IN DENIAL: THE ADF AND LITTORAL MANOEUVRE

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Cover image: Troops landing at Tarakan after the initial assault waves. The image shows a Landing Ship Tank berthed alongside pontoon bridges. In the foreground the narrow, muddy shoreline is covered in debris caused by the pre-landing bombardment. The RAN assistant beachmaster (white cap and beard) directs troops across the beachhead. (Source: Australian War Memorial)

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/ INTRODUCTION

> We have seen that deterrence, even nuclear deterrence, doesn't always work.[1]
>
> Thomas Schelling, Nobel Laureate

> For many years Australians, uneasily peering northward, had comforted themselves with the contemplation of the great arc of islands which stretches from the Pacific by way of the island mass of New Guinea and beneath the centrepiece of the Philippines, through the East Indian archipelago to the Indian Ocean. These islands, particularly in the north-east, seemed a barrier to invasion. But few Australians had much knowledge of them, and the military leaders mostly shared the general ignorance.[2]
>
> Dudley McCarthy, Australian Official War Historian

The National Defence Strategy 2024 (NDS) directs a Strategy of Denial as the cornerstone of Australian Defence planning.[3] It further states that current Defence strategic policy and investments are designed to ensure the Australian Defence Force (ADF) has the capacity to 'deter through denial any adversary's attempt to project power against Australia through our northern approaches'.[4] In other policy direction, the Australian Army must 'be optimised for littoral operations in our northern land and maritime spaces and provide a long-range strike capability'.[5] Additionally, Army's 'amphibious capable combined-arms land system' is to be 'enabled by Navy and Air Force combat capabilities and supported by Navy's amphibious capability, to optimise the Army for littoral manoeuvre and control of strategic land positions'.[6]

The course set by Australian strategic policy for the ADF is simultaneously definitive and uncertain. It is definitive as to the provision of policy ends (achieve 'deterrence by denial'); available means (the force-in-being and Integrated Investment Program (IIP) provisions); location (Australia's northern approaches); and named method (littoral manoeuvre). Policy direction is nevertheless uncertain with respect to exactly what 'deterrence by denial' looks like, and the causal logic behind *how* the conduct of littoral manoeuvre in Australia's northern approaches will achieve 'deterrence by denial' (the 'ways'). Other uncertainty arises from what some people regard as the sheer implausibility of the mission, method and constraints offered by the NDS.[7]

The quotations above from Schelling and McCarthy bookend this uncertainty. Schelling, a foremost expert on deterrence, highlights the implicit uncertainty of deterrence outcomes. This is a concern given the importance Australian strategic policy has assigned to it. McCarthy's quotation shines light on the perennial, but unqualified, Australian strategic optimism about the geostrategic defensive benefits of the northern approaches to Australia—something more often a 'vibe' rather than fact.[8]

Fuelling uncertainty about strategic policy is the emphasis on 'ends' and 'means' at the expense of the third element of the classic staff college expression of strategy: 'ways'. The Chief of Army highlighted as much in 2024:

> Discussions of strategy too often descend rapidly from framing and defining the 'ends' to single-minded discourse on 'means'. Indeed, the focus is often almost exclusively on 'means' … with 'means' being synonymous with vehicles and equipment.[9]

The NDS identifies *tasks* which are effectively the pseudo 'ends' sought by policy within the rubric of 'deterrence by denial'.[10] Concurrently, the IIP makes provision for some of the 'means' likely to be required to achieve a Strategy of Denial within the primary area of military interest (PAMI) and Australia's northern approaches more specifically.[11] Concern arises from the lack of a suitable explanation of the anticipated 'ways' to employ the means available to meet the desired ends.

The concern is not what current strategic policy says about littoral manoeuvre. It is about what it does not say—such as not explaining how all the disparate tasks and capability priorities listed across Defence's services and groups cohere and contribute to achievement of 'deterrence through denial' through littoral manoeuvre. This is a serious shortcoming, because littoral manoeuvre is not a problem the Army alone can solve. We must look beyond the frequent *Army* newspaper and social media cliché images of soldiers cruising around the Arafura Sea in Zodiac craft—that is not littoral manoeuvre. Littoral manoeuvre is a complex joint force activity that must be executed across all the five domains at once. We are missing a compelling and plausible logic that explains how the complicated activity of littoral manoeuvre will aid 'deterrence by denial'. The seriousness of this national defence endeavour deserves more fidelity than an implied assertion of 'stuff will happen' when it comes to 'ways'.[12] The challenge is to articulate a feasible, acceptable and suitable littoral warfare manoeuvre concept ('way'), with a 'theory of victory' that meets strategic direction within the means available.[13]

Concerningly, current policy presents a hypothesis that currently suggests more questions than it answers. These questions include, but are not limited to:

- Can a conventional deterrence effect be achieved?
- What is the relationship between deterrence and denial?
- What are the consequences if deterrence fails?
- What are the key considerations in framing the littoral manoeuvre challenge for the ADF?
- Are there principles to frame development of a littoral manoeuvre campaign concept?

Strategy is necessarily a practical subject.[14] My aim in this paper is to examine these questions and suggest practical ideas in response. The possibility of a negative answer to the first question illustrates the importance of considering them all. If Australia cannot achieve an effective conventional deterrence effect, then it will inevitably have to conduct denial operations in its northern approaches—or capitulate in the face of coercion. Both are serious and challenging consequences. The risk of conventional deterrence failing quickly takes us to the prospect of denial operations. A 'silver lining' in such a situation is planning it, for the conduct of *denial* may be less esoteric than planning for *deterrence*.

'Deterrence by denial'—and its achievement though littoral manoeuvre—in many ways echoes a concern raised in 2011 regarding Australia's planned amphibious capability, 'a perceived disconnect between concepts and visions espoused … and the current reality'.[15] We must ensure we are not in denial about the risks and opportunities in Australia's extant strategic policy direction, and the putative ability of the ADF to enact a strategy of 'deterrence by denial' as directed.

I do not seek to be polemical in this paper. When the Army Research Centre and I first engaged about this topic my proposed title was 'Persistent, Lethal and Resilient? Australia's Integrated Land Force and Littoral Operations in the Indo-Pacific in 2030'. As my research progressed, however, it became apparent that the proposed title was aspirational at best, and at worst misguided and potentially misleading.

My purpose now is to foster thinking about littoral manoeuvre as an *emergent way* of Australian warfighting aligned to strategic guidance, sovereign circumstance, and the context of the times. In doing so, I will frame the issues that will need to be addressed by a littoral warfare manoeuvre concept for 'deterrence by denial' and I will propose some principles to guide such a concept. I propose a 'campaign framing concept' for

anti-access / area denial (A2AD) littoral manoeuvre as a key ‘theory of victory’ for a Strategy of Denial. This approach means the paper will be less platitudinous than that originally proposed, but more contestable and useful in helping Defence meet the mission strategic policy has set. I do not offer definitive answers herein. Rather, I seek to outline a path forward, grounded in assessment of the strategic context, policy and capability environment, to help the ADF’s professionals in developing good responses to the challenges outlined.

/ CONTEXT

> Context is the basis for strategy, providing a grasp of the strategic and operational environment in which one's strategy is to be conducted … Comprehending the strategic context frames our understanding … and the particular environment in which our strategies must operate within.[16]
>
> Frank Hoffman

The Littoral

In seeking to develop a concept for an environment it is necessary to first understand something about that environment. The littoral per se is not a 'new' topic for either the Australian Army or Defence. Notwithstanding extensive military engagements in littoral operations during the campaigns in the South-West Pacific during the Second World War, theorising about the littoral and possible roles and missions within it has been a topic of debate cyclically over the last few decades.[17] One of the ongoing debates is the contention around the terms 'littoral' versus 'amphibious' warfare. I side with the viewpoint offered by John Nash, and will use the same framing and understanding in this paper:

> Opinions range from them being synonymous to it being nigh on heretical to conflate the two concepts, while others decry littoral as no more than a buzzword describing operations that have been well-defined for centuries. Realistically, they are not the same, and the author would argue that amphibious operations fall under the broader term of littoral. In essence, all amphibious operations are littoral, but not all littoral operations are amphibious.[18]

The Chief of Army offers a simple introduction to the littoral, stating it comprises 'the areas of the sea that influence the land and the areas of land that influence the sea'.[19] More recently, and in its response to the NDS, the Army has expanded upon this view and offered insight as to why Australia's regional littorals matter for strategic defence purposes. The explanation is worth citing in full as it neatly captures why the littoral matters to Australia:

> But what is the littoral, and why is the Australian Army preparing to fight there? The 'littoral' is defined as 'the part of the country that is near the coast'. It is a broad term that goes well-beyond just the physical environment. It includes the land, rivers, people, infrastructure, coastal waters, airspace, and the

> electromagnetic spectrum in these coastal regions … and even the space above them. Littoral terrain dominates the Indo-Pacific region. Hundreds of millions of people live near the coasts, including 87% of Australians. The littoral connects us to our economic wellbeing: maritime trade arrives through coastal waters and shipping lanes, and goods flow through ports and airports in coastal areas. It is where the critical internet cables hit national shores, as the hubs of our digital world. The littoral includes the key straits and passages that form the edges of Australia's 'northern approaches'. It is the home to most of the region's potential flashpoints … The lifeblood of the Indo-Pacific region, and of Australia, is in the littoral. This includes some of the most challenging jungle, mountain, riverine and urban terrain in the world.[20]

Army's lucid explanation of what 'the littoral' environment is, and why it matters, is useful to a point. What it fails to do is ascribe the significance of the littoral and its impact upon the conduct of military operations. After echoing a description of the littoral that accords with that offered by the Army, Jeremy Blackburn, a senior British naval officer, offered this assessment at the RAN Sea Power Conference in 2010:

> My proposition is that it constitutes a new joint paradigm which will affect not just our command structures but the way in which we plan, train, equip for and support our operations … It is an area where traditional service demarcations cannot easily work, since the boundaries between environments are, to say the least, very blurred. It is as challenging a management and command problem as you could hope to meet.[21]

This assessment succinctly highlights the complications littoral manoeuvre introduces to the planning and execution of operations. What it, and previous explanations, do not do very well is help us understand the military purpose sought in Australia's embrace of littoral manoeuvre. This purpose is effectively about control—with control through littoral manoeuvre being a means to the end of 'denial'. Chris Smith uses the example of the campaign at Milne Bay during the Second World War to illustrate this point:

> Take the World War II Battle of Milne Bay, for example. Both General Douglas MacArthur, Supreme Commander, Southwest Pacific Area, and the Japanese military recognised almost at the same time that the eastern tip of New Guinea was critical for exercising control of the Solomon Sea. Fortunately, MacArthur got Australian troops there first, occupying Milne Bay and commencing construction of three airfields. That move led to a defensive battle against a Japanese amphibious force hoping to seize the airfields for its own use. What resulted was a land battle to protect airfields, and the airfields were only important to the extent that they allowed for airpower to control a large part of the Solomon Sea—a battle on land for control of the sea from the air.[22]

Another matter to note is the regional geostrategic situation and proliferation of advanced military technologies within the Indo-Pacific over the last decade. These contribute to a trend of littoral operations moving from complicated to increasingly complex. Reviewing the nature of Australia's strategic circumstances, and the current strategic policy response to it, will provide further context for efforts to analyse and understand the complexity of the 'deterrence by denial through the conduct of littoral manoeuvre' problem set.

A Brief Look at Australia's Strategic Policy Circumstance

Over the years, White Papers from different governments have offered various views regarding Australia's strategic circumstance. Yet a simple and timeless fact endures about Australia's geostrategic situation: Australia is a continental island nation, and the archipelagic regions to our north, north-east and north-west present three possible operational scenarios with respect to the defence of Australia. These are:

- A potential defensive barrier
- A stepping-stone bridge and potential base locations to support offensive operations by an *aggressor*
- A stepping-stone bridge (and potential basing location) to support offensive operations by *Australia* into the region.

