capabilities in the form of high-altitude UAVs and even space capabilities would be a good start. With the ADF's acquisition of Triton and now Reaper, working with Japan and Indonesia to develop common UAVs that can enable the sharing of information makes sense.²⁰ In space capability, there's a chance for greater collaboration with both states to develop common command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) capability, including exploiting small-satellite technologies, and to cooperate on space launch capability. The development of a space launch site in the Northern Territory and Indonesia's plans for future space capability could mesh to open up new avenues of cooperation that would lead to common sea, air, space and ISR capabilities.²¹ A closer Australia–Indonesia defence relationship, anchored on joint operations and reciprocal access to base facilities, as well as cooperation in intelligence sharing and the development of common C4ISR capability, is a good step forward. It would complement a new Japanese–Australian defence alliance.

The challenge, of course, is that not all states are willing to openly identify the increasingly assertive Chinese state as a threat that they must respond to—although regional surveys of policymakers show that concerns about Xi's China seeking to be a non-benign regional hegemon are real.²² For many South Pacific states, the challenges posed by the effects of rising sea levels and the impact of climate change are existential.²³ The immediate risks come from non-traditional threats such as transnational crime, people smuggling and illegal fishing.

Nor is it realistic to expect Southeast Asian states to turn away from China's Belt and Road Initiative (BRI) without a better alternative, although Southeast Asian leaders can negotiate the risks of corruption and dependence effectively, as we have seen with Malaysian Prime Minister Mahathir's polite and forceful renegotiation of BRI deals with Beijing. There's a clear pushback emerging against the Chinese state's pressure through the BRI, including efforts to renegotiate participation in the initiative from within Southeast Asia, and growing caution over the Chinese state's intentions in the South Pacific.²⁴ How this can translate into a willingness to work with Australia in facilitating a forward-defence-in-depth posture for the ADF that advances regional nations' own security, including opening up access to forward basing, and closer cooperation on joint development of critical defence capability needs to be ascertained at the foreign policy and defence diplomacy level.

Australia also needs to work with the US, Japan and India to offer investment approaches that free Southeast Asian and South Pacific states from the threat of Chinese debt-trap diplomacy. Huong Le Thu has noted that the role of the Quadrilateral Security Dialogue is broadly seen in a positive light by ASEAN member states.²⁵ The US proposal for a 'free and open Indo-Pacific' (FOIP) strategy further adds to a suite of economic, diplomatic and security alternatives.²⁶ With the Quad and FOIP, ASEAN and South Pacific states don't have to accept China's BRI, with all its geopolitical baggage. Australian forward defence in depth would complement these diplomatic foundations with a defence dimension that's currently lacking.

Overall, the ADF undertaking forward defence in depth would reinforce the importance of Australian regional diplomatic engagement and economic investment through approaches such as the Quad and FOIP in a way that takes the tools of statecraft and employs them in an aligned and linked manner.

The ADF—particularly the Navy—is visible throughout the region even now, notably in exercises such as the recently held Indo-Pacific Endeavour (Figure 3).²⁷ Forward defence in depth would take that posture to a new level and entail putting our current operational force posture onto a much more persistent, muscular and visible basis to meet threats to Australia at more distant ranges. It would essentially see the ADF adopt an A2/AD capability at long range alongside key partners through closer regional defence engagement to complicate Beijing's choices to coerce, rather than surrendering the initiative.

Australia's defence forces would focus on power projection into the South China Sea and the Philippine Sea using sea power, particularly submarines, and air power, and employing joint forces to defend the Southeast Asian maritime straits, while having the ability to maintain presence in the Southwest Pacific. Some might say that such an ambitious strategy is beyond Australia's means, but Australia as a middle power can punch well above its weight if it acquires the right types of capabilities and is willing to match capability growth with a more effective and relevant defence strategy. Most importantly, the strategy requires a willingness

Figure 3: Australian Army 'Aussie Tiger' armed reconnaissance helicopter lands on HMAS Canberra during Indo-Pacific Endeavour 2019



Source: Department of Defence, [online](#).

to challenge strategic orthodoxy and entrenched mindsets and adapt to a worsening strategic environment. Failure to do so will see Australia less secure and less capable of responding to major-power challenges as they emerge.

