BLACK SWAN

STRATEGY PAPER

TARGETED INTEROPERABILITY: A NEW FRAMEWORK FOR AUSTRALIA IN SOUTH EAST ASIA
Authored by Jennifer Parker

DEFENCE AND SECURITY THROUGH AN INDO-PACIFIC LENS

UWA DEFENCE & SECURITY

THE UNIVERSITY OF WESTERN AUSTRALIA

Please direct inquiries to troy.lee-brown@uwa.edu.au

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Front Cover Image:
A HMAS Brisbane officer greets an arriving Singaporean visitor during Exercise Bersama Lima 2023.

↓ Republic of Singapore Navy ship RSS Supreme (centre) conducts officer of the watch manouevres with HMAS Adelaide (front) and HMAS Darwin off the coast of Singapore, during Indo Pacific Endeavour 2017.

About the author and editors

Dr Troy Lee-Brown

The Black Swan Strategy Papers are edited by Dr. Troy Lee-Brown, Research Fellow at the UWA Defence and Security Institute.

A researcher in regional security, maritime security and international relations with a focus on the Indo-Pacific, he is currently the Project Manager for 'Blue Security', a joint Defence and Security Institute-La Trobe Asia-Griffith Asia Institute-UNSW Canberra project which focuses on issues of maritime security in the Indo-Pacific.

Troy has authored several journal papers with a focus on security issues in the Indo-Pacific, regionalism and maritime security. His research interests include the Indo-Pacific, India, Japan, Indian Ocean Region and maritime security.

(E) troy.lee-brown@uwa.edu.au

Fiona Considine

Fiona is the inaugural Business Manager for the UWA Defence and Security Institute. As Business Manager, she is responsible for the high-level planning, coordination and execution of all DSI programs, stakeholder engagement and outreach activities. She has over 20 years' experience in Event and Program Management which has provided the platform and expertise for the brand development, engagement and profile building for DSI. Fiona is the Creative Director of the Black Swan Strategy Paper and oversees its design and content.

(E) defenceinstitute@uwa.edu.au

Jennifer Parker

Jennifer Parker is an Expert Associate at NSC and an Adjunct Fellow in naval studies at UNSW Canberra. She also serves as the Nancy Bentley Associate Fellow in Indo-Pacific Maritime Affairs at the Council on Geostrategy.

With over 20 years in the Royal Australian Navy (RAN), Jennifer specialised as a Principal Warfare Officer and completed advanced Anti-Submarine Warfare training. She has extensive operational experience across regions from the Middle East to the Caribbean and has held key naval appointments in force design strategy, career management, and international exercise planning and operations.

(E) jennifer.a.parker@unsw.edu.au

About the Black Swan Strategy Papers

The *Black Swan Strategy Papers* are the flagship publication of the UWA Defence and Security Institute (DSI). They represent the intersection between Western Australia and strategic studies – both of which are famous for their black swans. The series aims to provide high-quality analysis and strategic insights into the Indo-Pacific region through a defence and security lens, with the hope of reducing the number of 'black swan' events with which Australian strategy and Indo-Pacific security has to contend. Each of the Black Swan Strategy Papers are generally between 5,000 and 15,000 words and are written for a policy-oriented audience. The Black Swan Strategy Papers are commission works by the UWA DSI by invitation only.

↑ Able Seaman Communications Information Systems Brock Miller prepares to lower the Australian National Flag at sunset on the Flight Deck of HMAS Adelaide while alongside Fort Hill Wharf, Darwin during Indo-Pacific Endeavour 17.

Contents

Abbreviations

ADF	Australian Defence Force
ADMM Plus	ASEAN Defence Ministers Meeting Plus
AFT	Armed Forces of the Philippines
ASEAN	Association of Southeast Asian Nations
ATP	Allied Tactical Publication
CSP	Comprehensive Strategic Partnership
CT	Counterterrorism
CUES	Code for Unplanned Encounters at Sea
DCA	Australia Indonesia Defence Cooperation Agreement
DCP	Defence Cooperation Program
DFAT	Australian Department of Foreign Affairs and Trade
E-DCP	Enhanced Defence Cooperation Program
EEZ	Exclusive Economic Zone
FPDA	Five Power Defence Agreement
HADR	Humanitarian Aid Disaster Response
IKAHAN	Australia-Indonesia Defence Alumni Association
INDOPACOM	US Indo-Pacific Command
JATT-P	Joint Australian Training Team – Philippines
MBC	Maritime Border Command
MOU	Memorandum of Understanding
MNF SOP	Multi-National Force Standard Operating Procedure
MTT	Mobile Training Team
NATO	North Atlantic Treaty Organisation
PRC	People's Republic of China
QUAD	Quadrilateral Security Dialogue between Australia, India, Japan and the United States
RAAF	Royal Australian Airforce
US	United States
VPA	Vietnam People's Army

Executive Summary

This paper examines how Australia can redefine and enhance military interoperability with Southeast Asian partners in the absence of a formal multilateral alliance structure akin to NATO.