Which scenario prevails depends upon the policy choices made and Australia's ability to control, deny or exploit the approaches through agile presence, as well as its ability to project accurate and lethal long-range forces from and through them.[23]

An additional factor to consider (albeit one that does not disavow the relevance of these three scenarios) is that the treasured 'sea-air gap' of the *Defence of Australia* era has collapsed amid the proliferation of technologies agnostic about distance and domain.[24] In response, there has been a longstanding debate in Australia about these enduring realties. It centres around whether our defence strategic culture should (or could) be characterised by a focus on war fighting for *continental defence* or, instead, should focus on *expeditionary operations*.[25] This now tedious debate arguably (and largely) misses the point that perhaps Australia's approach has often been one more characteristic of *hedging*—described in one editorial as 'force planning against improbable threats'.[26] Students of Australian strategic policy and defence acquisition in the late 20th century may well recognise something in this description.

Another enduring factor since the late 20th century is that Australia is a technologically sophisticated nation of significant means (as seen in Australia's membership of the G20).[27] Australia also remains a rich nation that nonetheless consciously maintains an undeclared and bipartisan policy of placing low priority on defence expenditure. This has often led to the situation where relatively low quantities of highly sophisticated defence capability are acquired, regardless of threat or operational intent.

Neither the 2023 Defence Strategic Review (DSR) nor the NDS offer any novel additions to these insights. What emerges instead is another reinterpretation and slight hybridisation of familiar Australian strategic policy tropes. In government's direction to conduct littoral manoeuvre to effect deterrence by denial in Australia's northern approaches, we see elements of all three operational scenarios for the defence of Australia described above. And in the directed capability priorities and IIP, we see a continued emphasis on prioritising some high-technology capabilities, while apparently omitting others. There appears to be little logical connection to policy ends beyond an implication of 'stuff will happen'.

Strategic Direction—the DSR and the NDS

Reinforcing the idea of continuity in Australia's strategic policy, the DSR reinforces the Defence strategic objectives laid out in the 2020 Defence Strategic Update.[28] They are:

- to shape Australia's strategic environment
- to deter actions against Australia's interests
- to respond with credible military force, when required.

The DSR also introduces a new idea, that 'these objectives must now be seen through the lens of a Strategy of Denial.[29] This is defined in the review as:

> a defensive approach designed to stop an adversary from succeeding in its goal to coerce states through force, or the threatened use of force, to achieve dominance. Denial is associated with the ability and intent to defend against, and defeat, and act of aggression.[30]

In this confusing definition, students of Western military mission 'task verbs' will recognise an unhelpful conflation of three distinct terms—deny, defend and defeat—each with a different meaning and operational intent. Perhaps acknowledging this definition is not as clear and as definitive as it should be, the DSR writing team provides further directive qualifications. The geographical focus for the strategy is the PAMI, while it also recognises the importance of 'non-geographic security threats', which include cyber, space and long-range missile capabilities.[31] Helpfully, the review also notes (in the same

paragraph) that the key is the presence of 'a robust ADF'—a useful clarification in case anyone was thinking a weak ADF would suffice.

Finally, the DSR explains that implementation of the strategy must focus on the development of A2AD capabilities.[32] The DSR provides no further specific explanation as to the 'ways' such a strategy is to be enacted given the means available. Equally, the logic of this requirement is not clear.

In turn, the NDS builds upon the DSR, largely reasserting existing government policy for the development and tasking of Defence capability. It names five tasks for the ADF, stated as:

- Defend Australia and our immediate region.
- Deter through denial any potential adversary's attempts to project power against Australia through our northern approaches.
- Protect Australia's economic connection to our region and the world.
- Contribute with our partners to the collective security of the Indo-Pacific.
- Contribute with our partners to the maintenance of the global rules-based order.[33]

To achieve these directed tasks, the NDS further specifies six capability effects that are to support ADF force structure priorities:[34]

- Project force.
- Hold a potential adversary's forces at risk.
- Protect ADF forces and supporting critical infrastructure in Australia.
- Sustain protracted combat operations.
- Maintain persistent situational awareness in our PAMI.
- Achieve decision advantage.

These six capability effects treat—or have important implications for—force design and capability acquisition. They also help articulate the *means* to achieve policy *ends*. In doing so, they have utility in informing the development of a littoral manoeuvre strategy.

Interestingly, the NDS makes another attempt to describe the Strategy of Denial, arriving at a slightly different position than the previous year's review. It states that such a strategy is:

> [d]esigned to deter a potential adversary from taking actions that would be inimical to Australia's interests and regional stability. The Strategy of Denial involves working with the US and key partners to ensure no country attempts to achieve its regional objectives through military action. By signalling a credible ability to hold potential adversary forces at risk, this strategy also seeks to deter attempts

> to coerce Australia through force. Both objectives involve altering any potential adversary's belief that it could achieve its military ambitions with force at an acceptable cost.[35]

This more expansive offering is less a definition than it is a 'reason and objective statement'. The recognition of allies and partners is new, and the definition does not specify how they will work together. Beyond the high-level bromide of 'A2AD' and the presentation of 'littoral manoeuvre' as a task, the NDS (like the DSR) does not describe the 'ways' associated with the Strategy of Denial. In a similar way—and understandably in a public document—the NDS shies away from the use and attribution of the word 'threat' (the word appears only 12 times in 80 pages). The strategy's 'potential adversary' (a term used 19 times) is never named. A page under the rubric dealing with 'compounding security risks' subtly implies a few possible contenders for the title, but no specific implications are made.[36] Again, while this omission is understandable, identification of a threat or adversary has resonance and utility when designing and evaluating a deterrence strategy. Summarising, the NDS is a policy document with a narrative focusing on 'ends' and 'means', rather than a strategy with a linking logic of 'ways'. Its focus on—but weak explanation of—'deterrence' suggests there is a need for Defence policy to better understand and contextualise this subject.

Deterrence Policy and Theory

The NDS direction to adopt a strategy of 'deterrence by denial' implies the need to consider deterrent theory both in depth and in breadth, including examples of its practice.[37] Fortunately, the topic of deterrence theory has been a serious subject in the fields of defence and strategic studies for over 75 years.[38] The end of the Cold War sparked a flurry of new work examining the implications of 'the end of history' for the role of conventional deterrence.[39] Issues arising from 'deterrence' are germane to the development of a suitable ADF concept for deterrent littoral manoeuvre. These issues will be considered in more detail later in this paper. At this point, though, it is useful to highlight a few matters relevant to the strategic context for such analysis.

John Mearsheimer noted in 1985: 'Deterrence based on punishment is associated usually with nuclear weapons but sometimes with conventional weapons. Conversely, battlefield denial is usually linked with conventional forces'.[40] Noting that Australia is not a nuclear power, the NDS shapes the context in which *conventional deterrence* is to be achieved. The importance of conventional deterrence is heightened by the absence in the NDS of any indication that its achievement could be supported by the nuclear might of the US. The NDS merely notes: 'The Strategy of Denial involves working with the US and key partners'.[41] In practice this leaves the achievement of any deterrence effect in the

hands of conventional Australian defence capability, hopefully in agreement with others. This implicit requirement for self-reliance has several implications for the development of suitably deterrent capabilities and methods, again examined later in this paper.

When examining the context in which Australia is to adopt a 'deterrence by denial' strategy, it is useful to assess whether records exist of this approach being effective. This analysis is important as it may offer insight into the relevant strategic risks and potential mitigation measures. Unfortunately for Australian strategic policy's direction, the record of effectiveness is problematic. For example, the introduction to this paper quoted Thomas Schelling's doubts about the efficacy of deterrence strategy.[42] Similarly, and of particular relevance in the Australian context, Harknett offers: 'Conventional deterrence is more intricate than nuclear deterrence, and it is this intricacy that makes conventional deterrence *less resilient and robust*'[43] (emphasis added). A key and worrying point is that the term 'failure' arises too often in assessments and critiques of deterrence theory:

> Deterrence at conventional levels has tended to 'fail.' However, proponents of conventional deterrence argue that the use of conventional military force does not necessarily equate to a failure of doctrine. Deterrence failures are not inconsistent with deterrence theory, provided they can be attributed to the absence of a clear commitment or to insufficient capability or credibility.[44]

This is not a trivial issue, especially given that strategic policy concerning the defence of Australia against a coercive aggressor assumes that conventional deterrence is a feasible means of achieving that outcome. While it may be interesting within the halls of academia to consider theories concerning the hypothetical failure of a deterrence strategy, in practical terms such an outcome may have serious consequences in a world characterised by geopolitical competition.

From a review of deterrence theory literature as to why deterrence fails, failure of *credibility* consistently emerges as a predominant reason. In his analysis of the success or failure of deterrence, Wirtz adds another explanatory word, *capability*:

> Regardless of the weapons employed or the strategy adopted, capability and credibility are the key ingredients of deterrence success. Opponents must believe that the side issuing deterrent threats has the capability to make good on those threats and will actually execute them in the wake of deterrence failure.[45]

It is evidently important that Australia is seen as *credible* in its ability to achieve 'deterrence by denial' and that it is able to attain sufficient *capability* to underscore this credibility. Policy direction has allocated a related core task, that of preparing littoral manoeuvre capability, to the Army. So it is appropriate to examine Army's response to date.

Army's Response to Strategic Policy Direction

Army has interpreted the NDS direction as requiring it 'to optimise for littoral manoeuvre with a long-range land and maritime strike capability'.[46] Army goes on to state that it must be able to:

- Deploy and sustain land forces in Australia's PAMI.
- Deploy a strike capability with the range to protect Australia's northern approaches.
- Progressively increase increments of Precision Strike Missiles to extend the range and variety of targets that can be struck with land based long range fires.
- Increase stockpiles of long-range missiles including through domestic manufacturing.
- Invest in a combined-arms land system that can secure and control strategic land positions and provide protection for the ADF.[47]

While this list articulates some straightforward tasks, it does not describe the 'ways' by which these tasks are to be achieved. Fundamentally, the list provides insufficient context to derive feasible, acceptable and suitable operational methods for achieving littoral manoeuvre. In a similar fashion to the NDS, Army is silent here about its 'ways'; nor are they dealt with elsewhere in an otherwise informative publication.

Another potential issue for Army arises from the structure and organisation of the ADF following the First Principles Review. Very few of the identified tasks, if any, can be done by the Army alone.[48] Their achievement is dependent upon Chief of Army's sponsorship as a capability manager, and the direct support and efforts of the other Defence groups and services. An important challenge therefore arises from a lack of alignment between Army's priorities and those NDS priorities that are assigned to the Navy and Air Force.

There is clearly no realistic way that Army can conduct littoral manoeuvre in Australia's northern approaches without the full engagement and contribution of the Navy. In this regard, it is relevant that the RAN is directed to be 'optimised for operating in Australia's immediate region and for the security of our sea lines of communication and maritime trade'.[49] In one view, this policy direction accommodates Army's taskings, but it does so in an inexplicit and unconvincing manner. The situation with RAAF tasking does appear a little better: beyond 'optimisation for all aspects of air warfare', the 'support of maritime, littoral and sustainment operations … will be a high priority'.[50] Considering the perennial competition for capability funding in the IIP, it is hard to predict how things will develop—and the potential differences in view between the services as to relative priorities may well impact Army's achievement of its tasks. Better integration within the ADF would appear to be an important prerequisite for success.