There should be no misconceptions that such a shift would not involve significant cost. The importance of building closer defence alliances and enhancing burden-sharing can ameliorate some of the cost, but a new force structure, discussed below, to match a new strategy will be expensive.²⁸ Yet that future of greater defence spending may be unavoidable, given the rapid deterioration of our strategic outlook.

Implications for force structure and posture

The issue of what forward defence in depth means for ADF force structure choices is the final part of the puzzle. In this regard, the role of the US–Australia alliance is crucial. Australia needs to do more to strengthen the alliance and burden-share in the region, and developing a trilateral US–Japan–Australia alliance can open up many possibilities, as well as boosting defence cooperation with other key partners in Southeast Asia and expanding our defence role in the Southwest Pacific. At the heart of expanded defence cooperation, a strategy of forward defence in depth expands the potential for Australia to work with the US and other partners to build multilateral deterrence against the demonstrated way that President Xi is using Chinese power and, if that deterrence fails, more effectively defend against any threat in a crisis than could be achieved by ceding the operational initiative to the adversary in a narrow sea–air gap strategy.

We are talking about long-range power projection, first and foremost. The loss of the RAAF's F-111 force in 2010 tore open a large gap in our power-projection capability that has yet to be filled.²⁹ The F-35A, while technologically at the apex of combat aircraft development, lacks the range and payload to really project power at long range in a responsive manner. Boeing Australia is developing the Loyal Wingman unmanned combat air vehicle (UCAV), unveiled in 2019, as part of its proposed Airpower Teaming System, with a first flight set for 2020 and a range of 2,000 nautical miles.³⁰ It's smaller than the F-111, and so can carry less payload, but the lower cost of developing a UCAV would mean greater payload could be carried over more platforms as an extension of manned platforms.³¹ The key objectives are low cost, rapid development cycles, and the potential benefits of reintroducing mass back into the air combat equation. Manned-unmanned teaming will allow manned fighters operating to the rear of UCAVs to stay out of harm's way.

The Loyal Wingman is important because it represents the first effort to restore power-projection capability for the RAAF, which would be essential for any shift to a forward-defence-in-depth strategy. But, alone, it's insufficient to really carry out forward defence in depth. Deploying forces well forward and acquiring longer range anti-ship and land-attack cruise missiles should complement new capabilities such as the Loyal Wingman if we're to project power rapidly and effectively. Long-range stand-off weapons are a capability that the ADF currently lacks, either on its naval surface combatants or in the RAAF's strike and air combat capability.

Two short-term capability solutions are clear. The first is to forward-deploy the air power to forward bases beyond the Australian mainland through access agreements that can be negotiated with partners, particularly with Japan, as noted above. However, if we are to do this, then those forward bases will have to be defended. Given the threat posed by long-range Chinese missile capabilities, any deployment will go hand in hand with BMD systems that are land-based and sea-based. Building an integrated Tindal-Guam-Okinawa BMD chain would be an essential step to defend these bases, along with investing in longer range air-defence systems that are effective against high-speed cruise-missile capabilities. Both Japan and the US have BMD capabilities, and it's time for Australia to consider its options in this regard, not necessarily for national missile defence but for forward-deployable land- and sea-based BMD that's effective against the type of IRBM threats epitomised by the Chinese DF-26 anti-ship-capable IRBM (Figure 4).

The objective of such a BMD chain would be to provide manoeuvre space for Australian, Japanese and US naval forces between the first and second island chains (within the 'middle seas') to project power into the 'near seas' behind the first island chain. Installing land-attack cruise missiles such as the Block IV Tomahawk on our future naval surface combatants and submarines would add to Australia's ability to project power into a major-power adversary's near seas to strike at its forward bases, particularly in the South China Sea.³² It would also enable long-range anti-surface-warfare capabilities for the Navy, which it currently lacks, given its continued dependence on the obsolete, slow and short-ranged Harpoon anti-ship missile.³³

If Australian air power can operate from forward bases that are effectively defended, then equipping those forward-deployed aircraft with longer range stand-off missiles would add to the survivability of naval forces and contribute towards denying the PLA the ability to employ a long-range strike capability. For example, both the F-35A and the Block III F/A-18F could carry the 1,000-nautical-mile-range JASSM-XR joint air-to-surface stand-off missile for land strike as well as the LRASM long-range anti-ship missile.