As the Indo-Pacific security environment increasingly relies on minilaterals, quadrilaterals, and other ad-hoc groupings, Australia should adopt a regional approach that acknowledges varying operational and strategic objectives. Recognising that the term 'interoperability' is often used loosely – the paper refocuses on a more precise definition: the ability to operate effectively together across mission sets agreed at the political level.

Drawing on case studies of Indonesia, Vietnam, and the Philippines, the paper proposes a framework that examines interoperability along a spectrum of 'degrees' – deconflicted, compatible, and integrated – and across multiple 'dimensions' encompassing technical, procedural, human, and information aspects. It highlights how focussing on these definitional elements can help planners on where to focus their efforts on enhancing interoperability while being realistic about the relationship's political framework. The paper highlights how commonality of systems and procedures, regular joint exercises, and deliberate strategic planning are crucial to forging meaningful high levels of interoperability. However, the findings underscore that targeted interoperability can be achieved through an incremental approach, despite limitations posed by differing defence systems and the absence of formal alliance structures. This nuanced framework offers policymakers and defence planners a roadmap for strengthening partnerships and enhancing Australia's ability to respond collectively to regional security challenges.

Policy Recommendations

Building on the key themes explored throughout this paper, the following recommendations offer practical steps to strengthen Australia's military interoperability with Southeast Asian partners.

1. Focus on specific mission sets: Identify clear mission sets – such as maritime security, counterterrorism or humanitarian aid and disaster relief (HADR) – to guide targeted interoperability efforts.

2. Adopt procedural frameworks: Use or adapt unclassified regional standard operating procedures (SOPs) and doctrinal publications to establish shared tactics, techniques, and processes.

3. Invest in human interoperability: Expand officer exchanges, language training, and professional military education to build trust and mutual understanding.

4. Refine information-sharing mechanisms: Develop or enhance secure, timely data exchange arrangements, ensuring operational coherence and building confidence.

5. Leverage minilateral and multilateral exercises: Use regional exercises to stress-test these frameworks and deepen cooperation across all dimensions of interoperability.

Introduction

In the absence of formal multilateral alliance structures in Southeast Asia and East Asia, the United States (US), Australia, and their allies and partners have adopted a latticework approach to developing relationships.

The regional latticework approach requires Australia to think about the concept of interoperability with its Southeast Asian partners through a new lens, redefining interoperability with a regional focus. The rise of minilaterals, quadrilaterals and other ad-hoc groupings in the Indo-Pacific have become increasingly important to the regional security architecture. However, a significant challenge with this latticework approach is the ability to operationalise the military elements of these groupings in the event of a crisis, whether that crisis is a natural disaster or a regional conflict.

Interoperability is key to operationalising military relationships, however, unlike larger organisations such as the North Atlantic Treaty Organisation (NATO), which have agreed-upon frameworks to enhance interoperability and generalised strategic alignment,[2] the Indo-Pacific latticework approach lacks the necessary frameworks for functional interoperability. The challenge

for Australia then becomes, what is interoperability in the context of its relationships in Southeast Asia, and how can it be harnessed and enhanced. Key to enhancing interoperability is being deliberate in Australia's goals, understanding the likely common missions, the strategic boundaries of the relationship its seeking to operationalise, and optimising interoperability within this framing. Being specific and deliberate about the nature of interoperability is important. It has become common parlance for politicians, diplomats and defence personnel alike to list a key outcome of an exercise or working group activities as one of 'interoperability', some even go so far as to throw out the term 'interchangeability'.

It is important when considering how to enhance interoperability between Australia and key Southeast Asian partners to understand what we mean by interoperability. The omnipresence of the term interoperability in military

diplomacy at times overshadows its true meaning which in turn can distort key aspects of military engagement that should be focused on to deliver interoperability. This paper presents an approach to evaluating interoperability in the context of Australia's relationships Southeast Asia, applying the framework to the bilateral relationships between Australia and the Philippines, Indonesia, and Vietnam. It identifies the essential elements of interoperability and assesses the feasibility of enhancing these relationships in the absence of a formal alliance structure. By using this framework, the paper demonstrates that targeted interoperability can be achieved within the strategic frameworks of each relationship by carefully considering both the degrees and dimensions of interoperability. As this analysis is based on publicly available information, it assesses interoperability only within the scope of those elements.

↑ Representatives from the Maritime Cooperative Activity on the forecastle of HMAS Hobart in Subic Bay, Philippines.