An Integrated Force

Australian strategic policy has directed that the ADF must move from being a joint force to being an integrated force.[51] In a surprising twist of both plain English language meaning and long-established doctrine, the key distinction between the two 'forms of force' (joint versus integrated) does not relate to the improvements to planning and operational command and control (C2) that can be achieved by effective integration among the services. Rather, 'integration' here means the addition of the two 'new' domains of space and cyber so that effects are 'harnessed' across all five domains.[52] The plan is that the integrated force will be realised between 2026 and 2030 through 'the acceleration or addition of new capabilities in line with the force structure priorities and guidance outlined in the Review'.[53]

The Army is clearly aware of the need for greater integration to achieve the tasks it has accepted in response to the NDS.[54] Indeed, the Chief of Army has emphasised both the value and the intent of an integrated force:

> Integration is vital. It means that the ADF must be able to apply military force across all five environments … The Integrated Force will build relevant, ready and credible asymmetric military forces to deter conflict, and to deny any adversary's attempts to project power against Australia.[55]

The directed policy move towards fuller consideration of all five domains in the development of defence capabilities is welcome. It recognises the new domains that technological advancement over the last century has brought into the realm of warfare. It also aligns with a conceptual need (recognised by the US Joint Chiefs of Staff over a decade ago) for full integration of force capabilities across domains.[56]

A concern arises, however, that the focus of integration is on 'domains' rather than 'operations.' As a result, opportunities may be missed for the 'old-fashioned' joint service integration efforts required to conduct littoral manoeuvre. Milan Vego highlights the joint service integration imperative: 'Because of the overlap of the physical mediums in which services operate, major operations in the littorals conducted predominantly by a single service would be very rare'.[57] A case for seeking tactical integration at the lowest level possible of the integrated force seems clear.

Other writers and observers have also made observations about the joint service level of integration that is required for a force to effectively undertake littoral manoeuvre operations. The imperative is summed up by Iain Jarvie:

> [I]t should not be an 'Army problem' but an integrated Joint Force CONOPS in which Army nests. If we are describing only Army's part, where is the complementary Navy or RAAF contribution to Littoral Manoeuvre?[58]

Taking a different approach to arrive at the same point, Mark Mankowski has highlighted the relative vulnerability of the littoral manoeuvre craft being acquired through the current IIP. He suggests their best hope of protection could be through integration with existing joint force (Navy centred) capabilities:

> The vessels associated with littoral manoeuvre are for transport and will be vital to projecting Army's long-range strike platforms to a position of advantage, or to sustain Australia's forward partnerships that defend our immediate region in competition. They are vulnerable to attack from the air or sea in conflict. Thus, mitigating a higher threat is based on their employment. If littoral manoeuvre vessels are part of the Australian Amphibious Force, as the current suite of Army watercraft are, this force will provide air, surface and sub-surface protection in conflict.[59]

In a similar vein, Thomas Lonergan draws attention to the imperative for practical integration of the land-based long-range fires capabilities currently being acquired:

> It will not be enough for an Australian Army land force to merely possess batteries of HIMARS with PrSM. They will need to be integrated with RAN and RAAF assets to ensure multiple threat vectors against a hostile force ... in order to be effective, A2/AD needs to be able to draw data from multiple and overlapping sensors that can then feed this as targeting information into weapons systems.[60]

Lonergan's example draws attention to the disruptive impact of technology and its forcing function on changing both policy and the conduct of warfare.

Technological Impacts and Disruption

In 2020, I wrote: 'Australia's strategic geography is not what it used to be. Technology has made the "sea-air gap", an artefact treasured since the 1980s by a generation of Australian strategic planners, obsolete'.[61] This statement was more than a mere 'dig' at the reactionary beliefs of staid elements of Australia's strategic policy community. It highlighted the dialectic between technological innovation and its uptake by militaries. This drives an adaptation and counter-adaptation cycle, and results in conceptual and operational failure by those who do not, or cannot, keep up. The NDS echoes my point, saying:

> Technology has already overturned one of Australia's long-standing advantages – geography. Geography cannot protect Australia against new long-range missiles, space and cyber-attacks, disinformation, supply chain disruptions and the erosion of global rules and norms'.[62]

A lot of studies, reports and papers make the case for—and explain the impact of technology on—strategy and plans. Indeed, such studies are becoming a standard product of defence departments, think tanks, journals and military colleges alike. It is not my intent, or the purpose of this paper, to add to this oeuvre, particularly as there is a useful paper, written by Chris Smith and Al Palazzo, that sets the scene for assessing the impact of technology on government's efforts to achieve a Strategy of Denial in Australia's northern approaches. Published by the Australian Army in 2016, *Coming to Terms with the Modern Way of War: Precision Missiles and the Land Component of Australia's Joint Force*[63] is arguably one of the best pieces of academic analysis published by Army in the first quarter of this century. In it, the authors observe:

> While the future can never be accurately foreseen, one change that is becoming clear is the potential of long-range land-based strike weapons to tip the balance between the offence and the defence in war in favour of the defender. Long-range precision missiles, combined with advanced sensors, give the defender the potential to create killing zones with enormous depth encompassing the air, sea and land.[64]

While Smith and Palazzo helpfully emphasise the benefit of strike weapons, planners need to curb their enthusiasm with the realisation that every pro has a con. The Chief of Army demonstrated his appreciation of one of the cons when he pointed out that the 'exponential proliferation of sensors' is 'making some domains almost transparent whereas others—such as those on the land, under the sea and in cyber-space—are filled with clutter: something that offers opportunities and threats'.[65] Relatedly, in his analysis of 'systems warfare', former US Deputy Secretary of Defense Bob Work adds another issue to consider: 'The ability to out-range an enemy has become far more difficult with the development of invisible system strike capabilities such as cyber, counter-AI, and electronic warfare.'[66]

The disruptive impact of technology development and its adoption will both assist and threaten Defence's ability to implement a Strategy of Denial. The complexities that emerging technologies introduce to the battlespace, when combined with other factors, also influence the strategic context and operational environment in the PAMI. These changes necessarily raise questions about whether our knowledge of the past can usefully inform the future of littoral manoeuvre to Australia's north.

/ ON HISTORY

This paper does not aim to trace the history of littoral operations in Australia. Instead it cautions against the fact that, while Australia has undertaken littoral operations in the past, this experience offers no warranty as to the ADF's contemporary competence, or any automatic insight into its prospects moving forward. History is useful, but context is a killer of poor history lessons, and historical cases must be viewed through the widest aperture possible.

In the Australian Army's approach to the challenge of littoral warfare, there is an evident fondness (a cross between nostalgia and hubris) for past achievement. The Army's response to the direction in the NDS confidently states:

> The littoral regions are not new to the Australian Army, nor are the operations conducted within them. The most well-known amphibious action by Australian forces is the landings at Gallipoli on 25th April 1915, the foundations of the Anzac tradition that still shapes the Army of today.[67]

This statement assumes that aspects of the 'Anzac tradition' correlate with the culture of the Australian Army today. It ignores the fact that the Army's best-known amphibious operation was in all senses an operational debacle. The extract highlights what Michael Howard called 'myth making'—that is, 'the creation of an image of the past, through careful selection and interpretation, in order to create or sustain certain emotions or beliefs'.[68] Such use of history can be justified sometimes and indeed is useful for purposes such as developing morale, culture or esprit within a force. But it risks misinformation and misdirection if misapplied.

Military history provides a valuable guide to understanding only if its context is appropriately considered. It cannot and does not provide a blueprint for the future. As David Lowenthal reminds us, the past is a foreign country; it is something we can never fully know or understand.[69] Relatedly, Colin Gray warned that there are two equally dangerous approaches to history: a *complete lack* of historical 'knowledge' and an *over-appreciation* of a poorly understood 'nugget'.[70] Many of the 'lessons' proffered about Australia's littoral experience in the region during the Second World War do not withstand detailed scrutiny, particularly given the profound differences in today's context. Considerations such as the impact of contemporary patterns of regional sovereignty, demography and commerce; the high level of military technology deployed in and adjacent to the region; and the vastly different structure and size of the ADF today cannot be simply dismissed. The ADF must avoid making superficial comparisons with the past without establishing real context and understanding. Failure to do so will negatively affect the development of contemporary analysis regarding the conduct of future littoral manoeuvre.

/ CONTEMPORARY THINKING

Policy, Doctrine and Concepts

The available record of contemporary 'official' thought (characterised by policy, doctrine and concepts) is small—most of the material having already been referred to and cited in this paper. At the start of 2025, the ADF had no published doctrine or concept specifically addressing littoral manoeuvre, and its doctrine on amphibious operations was fast approaching obsolescence. Other classified material may exist, but it is unavailable to this writer; nor could it be published or referred to in a paper such as this one.

ADF Capstone Concept APEX: Integrated Campaigning for Deterrence echoes many of the higher-level thoughts in the NDS regarding deterrence but offers no additional specificity on the likely ways to achieve it.[71] *ADF Theatre Concept ASPIRE* seeks to explain how the ADF will mobilise and apply military power in an operational theatre.[72] Publicly available information tells us Aspire describes how the ADF will achieve missions through the focused and asymmetric application of military power, aiming to impose costs so that adversaries are deterred from, or cease, activities counter to Australia's interests.[73] The three principles—focus, asymmetry and cost imposition—offer a logical basis from which an operational method for littoral manoeuvre might be developed. It is plausible that practical actions can be developed from such principles. Furthermore, it seems clear that the principle of 'cost imposition' had a role in policy makers' development of the Strategy of Denial. The implication of this emerges later in this paper when deterrence theory is examined. Countering this positivity, however, is an assessment by David Fryer that Aspire 'advocates for the generalities of manoeuvre warfare without acknowledging the known capabilities and advantages of the adversary'.[74]

In June 2025, the ADF published a Joint Warfare Note—Concept (JWN-C) *Littoral Warfare: The Future Integrated Force in the Archipelagic Region*.[75] This publication is nested within the context of concepts Apex and Aspire and states that it 'addresses a gap in ADF doctrine and concepts—specifically, employment of all-domain capabilities in the littoral and archipelagic environments, in the context of capability, organisation and posture changes'.[76] This is an important task. Unfortunately, this concise text falls short of its stated ambition. The JWN-C spends about a third of its time restating context already set up in the DSR, NDS and Apex and Aspire. It offers a 'central idea' and 'supporting ideas' that, while solid enough, are obvious; they would offer neither novel nor innovative ideas to a competent force designer or planner who had previously spent at

least 30 minutes looking at the problem set. In short, the content of the JWN-C falls short of its stated ambition of presenting 'emerging ideas to address military problems, enable exploration and stimulate debate'.[77] Crucially, noting the urgency of the imperative set by strategic policy, it offers little practical guidance to determine *how* the ADF might employ the means available to meet a strategic policy of *deterrence by denial* through littoral manoeuvre within the PAMI.

Other Australian Literature—a Quick Review

Given the relative paucity of official material available, it is useful to consider what others in Australia may be writing about littoral manoeuvre. Encouragingly, the focus on the 'new' task of littoral manoeuvre in the DSR and NDS has led to an uptick in interest and writing about the subject within Army.[78] Two contributions of note touch on many of the issues of interest to this paper. An entire edition of the *Australian Army Journal* (volume XIX, no. 2, 2023) was dedicated to theme of littoral manoeuvre, containing a wealth of thought and insights. A second important contribution to debate is a report by Chris Smith published in December 2024 by the Australian Strategic Policy Institute, *The Implications of Emerging Changes in Land Warfare for the Focused All-Domain Force*.[79] Beyond the body of work largely centred on the contemporary efforts of the Deputy Chief of Army and contributors to the Australian Army Research Centre, we generally need to step back in time to find more material.