In the next Defence White Paper, greater consideration needs to be given to new concepts and capability solutions that could offer the ADF greater flexibility, reach and responsiveness against a very capable adversary's air, naval and long-range strike capability. Current planning for the ADF's future force structure under the *2016 Defence White Paper* depends heavily on the Attack-class future submarine to provide long-range strike and deterrence. However, political interest to sustain naval shipbuilding means that the first of those won't appear until 2034 at the earliest, and a sizeable force won't be available until the mid-2040s.³⁴ They'll arrive too late and are a capability for the 'war after next', not the next war. In the meantime, the Navy must depend on ageing though upgraded Collins-class boats.

Figure 4: The Dong Feng-26 anti-ship-capable intermediate-range ballistic missile



Source: CSIS Missile Defence Project, [online](#).

Such an approach doesn't respond adequately to the rapidly changing security outlook. We need to think outside the box in the next White Paper and look at new solutions to future force structure rather than drift forward on autopilot. How do we reach out, identify a threat at very long range, and strike quickly and decisively before an adversary is able to use its long-range firepower?

Such a task demands a resilient knowledge edge built around a survivable multi-tier air and space C4ISR network comprising long-range UAVs, satellites, advanced unmanned underwater vehicles (UUVs) and even unmanned surface vessels (USVs) that are postured *forward* into the Indo-Pacific, to 'see first', and then leverage high-speed, long-range strike capabilities from the air and sea to kill the archer before he releases his arrow.³⁵ It demands that Australia develop its own A2/AD capabilities to deter, and, if necessary, defend against, a major-power threat at long range—well beyond the inner arc and the sea–air gap.

Australia's current approach to long-range ISR is based on the acquisition of 15 P-8A Poseidon maritime patrol and response aircraft and six (possibly seven) MQ-4C Triton high-altitude, long-endurance UAVs that undertake maritime surveillance. They're supported by the Jindalee Operational Radar Network (JORN), which offers 1,000–3,000-kilometre-wide area surveillance from three bases in central Australia.

Efforts are underway to enhance JORN under AIR 2025 Phase 6, but extending that coverage north could also be achieved by adding new JORN transmitters.³⁶ For example, a transmitter at RAAF Tindal would significantly extend JORN's reach into the southern part of the South China Sea.

On the question of platforms, the decision to limit the Triton buy to six or seven aircraft gives a minimum capability depending on operational demands. For peacetime patrolling of the sea–air gap or monitoring Southern Ocean fishing, it's certainly enough, but for higher operational tempo scenarios we will simply lack enough Tritons to keep them deployed at long range on station for long. Nor is there any tolerance for attrition due to unserviceability or adversary countermeasures. Expanding the Triton buy beyond six or seven aircraft would give greater operational flexibility and mission assurance. It makes sense if Australia is to project power and presence north of the sea–air gap.

Supporting terrestrial ISR solutions such as Triton and JORN with a robust space layer for sovereign ISR also adds to our ability to see deeper into a hemispheric battlespace, rather than focusing our gaze on a limited sea–air gap region. From low Earth orbit, we can cue and employ those long-range strike capabilities we acquire more rapidly and effectively. Defence has a golden opportunity to leverage the rapid development of an Australian space industry to acquire such capabilities quickly and affordably within Project DEF-799 Phase 2.³⁷ The threat posed by hypersonic weapons may see the development of a 'space segment' of sensors that could enhance ADF long-range surveillance to an even greater degree, and open the door to US–Australian cooperative development of such capability.

That space segment can be augmented with high-altitude pseudo-satellite capability using very-long-endurance UAVs. Just such a UAV—the Airbus Zephyr—is being tested at Wyndham in Western Australia.³⁸ It can remain aloft for months, providing ISR and backup command, control and communications support for ADF forces, whether they're engaged in defending the Australian mainland or in expeditionary operations.