CHAPTER 1
The nature of interoperability

It is important when considering how to enhance interoperability between Australia and key Southeast Asian partners to understand what we mean by interoperability.

Understanding the specifics of interoperability, especially its technical elements, helps planners target engagement where it will most effectively advance interoperability. The term interoperability is not unique to the military setting, but even within the military setting it is often poorly defined.

Definition of Interoperability

NATO defines interoperability for its purposes as 'the ability to act together coherently, effectively and efficiently to achieve allied tactical, operational and strategic objectives'.[3] The challenge in applying this definition to Australia's relationship with Southeast Asian nations is that our operational and strategic objectives may not always align, and coordinated defence activities occur outside the framework of an alliance. These constraints mean that what is considered as interoperability for Australia in Southeast Asia differs significantly from the NATO context.

Australian military doctrine places a greater emphasis on 'systems' defining interoperability as 'the ability of systems, units or forces to act together, to provide services to or from, or exchange information with partner systems, units or forces'.[4] With its technical emphasis, this definition focuses on the ease in which information can be exchanged in an inter-service or alliance context. This definition includes aspects like the ability to pass data or undertake classified communications. Such a level of 'systems' interoperability requires two conditions; the first is commonality of systems, the second is high level agreements on the ability to pass classified information. These are relationship elements that can be achieved in an inter-service, joint standpoint, or even in an alliance scenario. But this is less applicable to Australia's relationships in Southeast Asia, for two reasons. One, many of

Australia's most prominent Southeast Asian partners acquire their systems from a vast array of partners, some including Russia and People's Republic of China (PRC). Countries such as Indonesia value diversity in their defence capability acquisition sources, which is considered part of their approach to strategic non-alignment.[5] While different countries, organisations and even military services will have different definitions of the term interoperability, in the broad there is a key theme that shines though: interoperability in its simplest sense is the ability to effectively operate together.

The discomfort in applying NATO and Australian military definitions of interoperability to Australia's relationship with Southeast Asian partners highlights the need to rethink how we approach interoperability. A more fitting definition of the interoperability sought between Australia and its Southeast Asian partners might be a shared familiarity in operating together across a range of agreed mission sets or operational scenarios. The mission sets and operational scenarios are agreed upon at the political level and are unique to the relationship or grouping through which interoperability is being pursued.

Degrees of Interoperability

Interoperability exists on a spectrum. It is not a binary measure of being either fully interoperable or not, but rather it occurs in varying degrees; a sliding scale of the measure of how two countries may effectively operate together. The Royal Australian Airforce (RAAF) breaks these degrees down to the areas of deconflicted, compatible and integrated.[6] In the RAAF Air Power manual, these degrees are defined as follows:

- Integration – 'the highest level of interoperability across the technical, procedural and human dimensions and may be facilitated through common systems, procedures, processes, training and education'

- Compatible – 'aviation systems may not be technically common, but this can often be mitigated by similar procedures, processes, training and education'.

- Deconflicted – 'The deconflicted level of interoperability is reserved for partnerships where forces need to work collectively but also be separated geographically or temporally due to a lack of interoperability across the dimensions'.[7]
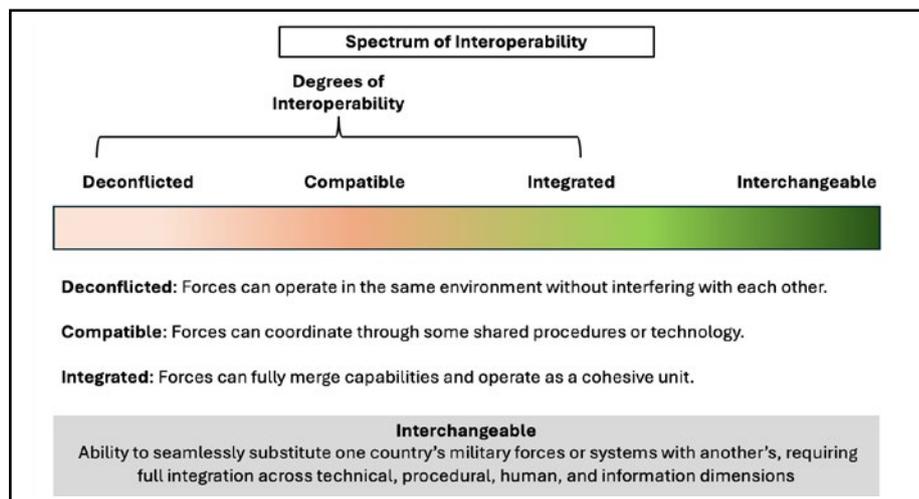
↑ Figure 1 – Spectrum of Interoperability

↑ Members of the Australian Army and Philippine Marine Corps participate in the Joint Australian Training Team – Philippines (JATT-P) program at Marine Base Ternate, Philippines.