In 2014, the Australian Army Research Centre published a discussion paper *Army in a Joint Archipelagic Manoeuvre Concept*.[80] The paper addressed the direction in the Defence White Paper 2013 requiring the development of a maritime strategy for deterring and defeating attacks against Australia.[81] In turn, the discussion paper built upon a foundation, laid over a decade before, in Army's 'manoeuvre operations in the littoral environment' (MOLE) concept.[82] Army's 2014 discussion paper widened the conceptual space opened up by MOLE but, significantly, introduced consideration of A2AD in the region.[83] Also worthy of note, the paper suggested 'ways' that joint archipelagic manoeuvre could be conducted.[84] Two years later the paper by Smith and Palazzo (cited earlier) built upon these ideas.[85]

Smith and Palazzo's 2016 paper appears prescient when examining the strategic direction provided by the 2024 NDS. The authors examine in detail the implications of the advent of precision long-range forces in Australia's region, and what that may mean for the 'traditional' relationship between the air, sea and land domains.[86] Their conclusion is:

> It is prudent, therefore, for Australia's joint forces to think through all the implications of long-range precision weapons, which is more than just working out how to use them to improve targeting and the ability to kill.

This assessment presages the requirement to think about how to develop the 'ways' that littoral manoeuvre may support an Australian A2AD system for deterrence by denial.[87]

Recent Australian thought has not always approached the topic of littoral manoeuvre through a 'land-centric lens'. Some useful thinking has also been done about maritime strategy that may inform the development of a littoral manoeuvre concept. For example, Richard Dunley makes the case that conceptions of maritime strategy remain vital, even in an age of long-range land-based anti-ship missiles and associated sea-denial concepts such as A2AD.[88] Ash Zimmerlie makes a detailed case that use of Julian Corbett's thinking would allow Australian Defence planners 'to treat Australia's risks, provide meaningful and credible support to its allies, preserve defence sovereignty, and systematically fuse land and sea power to align strategic ends, ways, and means'.[89] It will come as no surprise that Australia's principal ally, the US, is also looking for ways to address these concerns.

US Approaches

US strategic thinkers tend to look at a slightly different challenge with respect to littoral warfare and deterrence: that of manoeuvring in the face of an adversary's anti-access envelope.[90] The US's primary concern is the prospect of the People's Republic of China (PRC) developing (or imposing) an A2AD zone in the event of conflict in the Indo-Pacific. Such an approach is the other side of the same coin, and bears examination by Australia. In 2012, the (then) Chairman of the US Joint Chiefs of Staff, General Martin Dempsey, stated: 'A2AD strategies are a defining characteristic of today's operational environment. Confronting this challenge will require more integration—across all domains and at all echelons—than ever before'.[91] We see in Dempsey's statement the same concern previously identified with respect to integration. Further investigation reveals other useful US commentary regarding alignment that may assist Australia to develop its littoral manoeuvre strategy, while keeping in mind that the resources and scale that the US can bring to any response (either conceptual or actual) are vastly different to Australia's sovereign capabilities.

Unsurprisingly, the United States Marine Corps (USMC) has been on the front foot of thinking about littoral warfare. From 1996's *Operational Maneuver from the Sea* through to 2021's *A Concept for Stand-in Forces* and the *Force Design 2030*, the USMC has been examining ways it can contribute to the US joint force inside the contested spaces of the Indo-Pacific.[92] It is useful to develop an understanding of some of these ideas, and the *Concept for Stand-in Forces* is a good place to begin.

'Stand-in forces' (SIF) are defined as:

> small but lethal, low-signature, mobile, relatively simple to maintain and sustain forces designed to operate across the competition continuum within a contested area as the leading edge of a maritime defense-in-depth in order to intentionally disrupt the plans of a potential or actual adversary. Depending on the situation, stand-in forces are composed of elements from the Marine Corps, Navy, Coast Guard, special operations forces, interagency, and allies and partners.[93]

The fact that SIF are joint (and, by implication, integrated), combined, and intended to operate within either a weapons engagement zone (WEZ) or an A2AD system indicates why such a conceptual approach could be useful for the ADF. In the concept, the Commandant of the Marine Corps states that the SIF will 'conduct sea denial in designated areas' and will 'disrupt an adversary's plans at every point on the competition continuum'.

Building upon the SIF concept, the USMC has developed two additional operational support concepts. *Littoral Operations in a Contested Environment* describes the integrated application capabilities to overcome emerging threats in littoral areas that are 'rapidly expanding in operational depth, complexity, and lethality'.[94] The second concept, 'expeditionary advanced base operations', detailed in the *Tentative Manual for Expeditionary Advanced Base Operations*, [95] is summarised as:

> a form of expeditionary warfare that involve the employment of mobile, low signature, persistent, and relatively easy to maintain and sustain naval expeditionary forces from a series of austere, temporary locations ashore or inshore within a contested or potentially contested maritime area in order to conduct sea denial, support sea control, or enable fleet sustainment.[96]

The USMC's parent service is less preoccupied with the littoral per se and more concerned with the implications of the sophisticated technologies implicit in A2AD on naval and joint force operations in the Indo-Pacific. This focus has seen intellectual investment by the US Navy in a 'distributed lethality' concept, largely focused on the conduct of naval surface warfare.[97] Underpinning this is a classified concept called 'distributed maritime operations' (DMO), described by the Chief of Naval Operations as 'the Navy's foundational operating concept'.[98] DMO calls for US naval forces (the Navy and Marines) to operate at sea in a less concentrated, more distributed manner. The aim is to complicate an adversary's task of detecting, identifying, tracking and targeting US forces, while still being able to bring lethal force to bear against adversary forces.[99]

The 'distributed lethality' concept has a simple premise at its heart, but one that is immediately attractive when contemplating deterrence by denial: 'holding more adversaries at risk across a wider geography'.[100] It has been described thus:

> In broad terms, distributed lethality proposes creating small offensive adaptive force packages comprised of surface action groups (SAG) with a variety of support elements that operate across a wide region and under an adversary's anti-access sea denial umbrella. Its purpose is to confound adversary locating and targeting while introducing a threat to their sea control ambitions.[101]

In the context of an Australian integrated force, the relevant adaptive force packages might comprise surface action groups, but they could equally be any force package that has offensive utility within the broader rubric of utilising littoral manoeuvre to effect denial. An indicative example could be a land-based long-range strike adaptive force package with organic intimate force protection and littoral movement assets, as well as integrated command, control, communication, computing, intelligence, surveillance and reconnaissance capabilities. An examination of a proposed tactical doctrine for distributed lethality reveals many of the precepts of mission command and manoeuvre warfare familiar to students of Australian military doctrine and practice.[102] Like many concepts, establishing the 'practical how' of achieving 'distributed lethality' will require ongoing effort. A key consideration remains whether distributed lethality is achievable given the associated need for significant adjustment to present logistics and budgets.[103]

While slightly less fascinated with the littorals than the Navy and Marines, the US Army's 'multi-domain operations' concept also faces up to the issue of A2AD. Unsurprisingly, it places the Army and the land domain at the centre of the conceptual solution for the joint force.[104] A closer examination, however, shows that concerns exist at the joint conceptual level about the ability to manoeuvre in the Indo-Pacific.

Beyond the individual branches of the US military, the Joint Staff's interest has long reflected and built upon the single services' concerns and approaches. This concern is reflected in the publication of concepts such as the *Joint Concept for Entry Operations*.[105] Usefully, this joint concept highlights a concern about the conditions under which militaries can enter a battlespace—a concern that will be germane to this paper's later consideration of how to design an Australian littoral manoeuvre concept:

> The challenge of entry is heavily dependent upon pre-existing conditions and the effectiveness of pre-crisis operations conducted by the Joint Force. Consequently, success in entry often will depend on efforts to gain access and set conditions in advance, which in turn requires a coordinated interagency approach.[106]

The wider US Defense Department has also been engaged in relevant thought and research. An example is the Defense Advanced Research Projects Agency (DARPA) work on mosaic warfare.[107]

There is a strong basis to argue that integration or alignment of allied concepts with the US could be beneficial to Australia. This is particularly the case given the strong alliance relationship between the countries, and the likelihood of combined operations in the event of a regional conflict. US concepts can inform the operational problem at hand, as long as Australia remains cognisant of differences in scale and sovereign interest. Use of such concepts (or contribution to their emergence) will best be evaluated against the key issues that frame the littoral manoeuvre 'problem' for Australia.[108]

/ KEY ISSUES IN FRAMING THE LITTORAL MANOEUVRE PROBLEM

Based on the research undertaken for this paper, I have identified seven issues that are key to any effort to conceptualise how 'deterrence by denial' could be achieved through the conduct of littoral manoeuvre operations in Australia's northern approaches. These are deterrence, A2AD, domain issues, access, mass, sustainment, and preparedness. Like all complex problems involving military operations, there are other issues that also warrant attention, but they are assessed as more 'generic' operational issues, and hence a lower priority for attention.

Deterrence Matters

This paper has already established that, when we are discussing deterrence in the Australian context, we are talking about 'conventional' deterrence. Australia does not have nuclear weapons; nor does it presently have any plans, policies, or legal paths to acquiring them. Australia continues to benefit in some way from the 'extended deterrence' of its principal ally's nuclear arsenal. But Australian cannot reasonably assert that this non-sovereign capability is a component of its deterrence strategy. Instead, as Mearsheimer offers, conventional deterrence 'is a function of the capability of denying an aggressor his battlefield objectives with conventional forces'.[109] Robert Haffa elaborates:

> The classic focus of deterrence theory has been on creating military capability to prevent taking aggressive military action. Thus, deterrence, for our purpose here, can be defined as 'the manipulation of an adversary's estimation of the cost/benefit calculation of taking a given action … thereby convincing the opponent to avoid taking that action'.[110]

It soon becomes clear from the literature that conventional deterrence is linked to the capability and capacity to achieve battlefield outcomes—or, at the very least, the perception of outcomes.[111]

> [W]hile the requirements of deterrence may be little changed, past formulations of conventional deterrence objectives, focusing on large ground armies facing each other across a central front, may become increasingly irrelevant.[112]

So, logically, the credibility of conventional forces becomes a key issue. Specifically, the question is 'can the force proposed, in the manner described, and in the geographical location(s) selected, achieve the outcome desired/anticipated?' The nub of the matter is summed up by Mearsheimer:

> The attacker primarily wants to know, not whether there will be a response, but rather how effective it is likely to be. More specifically, will the defender's projected reply provide enough apprehension to deter an attack?[113]

If the answer is 'yes', then one can argue that the basic criterion for a successful strategy of deterrence by denial has been met. However, doubt can be a killer, so the defender must 'overdo it' by investing in expensive capabilities. Things get even harder when you consider the ultimate paradox: that the actual physical proof of the capability to deny can only truly occur after the deterrence 'message' has failed to convince the adversary of its credibility. As Wirtz states: 'The contestability of conventional threats can raise doubts in the minds of those targeted by conventional deterrence concerning the capability of the side issuing deterrent threats to succeed'.[114]

These considerations support two important conclusions. Foremost, to be credibly deterrent the ADF will demonstrably need the ability to deny Australia's northern approaches to an adversary—not just once or under restricted circumstances: the ability to deny must address the issues of reliability, repeatability and the capacity to defeat plausible adversary capability over time. Further, if deterrence fails, the ADF will have to fight and prevail in a denial battle in Australia's northern approaches. This means that selection of a 'deterrence posture' requires adequate investment in capability acquisition and development. Wirtz sums this point up:

> The execution of a deterrent threat only occurs upon the failure of deterrence as a strategy. In other words, deterrence when the adversary crosses some redline, initiates hostilities, creates a fait accompli, or undertakes some sort of unwanted activity. The impact of deterrence failure on the side issuing a deterrent threat is indeed profound and in fact constitutes an exquisite strategic victory for the recipient of the threat.[115]

A 2023 study published by the Australian Army found that adopting deterrence as an approach offers no 'saving' in investment in warfighting capability. The paper concluded that 'unless Australia can credibly deter through the capacity for a successful defence, its capacity for self-reliant deterrence is highly questionable'.[116] The adversary's perception is reality when it comes to assessments of credibility for deterrence. Australia is betting its defence on an adversary's perception of the credibility of an ADF-enacted A2AD system. Given this dependency, it is valuable to further examine what such a system is, and what may need to be carefully considered in an Australian context.