As we consider capability developments further into the 2020s and beyond, we should open our minds to the possibilities that are on the horizon. In a race to the swift in future war, the side that can strike most rapidly and absorb and reconstitute combat losses wins. This isn't a cult of the offensive, but a practical requirement based on emerging military reality. The US is belatedly trying to catch up to Russian and Chinese hypersonic strike capabilities in both hypersonic glide vehicles and scramjet technology. Australia is a leading actor in scientific R&D in hypersonics. That national capability shouldn't be left in the lab or given to others to take advantage of operationally.

A more pervasive use of networked unmanned systems in the air, on and under the sea and in near space needs to be a key focus for defence investment. Two critical areas—in the air and under the sea—need to be a focus of future ADF unmanned systems capability development.

First, Australia should consider participation with the US (and potentially alongside Japan) in its development of penetrating counter-air architecture towards future air-defence capability. In US thinking, there's been a move away from exquisite platforms that demand 30-year development cycles, which drive up cost and risk. Instead, the US Air Force is pursuing a new 'century series' for the next generation of fighters beyond the F-22 and F-35, with rapid spiral development, emphasis on fast innovation cycles, and manned–unmanned teaming. Recognition of the challenges posed by Chinese (and Russian) A2/AD means that future air combat capabilities will increasingly emphasise long range and high payload. If Australia is to look beyond a Maginot Line mentality in defence, long range and high payload, as well as high speed, are exactly what will be needed in future air force capability development. The benefits are increased if such a capability is spread across a larger strike and air combat force comprising a mix of manned and unmanned systems.

Second, waiting on the Future Submarine Program to begin to deliver a significant force of Attack-class submarines to replace the Collins class is likely to increase strategic risk. While the Attack-class boats are being developed, Australia should look to large UUVs as a new approach to undersea warfare. Both the US Navy and the Royal Navy are acquiring extra-large UUVs (XLUUVs), and Australia needs to acquire that sort of capability.³⁹ Cost matters here, and with current estimates of unit cost for a single Attack-class future submarine at \$4 billion, Australia could acquire a fleet of 24 XLUUVs such as the US Navy's Orca-class platform for a total of \$1.5 billion—a quarter of the cost of one Attack-class submarine. Such a fleet could be acquired much more rapidly and brought into service by 2022.

All this costs money! The *2016 Defence White Paper* made a commitment to increase defence spending to 2% of GDP equivalent, but events have since overtaken the assumptions underpinning that policy commitment and it's time to revisit the key assumption that 2% of GDP will be enough. The political case must be made that defence spending will be driven by strategic need. Spending must also be 'smart' and targeted at key capability investments that will deliver maximum benefits in the shortest time frame. Defence spending so far seems to be meeting government aspirations—but is that enough?⁴⁰ Peter Jennings argues that 'strategic shocks will jolt a future government into spending more'.⁴¹

The very fact that the ambitious capability plan suggested in the 2016 White Paper will take so long to come to fruition—while the strategic environment is deteriorating so rapidly—should suggest to government two conclusions.

First, current capability development as planned for in the 2016 White Paper isn't designed to meet rapidly emerging threats of 'the next war', but instead seeks to develop an ADF force structure capability for the 'war after next'. Yet at the same time that proposed force structure emulates past patterns without consideration of how rapidly warfare and technology—a lot of it non-military but with enormous military applications—are changing. A fleet of 12 Attack-class submarines operational by the 2050s may be outmatched by large numbers of adversary UUVs, controlled by artificial intelligence and able to wage sea denial at lower cost than traditional manned submarines, while hypersonic land-attack cruise missiles devastate our northern base infrastructure, traversing the sea–air gap before F-35As can be scrambled from Tindal.

That scenario of Australia's Maginot Line of the sea–air gap being circumvented quickly both in combat and in military–technological developments can't be ignored or dismissed lightly. It drives the second conclusion—that defence spending needs to urgently pivot towards rapidly acquiring new capabilities and undertaking more effective defence diplomacy with our neighbours and throughout the region to enable Australia to exploit a new military strategy of forward defence in depth. This will demand the reprioritisation of defence acquisitions—greater urgency needs to be placed on acquiring long-range power projection for air and naval forces as described above—and smarter defence spending.