While the RAAF uses these groupings in the context of 'systems,' they have broader applicability to the degrees of military interoperability between Australia and Southeast Asian countries. In some respects, they can serve as aspirational goals or benchmarks for military interoperability within the agreed mission sets or operational scenarios.

Dimensions of Interoperability

Not only is interoperability a question of the 'degrees' of interoperability it is also a question of interoperability of 'dimensions' or areas of interoperability. These areas cut across issues of culture, doctrine, structure, capability, technology, and policy. In many ways it is an unending list. For the purposes of this paper, interoperability will be grouped amongst four key pillars; technical, procedural, human and information.[8] There is no universal application of these groupings, and organisations often apply different consideration of the pillars, for example the RAAF considers interoperability under the context of purely the technical, procedural and human pillars.[9] When considering aspirational levels of interoperability, its important to recognise that interoperability is not an end in itself.[10]

The metrics that can be used to measure the dimensions or areas of interoperability are extensive and will differ in many ways depending on the objective for which interoperability is measured. For a targeted approach to interoperability between countries, the framework outlined in the RAAF's Air Power doctrine – comprising technical, procedural, and human dimensions – provides a useful model.[11] Adding a fourth dimension, information, further enhances this framework, highlighting the importance of the ability to exchange information as a key element of interoperability.[12] This grouping helps to assess the current state of interoperability and identify key areas for improvement.

Technical

Technical interoperability is effectively the ability of hardware and software systems to communicate and work together, such as radios, weapons systems, and command-and-control systems.[13] A high degree of technical interoperability requires either a commonality of systems, or intentional system design that allows for the transfer of classified information. In many respects, technical interoperability is one of the more difficult to achieve because it requires alignment at the strategic level to develop interoperable systems. Clearly a direction that the Australia-United States relationship is moving in, arguably in some specific areas of military capability to the degree of interchangeability, which is discussed later in this paper.

Procedural

Procedural interoperability, sometimes also referred to as doctrinal interoperability,[14] entails the harmonising of the processes, tactics, techniques, and procedures used by different military forces to ensure they can operate cohesively. The 2014 Code for Unplanned Encounters at Sea (CUES),[15] provides a low-level example of how these kinds of doctrinal initiatives can generate low degrees of interoperability. Notably, the recent Foreign Ministers' meeting in July 2024 announced the intent to develop a QUAD HADR doctrine.[16] This initiative exemplifies an interoperability approach that, if extended beyond the QUAD countries to Southeast Asia and aligned with ASEAN's HADR doctrine, could significantly enhance regional interoperability in disaster response efforts.

Other examples of unclassified military procedural documents used in Southeast Asia include:

- Multi-National Maritime Tactical Instructions and Procedures Volume 1 – This is an unclassified version of NATO's Allied Tactical Publication (ATP) that deals with maritime command and control.[17]

- Standard Operating Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations – An ASEAN Defence

Ministers Meeting Plus (ADMM Plus) publication that aims to assist in HADR operations.[18]

- 2018 Guidelines for Air and Military Encounters – An ADMM Plus that aims to deconflict military air assets at a basic level.[19]

Depending on the mission, there is limited unclassified procedural documentation available to assist with higher-end or more complex military operations. This poses a challenge when considering interoperability with Southeast Asian countries, as unlike Five Eyes or NATO partners, there is no agreed set of basic procedures or documents between Australia and its Southeast Asian counterparts. While the referenced documents may offer a helpful starting point, they are not comprehensive. Establishing a baseline of shared procedures would be beneficial for enhancing interoperability in the region. Of course, in any aspect of procedural interoperability, the need to exercise and develop these procedures is crucial. This is where the idea of exercises and joint sails in the region come to the fore. Importantly though, this is not just undertaking exercises or joint sails for the sake of the 'annouceable'. To achieve increased degrees of interoperability this requires targeted design on what type of procedures or activities you want to become increasingly interoperable with and then enhancing the complexity to stress the procedures, tactics, techniques and processes.
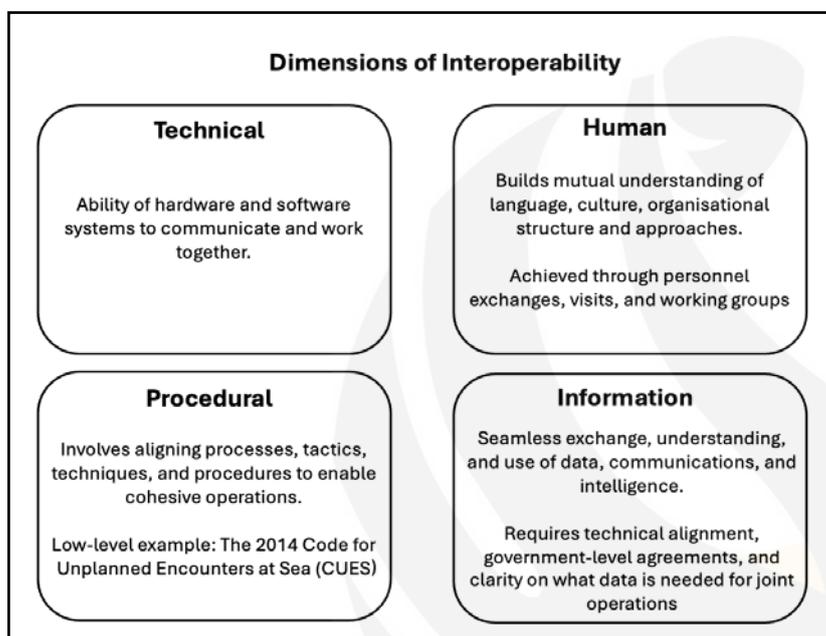
Human