Anti-Access / Area Denial

Australia's military strategic culture has long been founded on the promise that defensive measures will be sufficient to secure the island continent. From the coastal fortifications built in the 19th century to deny a putative Russian attack, to hiding behind the shadow of 'Fortress Singapore' in the 1930s and the sea-air gap of *The Defence of Australia* in the 1990s, Australia has sought strategic assurance in the act of *defending*. The vision offered in this statement by Smith and Palazzo is grist to that defence cultural mill:

> While the future can never be accurately foreseen, one change that is becoming clear is the potential of long-range land-based strike weapons to tip the balance between the offence and the defence in war in favour of the defender. Long-range precision missiles, combined with advanced sensors, give the defender the potential to create killing zones with enormous depth encompassing the air, sea and land.[117]

The latent possibility of modern high-technology defensive capabilities, used in a coherent system with a mission design focus, is the essence of A2AD. This is brought out in an early definition offered by the US:

> Anti-access refers to those actions and capabilities, usually long-range, designed to prevent an opposing force from entering an operational area. Area-denial refers to those actions and capabilities, usually of shorter range, designed not to keep an opposing force out, but to limit its freedom of action within the operational area.[118]

The US approach also states that the distinction between anti-access and area denial is relative rather than strict, and many capabilities can be employed for both purposes.[119]

Australian strategic culture, the government's adoption of the Strategy of Denial and the strategic policy focal areas of Australia's northern approaches all provide a reasonable foundation for implementing an A2AD approach. And there are examples in which A2AD is proving an effective defensive strategy, even among non-state actors. For example, it has been observed that in the Red Sea the Houthi movement based in Yemen is 'demonstrating how area denial tactics can create a strategic dilemma for larger and more capable nations'.[120] While each individual strike has been relatively ineffective, the cumulative effect of the threat has been impactful. At the time of the attacks commencing in November 2023, shipping in the region was reduced by over 40 per cent, and there is an ongoing requirement by Western nations to commit military resources to address the threat.[121] The Houthi example also demonstrates the asymmetric effects and costs that can be generated by effective A2AD. That these effects align with Concept Aspire's principles of asymmetry and cost imposition is convenient.[122] Based on such considerations, A2AD seems to be an ideal solution to Australia's deterrence and denial dilemma. A slightly deeper examination, however, suggests that it represents a *potential* solution that may be difficult to fully realise in current circumstances.

In evaluating A2AD it is crucial to recognise that, at present, the concept remains a hypothesis in search of a case to validate it. The idea of an 'A2AD zone' first emerged in US and Western assessments of the PRC's ability to deny access and freedom of movement out to the so-called 'first island chain' (if the forcible reunion of Taiwan with the PRC were to eventuate).[123] An important observation is that the PRC has never actually demonstrated a 'working' A2AD zone—its ability to do so remains very much theoretical and reliant upon the PRC's capacity to use a hitherto unproven capacity to execute a complex joint campaign. With respect to the actual conduct of A2AD, Albert Einstein's statement is salient: 'In theory, theory and practice are the same. In practice, they are not'.

While the Houthi example is regarded by some as demonstrating the utility of an A2AD strategy, it has not been wholly effective. Despite disruption to commercial shipping, and ideal conditions for denial (a strait only 32 kilometres wide), commercial shipping is still transiting the Red Sea, and attacks on naval shipping have been largely ineffective.[124] The vision offered by Smith and Palazzo is not yet realised in the long-range strike efforts of the Houthis in the Gulf. Further, the Red Sea example exists on a far smaller geographic scale than exists in the large and complex archipelagic area that characterises Australia's northern approaches. This reality underscores the practical difficulties that may arise in implementing effective A2AD at scale over large areas.

While the efficacy of an A2AD strategy is yet to be proven, one might be forgiven for attributing two related purposes to the US's fascination with it. The first is to provide a focused framework within which to understand the threat posed by modern technology to manoeuvre warfare—a situation foreshadowed by Smith and Palazzo. Cynically, the second purpose is to have a suitable threat to drive congressional funding to the US military for the maintenance and development of related capabilities. Neither of these purposes need unnecessarily prejudice Australia's engagement with A2AD but, in the development of its own A2AD approaches, Australia should be cognisant of these factors, and a few other issues.

There is a risk that the potential of A2AD systems will be overestimated leading to a 'Maginot Line' level of strategic or operational reliance that is unsuited to the Australian context. In the history of warfare, no single defensive or offensive system has proven omnipotent, and nor will A2AD systems. The conceptual work being done by the US through ideas such as the 'concept for stand-in forces' and 'distributed lethality' demonstrate the enduring cycle of adaptation and counter-adaptation that has always been a factor in military innovation. Indeed, Australia is no stranger to this—a case can be made that the actions of the 1st Australian Corps during the Battle of Hamel in July 1918 represent a successful effort to breach a contemporary A2AD system. Equally, 'modern' A2AD systems will have vulnerabilities. Richard Dunley highlights the fact that many of the weapons in such systems 'have considerable vulnerabilities, not least in

the infrastructure and "kill chains" that enable them to successfully hit a target'.[125] It will emerge that vulnerabilities around regional access, sustainment and logistics and mass are also concerns any Australian A2AD system seeking to deter by denial will need to address. The most significant challenge, though, arises from consideration of cross-domain matters.

Domain Matters

We have already engaged with the idea that the littoral is more than the mere synthesis of a place where the land and water meet, with consideration of the air space above them. Instead, the Chief of Army invites us to regard the littoral in an expansive sense:

> The 'littoral' is a broad term that goes well-beyond the physical environment. It includes the land, rivers, jungles, coastal waters, people, cultures, the urban areas, and the airspace above. And more so than ever today it includes both the electromagnetic spectrum that characterises the littoral zone, and the space effects that can be delivered into it from above.[126]

This broad conception leads to a challenge: how will the five recognised military domains (land, air, maritime, space and cyber) be unified and integrated to support manoeuvre in the littoral? While this question exists broadly for Australia and its allies, it is particularly germane in efforts to develop a littoral manoeuvre concept. Operational considerations arising from the littorals sit at the centre of any Venn diagram depicting the relationship between the five domains.

It has been shown through history that the littoral domain can, and does, embrace all five domains. For example, one recent examination of an important campaign in the South-West Pacific during the Second World War summarised:

> Control of each domain: land, sea, and air, coupled with information superiority, economic strength, and the ability to deploy and sustain it all provided the final margin of victory on Guadalcanal.[127]

The same benefit of cross-domain effects was also highlighted during the Battle of Milne Bay in the campaign. A letter from Lieutenant General Sidney Rowell, General Officer Commanding New Guinea Force, is included in the official war history. In it, Rowell stated what he saw as the vital nature of the Air Force's contribution to that littoral fight:

> Major General Clowes has asked that a record be made of his appreciation for the work of the Fighter and G.R Squadrons stationed at MILNE BAY. I am convinced that, when the story is complete, it will be found that their incessant attacks for three successive days proved the decisive factor in the enemy's decision to reembark what was left of his force.[128]

The risk with historical examples is in being caught up focusing on the domains that predominated in that particular conflict. The contemporary environment has changed, and technology has created new and potentially decisive domains for warfare. If in Clausewitz's view war is policy pursued by violent means, the sheer number of technological means available for that pursuit have proliferated over the last 100 years. Therefore, littoral concepts focusing on the intersection of jungle, boats, mud and so-called 'brown water' alone are inadequate and will engender risk by creating domain 'blind spots' an adversary can exploit. For example, in the digitally connected modern world it is necessary to understand how the cyber domain dislocates previously accepted wisdom regarding distance, rendering physical stand-off irrelevant, and sometimes warping time.[129] Any viable conceptual 'way' for the conduct of littoral manoeuvre in Australia's northern approaches must, necessarily, fully and explicitly address actions across all five domains. The move towards A2AD strategies (as a defining characteristic of today's operational environment) brings forth the challenge of 'more integration—across all domains and at all echelons—than ever before'.[130]

The concept of 'cross-domain synergy' is an emerging response to the challenge of multiple domains cutting across the littorals and A2AD approaches. This synergy is defined by the US as 'the complementary vice merely additive employment of capabilities in different domains such that each enhances the effectiveness and compensates for the vulnerability of others'.[131] In many ways, this definition typifies how Western armies employ 'combined arms' to mitigate single-capability weaknesses—it just extends the practice across domains.

While cross-domain synergy will be important in efforts to successfully achieve 'deterrence by denial' using littoral manoeuvre, it is clear from the current IIP that there is still a lot of work needed to acquire the necessary capabilities. The word 'domain' occurs 20 times in the 2024 IIP. Yet its predominant context (18 examples) is to denote or describe the planned acquisition of a capability for a specific environmental domain—for example 'improved space domain awareness'.[132] The idea of *cross-domain synergy* is only implied in two instances: with reference to integrated air and missile defence and better synchronisation across 'all ADF domains'.[133] It is concerning that planned capability investments to achieve the integrated force pay scant attention to capability that will advance true cross-domain synergy. When considered alongside the NDS, which delivers erratic service/domain tasking with respect to littoral manoeuvre (as previously described), it is evident that Defence must pay greater attention to domain integration capabilities and processes if any effective A2AD capability is to be realised. A necessary step forward is to cease seeing capabilities as stovepiped 'environmental warfighting domains' and instead pursue capability effects across a single and *unified warfighting domain*. The need to think differently about how Defence does things applies as much to issues of regional access as it does to cross-domain thinking.

Access

Oddly, a view seems to exist among Australian policymakers that a form of modern-day terra nullius applies to the region as it relates to our near neighbours' sovereignty and governance. This perspective is evident in contemporary theorising about littoral manoeuvre and putative A2AD systems within the PAMI. Nothing could be further from reality. The nations comprising the Association of Southeast Asian Nations and the Pacific Islands Forum fill the space under consideration. These nations are invariably proud of their sovereign independence and are committed to the global rules-based order and the principle of non-intervention. Australia's close and friendly relationship with these nations means it cannot prepare for, or conduct, military operations in the PAMI in the manner the Allies did between 1942 and 1945. Instead, the development of any 'way' for the conduct of littoral manoeuvre will require careful thought and treatment regarding the issue of access, basing and overflight (ABO) of our regional neighbours. The NDS does explicitly acknowledge the importance of regional engagement.[134] However, there is quite a gap between *engagement* and the sort of *agreement* whereby a war may be fought from, through or across another nation's sovereign territory. Any feasible littoral manoeuvre concept for 'deterrence by denial' in Australia's northern approaches will need to treat this matter in an appropriate and sensitive way prior to enactment. If Australia is unable to establish ABO arrangements in the region, a far greater mass of capabilities will need to be deployed by Australia, from its own sovereign soil, to achieve an adequate A2AD effect across the littorals of the northern approaches.