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Acronyms and abbreviations

A2/AD	anti-access/area denial
ADF	Australian Defence Force
ASEAN	Association of Southeast Asian Nations
BMD	ballistic-missile defence
BRI	Belt and Road Initiative
C4ISR	command, control, communications, computers, intelligence, surveillance and reconnaissance
FOIP	free and open Indo-Pacific
IRBM	intermediate-range ballistic missile
ISR	intelligence, surveillance and reconnaissance
JORN	Jindalee Operational Radar Network
PLA	People's Liberation Army
PNG	Papua New Guinea
R&D	research and development
RAAF	Royal Australian Air Force
RAN	Royal Australian Navy
UAV	unmanned aerial vehicle
UCAV	unmanned combat air vehicle
USV	unmanned surface vessel
UUV	unmanned underwater vehicle
XLUUV	extra-large unmanned underwater vehicle

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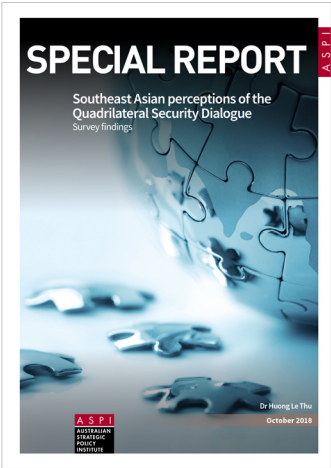
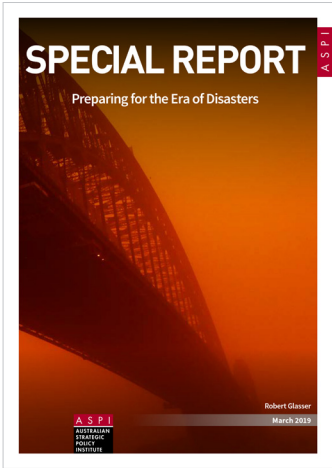
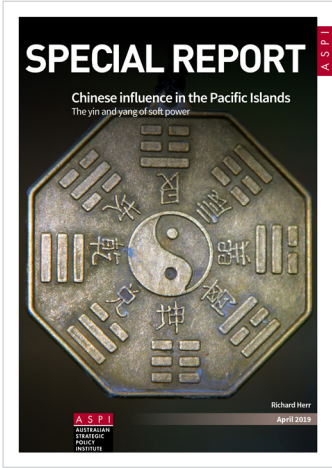
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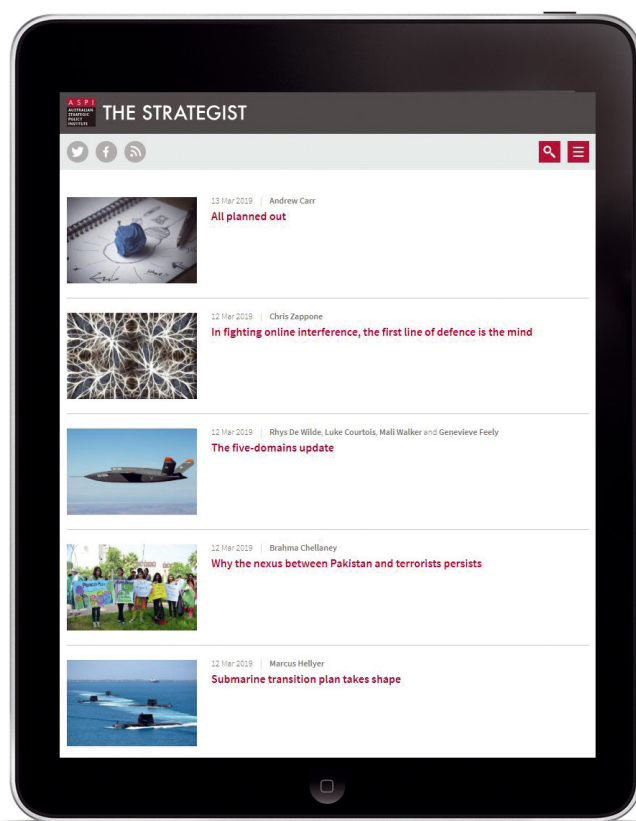


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