Human interoperability aims to promote mutual understanding and cooperation among personnel from different military forces, including language, culture, and training. This can occur during visits, or more formalised training exchanges and working groups.

Information

Information interoperability refers to the ability of different systems, organisations, or forces to exchange, understand, and use information effectively across various platforms and environments. In a military context, it specifically involves the seamless sharing and integration of data, communications, and intelligence between partners to ensure coordinated operations and decision-making. It is linked to technical interoperability but requires a broader commonality than just systems that can talk to each other. It often requires government level agreements, but also a common understanding of what information may be required to undertake certain activities or operations.

↑ International observers from Singapore, Thailand, Indonesia, Vietnam and international engagement officers watch LR5 being lifted during *Exercise* Black Carillon 2023 held off the coast of Western Australia.

Dimensions of Interoperability

Technical

Ability of hardware and software systems to communicate and work together.

Human

Builds mutual understanding of language, culture, organisational structure and approaches.

Achieved through personnel exchanges, visits, and working groups

Procedural

Involves aligning processes, tactics, techniques, and procedures to enable cohesive operations.

Low-level example: The 2014 Code for Unplanned Encounters at Sea (CUES)

Information

Seamless exchange, understanding, and use of data, communications, and intelligence.

Requires technical alignment, government-level agreements, and clarity on what data is needed for joint operations

↑ Figure 2 – Dimensions of interoperability

↑ Australian Army soldier from the 1st Combat Engineer Regiment engages with members of the Philippine Marine Corps Force Reconnaissance Company on a Zodiac small boat during Joint Australian Training Team – Philippines (JATT-P) program at Marine Base Ternate, Philippines.

Interchangeability

In discussions on interoperability, the term 'interchangeability' is increasingly used. Whilst it is tempting to substitute the term interoperability with interchangeability, they are different. There is no publicly available Australian military definition for it. NATO defines interchangeability as 'the ability of one product, process or service to be used in place of another to fulfil the same requirements'.[20] More simply, interchangeability is the ability to lift and shift one part of a country's armed forces, into another seamlessly. Interchangeability is a much higher threshold of commonality between different militaries and an extension of the systems-based NATO definition of interoperability in a broad military sense implies that it requires two key criteria, strategic alignment and commonality of systems, or a high degree of technical interoperability.

Consider the definition of interchangeability through the approach of the dimensions of interoperability, technical, human, procedural and information. It is clear to achieve a relationship where military interchangeability is feasible in the broadest sense, or in a specific mission set, the integrated degree of interoperability is required across all four dimensions of interoperability to achieve functional interchangeability. Based on these criteria, in a general sense Australia is only likely to achieve interchangeability with its key allies the US and New Zealand, when there is strategic alignment within the alliances and a commonality of systems. The assessment in this paper is that this is dependent on the current nature of the relationship; however, future conflict or crises could accelerate the degree and dimensions of Australia's interoperability with its Southeast Asian partners.

Interoperability Framework

This paper employs a two-part framework to evaluate interoperability in each case study. First, it draws on the concept of degrees – deconflicted, compatible, and integrated – to map the level of cooperation. Second, it examines four key dimensions – technical, procedural, human and information – to pinpoint areas of strength and weakness. Combined, these degrees and dimensions provide a structured way to assess how effectively Australia and its Southeast Asian partners can operate together, highlighting where interoperability can be enhanced and whether it could eventually approach the higher threshold of interchangeability.