Mass

Mass has always mattered in warfare, and the ability to mass military power will continue to impact the conduct of statecraft. Anyone who doubts this assertion need only look at the ability of Putin's Russia to continually scorn Western exhortations regarding its illegal invasion of Ukraine. Australia's Defence strategic culture has a deep-seated understanding that military mass is needed to defend the continent. Equally, however, we have a long record of failing to design, acquire and fund the mass required to do it. This omission has seen enduring reliance on large and powerful allies as a source of confidence and protection. It has also seen Australia adopt strategic concepts which minimise the perceived need for mass, such as has been described by Sam Baumgarten:

> Similarly, the indirect approach, which represented a key influence on the Army's first operational-level doctrine, has consistently allowed Australian planners to develop operational and strategic doctrine that is not reliant on mass and firepower.[135]

A problem emerging from this predilection within Australian Defence planning is that 'deterrence by denial in Australia's northern approaches' comes up hard against the requirements for mass. In this regard, Wirtz makes the case that to achieve mass in conventional deterrence requires symmetry:

> Deterrence by denial would seem to imply a broadly symmetrical response to the challenge. In other words, defeating an opponent at the point of attack seems to imply utilizing superior, albeit generally similar, forces.[136]

Wirtz also relates effective deterrence to possession of sufficient military capability, so again mass matters:

> The starting point for any deterrent strategy is capability … the likelihood of deterrence success increases if the opponent is aware that the party making a deterrent threat actually possesses the military capability needed to execute that threat.[137]

If Wirtz is correct, then assessing the capability of the ADF—and the capability of an adversary coercing Australia through the northern approaches—inevitably involves the consideration of mass. Rich Bushby reinforces this idea when he writes: 'The Pacific region features relatively large and heavily forested landmasses that required large-scale land forces to effectively control'.[138] The historical record of Australian littoral manoeuvre during the Second World War supports this idea.

Let's look at an example considered by the Army as 'a prime example of the Australian Army fighting for strategic land positions—in this case an airfield—in a war in the littoral', the Battle of Milne Bay in 1942.[139] The official history of the RAN contribution to this effort describes the battlefield area thus: 'about seven miles wide at its entrance, Milne Bay has a greatest width of about 10 miles half way along its length'.[140] The history further builds on this description:

> Milne Bay was shaped like a semi-ellipse. From China Strait on the east the sea flowed—through an entrance approximately seven miles wide—westward for some twenty miles. Gili Gili was near the head of the bay. Heavily wooded mountains pressed in from three sides, leaving only a narrow coastal strip, soggy with sago and mangrove swamps; bush-covered except where a few coconut plantations stood in orderly rows. On the north shore the mountains came down almost to the sea leaving only a ledge which was rarely more than a mile wide and in places narrowed to a few hundred yards. Along the coast, never more than a hundred yards from the sea, a 12-foot track, crossing many streams, ran for nine or ten miles from Ahioma, through K.B. Mission to Rabi, whence it rounded

> the north-west corner of the bay and travelled to Gili Gili. In the vicinity of Gili Gili, and at the head of the bay, the coastal plain was at its broadest but even there densely bush-covered spurs ran down from the main 5,000 feet summits only a few miles away.[141]

Milne Bay constitutes a littoral environment which is broadly representative of that commonly found in countless places across Australia's northern approaches. The battlefield area, covering approximately 363 square kilometres, can be regarded as a 'pocket example of a littoral' terrain compared to the tens of thousands of square kilometres that constitute the PAMI. Yet the 'pocket sized littoral' of Milne Bay absorbed two Australian infantry brigades, sorties of RAAF fighter attack squadrons and scarce naval resources. Another way to look at this is that the battle of Milne Bay, conducted on a small piece of littoral terrain, absorbed the equivalent of two-thirds of the existing combat brigade capability in today's Australian Army.

The challenge of achieving mass should be a sobering thought when it comes to Australia's strategic ambitions in the littoral. Mass really does matter—not just for 'deterrence credibility' purposes but for the practical matter of fighting. Consider, for example, the mass that the DSR requires of the Australian Army's 'single armoured combined-arms brigade' against an example of an indicative adversary threat:[142]

> SOF drawn from several existing capabilities, including the PLAA and the PAP, the reformed PLAAF airborne corps (which has shifted from a division to a brigade structure), and a PLAN Marine Corps which has grown from two to eight brigades, totalling some 80,000 personnel.[143]

A wider look at the history of the South-West Pacific campaign highlights that mass in shipping and naval forces also matters a great deal in littoral manoeuvre. On 6 September 1942, General MacArthur highlighted his concerns about the availability of maritime capability to the Chief of Staff of the US Army, General Marshall, in Washington, DC:

> Due to lack of maritime resources, I am unable to increase ground forces in New Guinea as I cannot maintain them … it is imperative that shipping and naval forces for escort duty be increased to ensure communication between the Australian mainland and the south coast of New Guinea. With these additional naval facilities, I can despatch large ground reinforcements to New Guinea with the object of counter-infiltration towards the north, and at the same time make creeping advance s along the north coast with small vessels and marine amphibious forces. Such action will secure a situation which otherwise is doubtful. If New Guinea goes the results will be disastrous.[144]

MacArthur was heard by the right people, and the situation with respect to shipping was remediated over the course of the war as the Allies' industrial mobilisation peaked. An example showing the progress made is the 150 ships that were available to put the Australian 7th Division ashore at Balikpapan on 1 July 1945.[145] However, despite the growth in shipping capacity and capability during the war, limitations in ship numbers nevertheless affected the planning and conduct of operations until the end of the war.[146] These examples raise questions about whether Australia has the current and planned capacity to generate sufficient mass to enable the outcomes directed by extant strategic policy.

In this regard, it is notable that the IIP provides only that 'essential logistics support and amphibious capabilities for the fleet' will be maintained. This will be achieved through continued investment in the existing fleet of five ships: two replenishment oilers, two Canberra-class landing helicopter docks and HMAS *Choules*.[147] There is no provision in the IIP for the two multi-role sealift and replenishment vessels previously detailed in Defence's 2020 Force Structure Plan to replace HMAS *Choules*.[148] Should Australia be required to conduct defensive operations in the PAMI, the fleet's replenishment oilers efforts would quickly be exhausted supporting vital naval manoeuvre. This would leave just three RAN ships available for littoral manoeuvre operations. As Andy Love stated in 2011, 'With the best will in the world, 2–3 ships do not make a full spectrum amphibious capability'.[149] The IIP does have provision for 18 medium and eight heavy landing craft, which will be operated by the Army. However, in the absence of RAN larger vessels, it remains unclear whether this capability would be adequate to generate and the mass necessary to sustain movement and logistics during littoral manoeuvre operations in the PAMI. Logistics and sustainment matter far more than generating and supporting mass alone—they are key to the success of any littoral manoeuvre operations.

Logistics and Sustainment

It should be unnecessary to restate the importance of logistics and sustainment to the planned or actual conduct of military operations. From the development of Roman roads to support the spread and maintenance of ancient empire, to Napoleon's retreat from Moscow and the 'Iron Mountain' of materiel assembled to support the first and second US-led wars against Iraq, military studies are replete with illustrative examples. Yet there is evidence that logistics and sustainment are sometimes overlooked, and this is true when the focus is on other aspects of littoral manoeuvre or A2AD.[150] Australia is not immune from this phenomenon. In seeking to 'improve maritime lethality' Defence has 'de-prioritised' (bureaucratic code for 'cancelled') plans to acquire two large maritime

support vessels.[151] The idea that lethality in the littorals can be increased through *reducing* logistic support is incredible. Empty missile launchers are not lethal; nor are aircraft without fuel and ordnance or 'armoured combined-arms brigades' without spare parts. Historical example suggests A2AD strategies can quickly become attritional, and the side that can best sustain itself and replace its losses will ultimately prevail.[152] Rather than remaking the obvious case for logistics and sustainment, this section highlights concern pertinent to littoral manoeuvre and the anticipated use of A2AD to enact a Strategy of Denial.

A major concern relates to the perennial and universal challenge of adversary interdiction and detection of sustainment systems. This challenge is exacerbated by the multi-domain nature of littoral manoeuvre and the distances associated with its planned conduct within Australia's northern approaches. Chris Smith illuminates the problem:

> The principal challenge for expeditionary operations overseas is to sustain the remote force across sea lines of communications that can be threatened by a technologically advanced and capable adversary. Without sufficient protection or control of the sea and air, remote forces are susceptible to being isolated and starved of resources.[153]

The challenge of overcoming the impact of hostile precision-strike systems when attempting sustainment operations within a WEZ is a significant barrier to the achievement of littoral manoeuvre and the development and implementation of an A2AD system. The USMC 'concept for stand-in forces' proposes design, procedural and technological measures to address this challenge.

The USMC's design for SIF proposes an 'avoidance and redundancy' mindset when planning and conducting operations within a contested area.[154] Where possible, mission logistics planning will seek to avoid posturing logistically intensive systems within a WEZ, bedding them down outside the contested area. There are procedural aspects to this strategy. Specifically, if mission design cannot avoid such placement, multiple ways of obtaining the necessary support must be planned and utilised (redundancy).[155] Other procedural matters include attention to signature management and deception. In this regard, the use of technology is expected to enable greater use of automation and data science. Examples offered include the use of artificial intelligence to more accurately determine demand, the use of uncrewed systems for delivery, and the reduction of demand through measures such as alternative fuel systems and the use of additive manufacture.[156] Such ideas readily align with the Australian Army's statement 'We must leverage technology to reduce the demand for distant resupply'. The challenge remains finding practical, timely and effective ways to develop and field them.[157]

Measures such as deception and signature management have the potential to deliver immediate, practical and low-cost utility in efforts to harden logistics and sustainment while other advanced technology dependent systems are being developed. The Marines' SIF concept suggests:

> materiel should be housed in common containers that can be transported with modest local commercial assets so that they can be moved frequently and so that relatively inexpensive and plentiful decoys can be employed.[158]

This idea can be extrapolated across many of the capabilities being proposed for the ADF today, or already in the IIP. A ready example concerns the landing craft projects in the current IIP. Tom Lonergan paints a useful description of the relevant maritime spaces into which such capabilities may be deployed: 'large, environmentally complex, and full of maritime traffic, from the largest container ships down to the smallest of fishing vessels and pleasure craft'.[159] There are literally many hundreds of regional littoral craft sailing through the archipelagos of the PAMI every day. Designing the signature of the 28 Army landing craft to match local craft signatures as much as possible is an obvious way to hide among the everyday clutter of these waterways.

Army could take a similar approach to the systems associated with its forthcoming land-based long-range fires and maritime strike capabilities. Missile systems could be adapted to container systems that replicate the millions of commercial containers already in the Indo-Pacific. The platform for Army's new Naval Strike Missile need not be an expensive, unnecessarily over-engineered and obviously military vehicle such as the Strikemaster.[160] A suitable commercial-off-the-shelf truck of a type or make endemic to the region could suffice. This would reduce cost (in acquisition and sustainment of the platform) and the signature of the system.

The logistic and sustainment challenge arising from the problem of 'resolving how to manoeuvre naval and land forces and all their supplies and other logistical needs across no-man's-lands encompassing both sea and land' is real.[161] The perceived solutions—reducing demand, capitalising on technology, and introducing new and innovative procedures—are a kind of military logistics 'Shangri-la' for which many entry tickets have been sold over the years but that few logisticians have ever visited. Reaching that proverbial Shangri-la is 'an all-domain problem and solving it would go a long way towards building confidence that the ADF and potential partners can manoeuvre in the Indo-Pacific at all'.[162]

/ NEW THINKING FOR A NEW PROBLEM

> All men are by nature conservative but conservatism in the military profession is a source of danger to the country. One must be ready to change his line sharply and suddenly, with no concern for the prejudices and memories of what was yesterday. To rest upon formula is a slumber that, prolonged, means death.[163]
>
> Hyman Rickover, US Navy Admiral

Rickover highlights the risk of innate conservatism in military thought. Over an Army career spanning four decades, I often saw that the default response to unfamiliar problems—in Australian and partner militaries—was to dust off an old solution, refresh the briefing slides and pitch it to the commander. I suspect this scenario is familiar to many readers with military experience. The problem is that every situation is treated as being sui generis whereas, as we have established, *context matters*.