Case Studies

Indonesia, Vietnam, and the Philippines were selected for this study due to their strategic importance and evolving defence relationships with Australia. Indonesia, as Southeast Asia's largest nation and a key neighbour, is vital to Australia's regional maritime security. Vietnam, with its growing defence capabilities and proximity to China, offers unique opportunities and challenges for deepening cooperation. The Philippines, a longstanding US ally and pivotal player in the South China Sea facing ongoing aggression from the PRC in the maritime domain has quickly become a key defence partner for Australia. Together, these nations provide a comprehensive view of the challenges and opportunities in enhancing Australia's military interoperability in Southeast Asia.

CHAPTER 2:
Interoperability with Indonesia

The Australia-Indonesia relationship is one of the most significant for Australia's national security.

Indonesia's proximity and the fact that two-thirds of Australia's trade passes through its archipelago make this partnership central to Australia's security interests. The relationship dates back to Indonesia's independence, when Indonesia selected Australia as it's representative at the United Nations in 1949.[21] However, the Defence relationship has been slow to develop and despite the extensive number of defence related agreements between the two countries – the strategic relationship, and subsequently the defence relationship, has been characterised by significant ups and downs.

Strategic Framework

Defence engagement was sporadic from the 1970s, however it came into focus in the 1990s with the signing of the 1995 Security Agreement between the two counties.[22] Unfortunately the agreement was short lived with Indonesia withdrawing from it in September 1999 in response to Australia's engagement in East Timor.[23] The defence relationship between Australia and Indonesia has matured significantly over the past two decades. The 2006 Lombok Treaty provided the groundwork for formalised security cooperation,[24] while subsequent agreements, such as the 2018 Joint Declaration on Maritime Cooperation,[25] have reinforced shared priorities in maritime security, counterterrorism, and disaster relief.[26]

The most recent milestone was the 2024 Defence Cooperation Agreement (DCA). The DCA is yet to be ratified or made public. However, the Australia Government describes it as a:

'treaty-level agreement [which] will allow for enhanced practical cooperation and interoperability between our defence forces in areas such as maritime security, counterterrorism, humanitarian and disaster relief, logistics support, education and training, as well as across defence industry'.[27]

This statement makes it clear that interoperability is focused on three key mission sets: maritime security, counterterrorism, and HADR with a desire to increase technical interoperability across the defence industry and continue to progress human interoperability.

↑ Officers from HMAS Hobart and the Indonesian Navy, at the Port of Benoa, Bali, Indonesia, during a welcome ceremony for the ship's arrival.

Level of Engagement

Through initiatives such as joint participation in exercises like *Exercise Garuda Shield* and other multilateral exercises,[28] alongside bilateral maritime security operations, both nations have demonstrated a willingness to collaborate on shared security challenges. However, while these exercises have fostered important tactical and operational links, the overall defence relationship remains less developed than Australia's partnerships with other regional allies like Japan or the United States. Strengthening interoperability remains a key opportunity for growth, particularly in addressing complex challenges in the maritime domain. Despite the extensive strategic framework between the two countries their respective strategic traditions have an impact on the feasible level of interoperability. Indonesia's tradition of strategic non-alignment and Australia's tradition of partnerships and alliances play out in both the dimension of interoperability and the feasible degrees.

Technical

While interoperability in general is clearly a focus in the Australia-Indonesia defence relationship's strategic framework, it will not be easily achieved across all dimensions of interoperability. The technical dimension in many ways presents the greatest challenge for enhancing interoperability between the two countries, even within the defined mission sets of maritime security, counterterrorism and HADR.[29] Indonesia operates a diverse array of equipment sourced from Russia, the US and European nations, and sees its acquisition from different sources as an element of its non-alignment.[30] Despite the ongoing modernisation of the Indonesian armed forces,[31] this strategic approach to acquisition from multiple countries makes enhancement of technical interoperability between Australia and Indonesia difficult.

This has not always been the case – in fact, early iterations of the Defence Cooperation Program (DCP) between Indonesia and Australia focused on the provision of military hardware to Indonesia in the 1970s and 1980s, whereas it has now transferred to training.[32] This means there is limited commonality of systems between the two countries to support technical interoperability. While Australia recently transferred 15 Bushmasters configured for peace-keeping operations to Indonesia in 2023,[33] this will not address broader technical interoperability challenges. The 2024 DCA has not been ratified and its contents are not public, however, it does touch on enhanced defence industry cooperation and technical cooperation in areas including science and technology.[34] However, more broadly, interoperability in the technical dimension is unlikely to progress to and beyond the degree of deconflicted without further strategic alignment in capability or system acquisitions.

↑ Display of a medical field kit from Indonesian National Armed Forces personnel during a medical workshop as part of Indo-Pacific Endeavour 2024 in HMAS Adelaide.