The ADF currently faces an unprecedented challenge. Government has directed it to achieve deterrence and denial, to conduct operations in the regional littorals and—in doing so—to apply concepts regarding littoral manoeuvre and A2AD that are yet to be fully tested. This problem is unique. So too are the technological and geostrategic circumstance in the PAMI today—they are not those our forebears experienced in any former campaign. The Chief of Army has succinctly identified the scope and novelty of this new challenge of:

> building an Army that conceives, executes and enables operations over hundreds and even thousands kilometres, across all domains … rather than the old ways of tens of kilometres just on the land.[164]

New problems require new thinking and the development of theory that can be applied, tested, evaluated and amended as required. Such a process is core to successful adaptation to new and emerging problems. Matthew Scott's recent investigation of littoral manoeuvre tenets cites Vego's observation that the most important prerequisite for success is 'a solid theory developed ahead of time to allow organisation and training'.[165]

In response to this challenge, I propose seven principles, captured by the acronym *FULLER + Manoeuvre*. These principles seek to inform 'how we might think' rather than 'what we must think' about Defence's current conceptual gap with respect to how littoral manoeuvre, and the conduct of A2AD, may work towards a Strategy of Denial. In effect, these seven principles support development of a practical *campaign framing concept* for how the ADF could merge littoral manoeuvre and A2AD for operational success in the PAMI. It will be seen that each principle relates in some way to the others, a ready example being how the principle of 'Forward' in turn drives 'Engaged' and impacts 'Logistics'. The overlapping of the seven principles highlights the complexity being treated but also helps us see the possible paths and linkages in that complexity.

/ FULLER + MANOEUVRE

Forward

The principle *forward* suggests that capabilities should be positioned forward of the Australian continent. This has a twofold purpose of both supporting deterrence and enabling strategic advantage in order to offset the impacts of any adversary's anti-access capabilities.

Fruehling and Carr have noted that it is rare for Australia to posture its military forces forward to deter an adversary. Nevertheless, they assess that Australian defence policy has recently embraced the role of forward presence to signal the nation's strategic intent to partner with regional nations, and as a warning to potential adversaries.[166] They conclude with an assessment that the most credible deterrence posture for Australia is that which entails the greatest operational role for forward presence forces: forward defence.[167] Their conclusion is supported by Haffa's assessment that an emphasis upon 'the visibility of the military force' can enhance the credibility of conventional deterrence.[168] 'Forward forces' are inherently more visible to—and within—the region than those operating only in domestic locations.

Smith and Palazzo provide a rationale for the possible warfighting advantage of a forward posture:

> However, the easiest way to negate the defender's strength may be to have troops already inside the anti-access window before a conflict commences. This would require access to another country's territory and is firstly a question of diplomatic arrangement with a partner state. By prepositioning forces forward the strength of an adversary's anti-access envelope may be considerably reduced, allowing access by the ADF's land, sea and air forces. Its potential is worth exploring.[169]

The former Commandant of the USMC, General Berger, made a similar case in 2021 with respect to SIF (the idea of 'forward' force taken to the extreme), while also noting:

> Even in steady-state, day-to-day competition below the threshold of violence, this widely distributed mobile presence will greatly expand the depth and fidelity of the joint force commander's understanding of the full range of adversary and other activity within the area of operations.[170]

Unified

> Today, the range of modern sensors and weapons extends hundreds of miles both seaward and landward, blurring the distinction between operations at sea and on land and necessitating an operational approach that treats the littorals as a singular, integrated battlespace.[171]

Our earlier examination of domain impacts established the challenge of multiple domains cutting across the littorals and A2AD approaches. The need to seek 'cross-domain synergy' was proposed as a suitable response to these challenges. The principle *unified* seeks to give shape to a heuristic providing a pragmatic frame for the conduct of littoral manoeuvre and delivery of A2AD effects.

The ADF and its partners cannot continue to engage with cross-domain issues from within 'segregated specialisations'.[172] This approach has proven to be inadequate, even back in 1942 when MacArthur refused to appoint joint task forces, leaving Blamey without control over the naval and air forces supporting him.[173] It is inconceivable that such a situation should ever occur today. The DSR's force design direction, requiring the ADF to evolve into 'a genuine Integrated Force', should go some way to reducing the stovepipe effect of five pillars of 'specific domain excellence'.[174] Conceptualising an operational area as a single and *unified* warfighting domain will go some way to reducing the friction inherent in littoral operations. Further development of ideas such as 'systems warfare'—and achieving the ambition for artificial intelligence enabled human-machine collaborative battle networks—will doubtless assist in the realisation of a unified warfighting domain.[175]

Lethality

Lethality—acquiring it, maintaining it, and delivering it as required—is a perpetual obsession for military forces. When your primary purpose is the application of organised violence to 'kill other people and break their things', lethality will always be an important measure of effectiveness. It is expected that the 'amount' of lethality encountered in the conduct of littoral manoeuvre will only increase in the future due to the 'nature of advanced integrated command and control systems [that] will allow the massing of precision fires at a tempo and scale exceeding past wars'.[176] It will therefore be vital for Australia to stay in touch with, and ideally ahead of, this anticipated trend with respect to fielding any future A2AD capability.

The Australian Army regards the potential lethality offered by current and planned capabilities as increasingly important to denying 'hostile forces the ability to approach Australia'.[177] Similarly, the USMC's *Littoral Operations in a Contested Environment* concept seeks to 'distribute lethality' to confound an adversary's decision calculus

by forcing them to allocate sensor and shooter resources against a wider and more dispersed set of threats.[178]

In efforts to achieve 'deterrence by denial' through littoral manoeuvre, the principle of *lethality* has two purposes. The first and most obvious is the application of lethal means to ensure the destruction of enemy forces. Nothing 'denies' quite like not having people and equipment available for offensive operations—this assertion also aligns with the issue of *mass* previously examined. The second, and equally important, purpose is to reinforce the *credibility* of Australia's forces for the purpose of their conventional deterrence effect. The simple equation here is that the more lethal Australian forces are perceived to be capable of being, the more credible their deterrence effect will be in the calculus of an adversary.

Two tasks flow from the principle of *lethality*. The first is that, when conducting littoral manoeuvre and A2AD, Defence must ensure (keeping in the mind the issue of *mass*) the ADF fields the most lethal capabilities that the budget will allow. Concepts inform thinking, but only acquired capabilities kill. There is a direct relationship between having sufficient lethality and the ability to conduct *attrition* of any aggressor's forces. Attrition remains an enduring and crucial element of warfare, for as Amos C Fox reminds us: 'The destruction of armies or the push towards destroying armies is the most effective and historical supportable way in which to drive policymakers to the negotiation table.'[179]

The follow-on task is for the ADF to demonstrate its actual and potential lethality routinely and reliably to a wide audience, reinforcing attritional credibility for the purpose of deterrence. Achieving these tasks for the principle of *lethality* will necessarily have a close relationship with the principle of *logistics*—because empty missile launchers are not lethal, and nor do they deter. Without logistics there can be no lethality.

Logistics

The principle of *logistics* is not about making the case for logistics in littoral manoeuvre or A2AD. This requirement is evident from our earlier review of issues around logistics and sustainment, and is further reinforced by examples such as this offered by Rein:

> The Japanese experience on Guadalcanal demonstrates that an anti-access, area denial strategy can lead to attritional battles, and the side that can best sustain itself and replace its losses will ultimately prevail.[180]

The principle of *logistics* is intended to prompt decision-makers to constantly consider the significant levels of logistical thinking and capability development required by the ADF and its partners to achieve contemporary littoral manoeuvre and A2AD. As observed above, many perceive that 'logistics solutions' can be achieved by reducing demand,

capitalising on technology, and introducing new and innovative procedures. This optimism is evident in the USMC's 1996 *Operational Maneuver from the Sea* concept.[181] The concept predicted that the advent of precision weapons would lead to reduced landing force logistics footprints, and reductions in onshore storage and transport.[182] These factors have remained largely constant in the last 30 years. While seemingly reassuring, such confidence is nevertheless misplaced. More realistically, the unclassified report on the US-led 2022 Unified Pacific Wargame concluded that the exercises 'highlighted a lack of practical clarity regarding how the Joint Force will execute joint logistics in support of new service concepts in the Indo-Pacific'.[183] There is evidently a need to reconcile conceptual thought about the issue of logistics with practical actions.

Technological innovation, adaptation and competition—such as occurs in the context of modern littoral manoeuvre and A2AD operations—invariably requires new 'break-out' concepts of force employment.[184] Today, substantial attention and practical remediation measures are needed to move beyond 'break-out' concepts and 'promising ideas' about fantasy capabilities. There can be no Strategy of Denial if the ADF is neither credible nor effective at littoral manoeuvre within a possible WEZ because it has failed to address the practical requirements of logistics.[185]

Engaged

Australia is not enacting the Strategy of Denial in a vacuum. Its northern approaches are located in a region characterised by many nations. We have examined the implications of this geography for the issue of military planning for 'access' to conduct littoral manoeuvre operations. We have also noted the gap between the *engagement* envisaged in the NDS and the sort of *agreement* whereby a war may be fought from, through or across another nation's sovereign territory.

The aspiration behind the principle of *engaged* is that regional partners will move beyond merely amicable relations to generate a common purpose to deter coercion and aggression in the region. Successful engagement would help achieve the principle of *forward* that opened this section of this paper. It would also aid Australia's ambition to 'hide in the clutter', something Army sees as useful and desirable for littoral manoeuvre in the region.[186] Additionally, demonstrable engagement with regional partners would significantly enhance the credibility of Australia's deterrence ambitions.

The ADF's new concept *Littoral Warfare* does not provide the insights necessary to address the challenge of how 'engagement' actually becomes 'agreement'.[187] The events surrounding Australia's failure to achieve signature on the 'Nakamal Partnership Agreement' in September 2025 are illustrative. A key 'deduction' from the concept is:

> Enhanced security cooperation with partners and allies is critical to maintaining persistent situational awareness, enabling force projection and the ADF's ability to hold adversaries' forces at risk.[188]

This deduction is hardly news to any serious student or practitioner of contemporary military art in the Indo-Pacific. Elsewhere, the concept notes that in the Pacific 'burgeoning maritime and air capabilities across partners and allies provide significant opportunity for engagement and cooperation' while in South-East Asia 'countries tend towards larger forces in all domains by scale and capability, with mature security cooperation and defence engagement prioritised in interoperability and mutual security interests'.[189] These are, again, simple statements of known facts. They lack the necessary direction or example as to 'how' the ADF might translate vague 'engagement' activity into a posture of being actively 'engaged' in a regionally agreed scheme of littoral manoeuvre to achieve deterrence by denial within the PAMI.

Unfortunately, there remains a lot of work to do with respect to being 'engaged', and it would be foolish to presume it will be easy or simple. A recent piece published by the Lowy Institute, looking at the Australia–Indonesia bilateral relationship, highlights just a small element of the challenge:

> [There is] a view in Indonesia that rarely rates Australia as a preferred and trusted strategic partner for the Association of Southeast Asian Nations. Leaving aside China, the European Union or United States, Australia regularly sits behind Japan and South Korea, and more recently India. [190]

The author goes on to suggest 'Indonesians may hope to maintain good relations with Australia, but there are limits to what Indonesia is willing to do'.[191] If we consider a 'best case' that a permissive environment prevails across the countries with the region, then the scale of Australia's challenge becomes clear. Australia is not alone in this regard; US conceptual thinking has stated:

> Allies and partners play an instrumental role in the SIF concept. SIF are specifically intended to conduct partnered operations with them in their sovereign littorals. The quality of the relationship between the host nation and the force will affect the scope and flexibility of SIF operations. Establishing and maintaining cooperative working relationships with such allies and partners is then an obvious requirement. Allies and partners must view the presence of SIF as sufficient to deter potential adversaries. In large measure, these host nation decision-makers determine the credibility of that security guarantee.[192]

The principle of *engaged* seeks to realise a form of collective security that can emerge when shared interests about resisting coercion and aggression translate into practical partnerships. Such engagement would also deepen the resilience of Australia's Strategy of Denial through enabling credible littoral manoeuvre operations in the region.