Procedural

Procedural interoperability provides an area for both Australia and Indonesia to focus, and in some ways can mitigate some of the limitations posed by the barriers in the relationship to technical interoperability. Despite the inconsistency in the defence relationship between the two countries, exercises and in some areas, operations, have been a hallmark of defence engagement. At the forefront of the relationship have been exercises and operations, predominantly in the maritime and counterterrorism domains. It is clear that the areas of non-traditional maritime security, counterterrorism and peace-keeping have been the traditional agreed mission sets and operational scenarios that the two countries are comfortable in pursing.

Exercises between Australia and Indonesia have traditionally been bilateral. Notable examples include *Exercise New Horizon* and *Exercise Cassowary. New Horizon*, held biennially for over a decade, focuses on basic maritime warfare serials and ship manoeuvring.[35] *Cassowary* is a similar exercise, centred on patrol boat operations between the two nations.[36] Longstanding maritime cooperation extends beyond exercises to joint patrols, such as *AUSINDO CORPAT*, a fisheries patrol conducted by both navies,[37] and *Operation Gannett,* an annual patrol between Maritime Border Command (MBC) and Indonesia's Coast Guard, targeting illegal activities at sea.[38] In combating maritime crime, Australia and Indonesia have arguably achieved a compatible level of interoperability. These traditional areas of collaboration, primarily focused on enhancing procedural interoperability, have expanded in recent years. Australia's participation in *Exercise Garuda Shield* in 2022,[39] marked a shift. More recent exercises have demonstrated three key trends: expanding beyond traditional maritime cooperation, increasing participation in joint exercises, and a shift towards minilateral exercises involving additional partners.

The expansion of exercises in 2023 and 2024 alone saw Australia and Indonesia conducting:

- *Exercise Albatross AUSINDO* – An Australia-Indonesia maritime patrol surveillance exercise.[40] An exercise which had early origins in the relationship in 2005, and experienced a hiatus between 2012 and 2021.[41]

- *Exercise Rajawali Ausindo* – An Australia-Indonesia air mobility training exercise involving C-130Js. Although first held in 1994, it has gone through a series of suspensions.[42]

- *Exercise Elang AUSINDO* – An Australia Indonesia Air Combat exercise that saw Australian F35s deploy to Indonesia for the first time. Although first held in 1993, it has gone through a series of suspensions. [43]

- *Exercise Wirra Jaya* – Annual bilateral Army training exercise,[44] which commenced in 2013.[45]

These service-to-service exercises were complemented by *Exercise Keris Woomera* 2024, a joint amphibious exercise held in November 2024 that involved around 2000 personnel and featured 'air, maritime, amphibious and land operations, as well as a humanitarian assistance and disaster relief evacuation scenario'.[46] *Keris Woomera* 2024 represented the largest and most complex bilateral exercise ever between the two countries.[47]

The third trend toward minilateral exercises involves the development of joint activities between Australia, Indonesia, and partners such as the US and India. These include:

- *Exercise Bhakti Kanyini AusIndo* 2024 – An inaugural Australia, United States and Indonesia HADR exercise.[48]

- *Exercise Garuda Shield* 2024 – A US INDOPACOM multinational joint exercise, which Australia participated in for the first time in the modern construct of this exercise in 2022.[49]

- *Exercise Crocodile Response* 2023 – A trilateral HADR exercise between Australia, Indonesia and the US.[50]

- First trilateral maritime exercise between Australia, Indonesia and India.[51]

This expansion of minilateral exercises is further complemented by Indonesia's long-standing participation in Australia's multilateral maritime *Exercise Kakadu*,[52] and the air combat *Exercise Pitch Black*.[53] Indonesia joined *Exercise Talisman Sabre* as an observer in 2021 and participated fully in 2023.[54] The intensification of exercises and their expansion across various domains have enhanced interoperability between the two countries, likely achieving compatibility in some of the more longstanding areas of cooperation. Yet, differing operational doctrines remain a challenge. Australia's operational procedures are closely aligned with those of its major allies, whereas Indonesia's approach is shaped by a variety of military influences, reflecting the diversity of its defence procurement, training and exercise engagement.

To improve procedural alignment, joint exercises should emphasise more complex, real-world scenarios where procedural coordination is critical. For instance, the South China Sea and Indian Ocean regions are of mutual interest, and exercises in these areas should focus on rules of engagement, disaster relief, and maritime security operations. Developing and standardising procedures for rapid response to crises would be mutually beneficial. There is little publicly available evidence of common doctrine between the two countries – but the development of common doctrine, or use of regional doctrine as a hallmark of these expanding exercises would help to increase interoperability between the two countries in the areas of maritime security, HADR and counterterrorism.