Resilience

In its simplest sense, being resilient is about being elastic—being able to take a 'hit' and to continue to function rather than fail. The conduct of littoral manoeuvre and undertaking A2AD operations will see the Australian force face the full suite of modern offensive capabilities described in detail in Smith and Palazzo's paper and witnessed in the contemporary conflict in Ukraine. The need for a resilient force, prepared for such circumstances, is evident. However, the unique nature of the contemporary regional littoral environment suggests the need to highlight a few relevant issues which go beyond those of routine force protection measures.

The increased range, capability, lethality and targeting ability of adversary systems within the PAMI mean that force projection assets (such as airbases and fixed naval infrastructure) will be increasingly vulnerable. To improve their resilience, such assets can be hardened (to a point), aided by deception, obscured by counter-surveillance, counter-reconnaissance and counter-targeting measures, and protected by integrated air and missile defence (should sufficient capability exist). However, it can be expected that attrition tactics will eventually take a toll on these static capabilities. The common solution to this issue involves mobile systems to bring some depth of resilience into lethal strike systems.

If we take airbases out of the equation, mobile systems typically comprise land-based capabilities or warships. But such capabilities have their own issues with resilience. Navy warships have a limited missile magazine capacity and even more limited capacity to replenish their magazines while underway. They are also vulnerable while making their way back through a WEZ to a replenishment location with an empty magazine. Theoretically, a land-based strike system can have an infinitely deep magazine. But this is dependent upon a logistic system that can supply sufficient ordnance—either stockpiled beforehand or brought through an active WEZ in conflict. And while such land-based systems are, to a degree, mobile, any dependence upon a fixed magazine location quickly reduces that attribute. As Tom Lonergan has noted, 'the idea of a land force having a superior magazine depth only works with a good logistics chain or when

in or near to the national support base'.[193] The point of this discussion is not to create a sense of doom about the probable resilience of Australian forces seeking to conduct littoral manoeuvre or A2AD. It is instead to highlight that a resilient force is unlikely to be achieved through reliance on the individual attributes of any one system or capability.

For all the reasons already understood about the threat and environment, making Australia's approach to littoral manoeuvre and A2AD *resilient* will require systemic attention to design issues. This design may work in much the same way as Army's 'combined arms' approach to land warfare. Here, complementary strengths of various arms are combined to create strength and to mitigate vulnerabilities. It may well be that US concepts such as *distributed lethality* and *mosaic warfare* offer further useful insights that Australia could consider in its efforts to increase the resilience of its emerging littoral manoeuvre capability.

Manoeuvre—Putting the 'Manoeuvre' into Littoral Manoeuvre

The final principle to consider is that of *manoeuvre* itself. We have seen that Defence's approach to meeting contemporary and future security challenges is to pursue a strategy of *deterrence by denial*. Understandably, Australian strategic policy and prevailing zeitgeist tends to focus on the *denial* part of that statement. This in turn has seen a lot of attention paid to 'the defence' and A2AD, at the expense of operational manoeuvre concepts. It is necessary, and well past time, to recognise the need to put 'manoeuvre' back in operational concepts for littoral manoeuvre.

In this sense, the 'manoeuvre' principle goes beyond mere 'movement'. Instead, it embraces the need to apply *manoeuvre warfare thinking*—long understood and discussed by the Australian Army—to littoral manoeuvre in Australia's northern approaches.[194] Commitment to an 'indirect approach' is at the heart of manoeuvre warfare thinking. This approach has real utility for the Army (and ADF more broadly) in its efforts to address the challenge of achieving government's 'deterrence by denial' strategy. The advantage the Australian Army saw in engaging with manoeuvre warfare theory in the 70s, 80s and 90s, and the theory's continued alignment with Army culture, still resonate.[195] Usefully, manoeuvre tenets fully align with current NDS direction to achieve 'a coordinated, whole-of government and whole-of nation approach that harnesses all arms of national power', and the Concept Aspire idea of 'focussed and asymmetric application of military power'.[196]

In 2017, Army observed that manoeuvre theory:

> occurs within and across the physical, information and cognitive dimensions. Manoeuvre is a way of thinking about warfare rather than the application of a particular set of tactics or techniques. Its essence lies in defeating the enemy's will to fight by 'destroying' the enemy's plan rather than destroying his forces.[197]

While this is easy to state, Smith and Palazzo recognised and described the problems of achieving manoeuvre theory in their 2016 paper:

> [C]reating an anti-access envelope is only half the problem. The more difficult challenge is manoeuvring in the face of an adversary's anti-access envelope. If the advantage in warfare has tipped decisively in favour of the defender, as is likely, given the global scope of Australia's Strategic Defence Interests, it may be important for the ADF that the balance in warfare be returned to a more neutral setting between the attacker and the defender. Without manoeuvre warfare risks becoming static, costly and indecisive. Disappointingly, there are no easy solutions to this problem. Many of the world's armed forces are applying their minds to solving it with no clear indication of a solution as yet.[198]

Smith and Palazzo's assertion that 'many of the world's armed forces are applying their minds to solving it' is supported by our review of the relevant US literature. There are evidently many conceptual attempts to address the possibility of putative PRC A2AD systems being used in the Indo-Pacific. In Australia there is clearly enthusiasm to build a regional A2AD system, but—to date—far less attention has been paid to the relevance of manoeuvre theory to the delivery of capability effects. Accordingly, there is much that may be learned from comprehensive engagement with the US forces as they continue their theorising and experimentation about how to break into, fight within and collapse an adversary's A2AD system. The likely benefit is twofold.

War remains the proverbial 'two-way street', and the cliché that 'the enemy gets a vote' is also a truism. It is therefore presumptuous to expect that allied forces will (or could) 'beat' a determined adversary from creating their own A2AD zone within the PAMI or Australia's northern approaches. Creation of an enemy A2AD zone could occur pre-emptively, or through 'winning' the race to emplace A2AD capabilities following the outbreak of hostilities. The former would be a clear signal of the failure of Australia's strategy of 'deterrence by denial'. The latter may well represent a failure to address many of the issues raised in this paper. Either way, the ADF and its allies and partners would encounter a challenging operational problem requiring the application of advanced concepts for offensive manoeuvre within the enemy's denial zone.

The second benefit of engaging with the US is that Australia may gain insights to inform its vision and plans for a deterrent A2AD system within and across Australia's northern approaches. Firstly, understanding how the US plans to counter adversary A2AD systems will highlight potential vulnerabilities in such systems more generally. Such vulnerabilities, once identified and understood, could be reverse engineered to inform the design of Australian and allied A2AD systems to make them stronger. The next sub-benefit arises from the fact that any survivable A2AD system in the 21st century will need to employ agile and dynamic approaches rather than entrenched and static thinking—adaptive learning will be key. It is inevitable that manoeuvre concepts within A2AD zones will need to secure an ongoing tactical advantage that enables the forward positioning of (at a minimum) sensors, offensive strike platforms and ongoing sustainment.

It should be noted that the application of a 'manoeuvrist approach' does not disavow the ongoing need to achieve (or demonstrate a credible threat of) *lethality* and *attrition*. The physical destruction of enemy forces is invariably associated with the disintegration of the will and ability to fight. It is therefore an essential element of achieving *denial*. The principle of *manoeuvre* then, along with the other six principles covered by the acronym 'FULLER', has a role to play in informing the development of a suitable littoral manoeuvre concept to achieve Defence's directed tasks.

/ CONCLUSION

The ADF should not be in denial about the difficulties it faces in implementing current strategic policy. We have seen that the Army, integrated with and supported by the RAN and the RAAF, is directed to conduct littoral manoeuvre in Australia's northern approaches, utilising A2AD, to achieve a Strategy of Denial. The uncertainty behind how 'deterrence by denial' will work in practice—and the absence of a clear explanation of how littoral manoeuvre will achieve the conventional deterrence of an unspecified coercive adversary— are challenges that must be addressed. The fact that the ADF recognises the need to 'do something' about this (as demonstrated by its publication of the recent—and underwhelming—'joint littoral warfare' concept) is a start but not enough. Other matters are similarly concerning.

In the new enthusiasm for A2AD, people appear to have forgotten that it is a double-edged sword rather than a single-edged axe. It cuts both ways. A method needs to be developed and explained as to how the ADF might maintain access, and achieve its tasks, in the event that an adversary establishes an A2AD zone in the PAMI. A related problem (which has the potential to disrupt strategic policy's ambition) is how to develop ABO arrangements in the region. If these challenges are not addressed, Australia is likely to face hostile opposition in its efforts to pursue directed policy, not only from its potential adversaries but also perhaps from its regional friends and partners. This paper's examination of key issues that frame discussion about littoral manoeuvre has also suggested the existence of capability gaps that limit the means available to the ADF to pursue its strategic objectives.

Speedy acquisition and development of littoral manoeuvre capabilities—already an aspiration of the DSR—will be vital.[199] The importance of this is highlighted by Andy Love's observation that 'you can't ride a concept to the beach'. Key areas that capability development should focus on are:

- additional shipping to support littoral manoeuvre. A good starting point would be to reverse the IIP's direction to cut the two multi-role sealift and replenishment vessels that were previously detailed in Defence's 2020 Force Structure Plan to replace HMAS *Choules*
- a protected and low-signature logistics system (enabled by AI and autonomy)
- an ADF C2 system that allows and supports a single unified domain battlespace

- measures that add mass to the ADF to support both deterrence credibility and actual warfighting. The development and deployment of autonomous and semi-autonomous technologies are likely to be key
- heightening lethality through development of robust and redundant cross-domain targeting systems and the acquisition of sufficient ordnance to allow attritional engagements within A2AD systems
- deception and signature management capabilities, with a focus on force projection infrastructure, logistics nodes, forward-deployed strike systems, and a littoral manoeuvre logistics and sustainment system in the WEZ.

The capabilities suggested above are important for accelerated development and acquisition, yet they are, of themselves, insufficient. The addition of more (necessary) littoral manoeuvre capabilities alone will not make much difference to the ADF's efforts to achieve a Strategy of Denial. ADF decision-makers must also apply careful thought to developing a feasible and logical method which translates littoral manoeuvre and the use of A2AD into a practical strategy that can achieve conventional deterrence. This is truly an issue for preparation and action by the entire integrated force envisaged in strategic policy.

The official history of Australia in the Second World War begins its treatment of littoral manoeuvre in that war by an ill-prepared Australian force with this melancholy statement:

> Instead, for the most part, it is the story of small groups of men, infinitesimally small against the mountains in which they fought, who killed one another in stealthy and isolated encounters beside the tracks which were life to all of them; of warfare in which men first conquered the country and then allied themselves with it and then killed or died in the midst of a great loneliness.[200]

For the sake of the Australians who will have to conduct the nation's next littoral manoeuvre operations, we should not deny the uncertainties that arise in Australia's current strategic direction. The ADF must address how it will fight, rather than with what it will fight. The Chief of Army has taken a step in offering a vision of the 'how':

> By being present and persistent in key terrain, we can place the burden of aggression on our adversaries. In particular the enhancement of anti-access area denial capabilities, especially land-based maritime strike, provides conventional and forces and special forces with lethal asymmetric capabilities.

The principles introduced in this paper by the acronym 'FULLER + Manoeuvre'—provided their application is tempered by an understanding of context and the wider issues framing the contemporary littoral manoeuvre problem—offer a path towards achieving the Chief of Army's vision. Other ways and deeper thoughts are still required to address the complexity and ambition of current Defence strategic policy and the Chief of Army's vision. We should not be in denial about the challenge of littoral manoeuvre, but neither should we be deterred.

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5 See Australian Government, *National Defence: Defence Strategic Review* (Commonwealth of Australia, 2023), p. 7. For the 'doubling down' of this direction in the NDS see Australian Government, *National Defence Strategy*, pp. 37, 38, 40.

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