Human

In many ways the human dimension of interoperability was the first to develop between Australia and Indonesia and remains the strongest, with further growth potential. In the early 1960s, the Armies of the respective countries commenced exchanges to each others' staff colleges.[55] Indonesia was an early member of Australia's DCP.[56] This training has been underpinned by a series of operational level working groups and high-level meetings. Interpersonal relationships between Australian and Indonesian defence personnel have steadily improved through officer exchanges, joint training, and high-level military dialogues. Programs like the Australia-Indonesia Defence Alumni Association (IKAHAN),[57] play a key role in fostering long-term professional relationships that contribute to smoother collaboration during joint operations. However, further investment in personnel exchanges at the operational level will be crucial to achieving a greater degree of human interoperability. More frequent exchanges of junior and mid-level officers will ensure that joint exercises are more effective and that the cultural understanding between the two forces deepens. Language remains a barrier, with English often serving as the common medium during exercises, but greater proficiency in Bahasa Indonesian among Australian officers could enhance communication during collaborative efforts.

Information

The secure and timely exchange of operational data between Australia and Indonesia is one of the most complex aspects of the defence relationship. Despite participating in joint maritime patrols such as *AUSINDO CORPAT* and *Operation Gannett*,[58] the ability to share intelligence, particularly in real time, remains limited—at least based on publicly available information. The 2014 Joint Understanding on the Code of Conduct states that Australia and Indonesia should 'promote intelligence cooperation between relevant institutions and agencies',[59] however, from an interoperability perspective this is unlikely to have translated to the operational level and enhance interoperability. While the increase in procedural interoperability will improve information sharing – by clarifying points of contact and pathways for data exchange, thereby enhancing overall interoperability – this progress will only be fully realised with clear strategic direction. Australia and Indonesia could further benefit from establishing deeper intelligence-sharing arrangements and operational information exchanges, supported by formal agreements to ensure consistency and trust.

Summary

The Australia-Indonesia defence relationship is vital for regional security, with Indonesia's proximity and control of key trade routes underscoring its strategic importance to Australia. Over the years, the partnership has evolved through agreements like the Lombok Treaty (2006), the Joint Declaration on Maritime Cooperation (2018), and the recent 2024 DCA, which emphasises interoperability in maritime security, counterterrorism, humanitarian assistance, and disaster relief. However, challenges persist. Indonesia's non-aligned procurement strategy complicates technical integration with Australian systems, limiting the potential for deeper technical interoperability. While the expanding scope, complexity, and multilateral nature of exercises between the two countries in recent years have strengthened operational coordination, procedural alignment must now focus on real-world scenarios in regions like the South China Sea, where the strategic relationship allows.

Human interoperability remains the partnership's strongest area, fostered through personnel exchanges, defence training, and alumni programs like IKAHAN. Strengthening cultural understanding, particularly through Bahasa Indonesian proficiency among Australian personnel, will further enhance collaboration. However, information interoperability requires more development, with real-time intelligence sharing still limited. Expanding secure communication infrastructure and establishing formal agreements on data exchange would assist information interoperability. Despite these challenges, interoperability is advancing through efforts in the procedural and human dimensions. Limitations in technical interoperability will nonetheless continue to hinder progress in areas beyond counterterrorism and maritime security.

CHAPTER 3
Interoperability with Vietnam

Strategic Framework

Australia's defence relationship with Vietnam is one of the more embryonic in Southeast Asia. However, Vietnam's geographic position and historical hesitancy towards strategic alignment with the PRC have made them a critical player in Australia's quest for a regional balance of power. In 2024, a significant milestone in the defence relationship between the two countries was achieved with the signing of a Comprehensive Strategic Partnership (CSP) which features key elements of defence cooperation.[60]

The modern defence relationship between Australia and Vietnam commenced in 1999 with the establishment of Defence attaché representation in both countries.[61] Whilst there was some minor engagement throughout the 1990s, Defence engagement between the two countries accelerated from 2010 with the signing of a Memorandum of Understanding (MOU) for Defence Cooperation.[62] The defence relationship has deepened since the establishment of the MOU, with focal areas being the conduct of high-level talks, and limited training activities between the ADF and the Vietnam People's Army (VPA).[63] The nature of the high-level talks between the two countries has evolved over time, with a joint Foreign Affairs and Defence Strategic Dialogue at deputy secretary/deputy minister level commencing in 2012.[64] Annual talks on the two sides also occur in the form of defence cooperation talks, defence policy dialogue and a Track 1.5 dialogue.[65]

In 2013 the first Defence Minister meeting occurred between the two countries,[66] with this moving to an annual meeting from 2018 with the issuing of a joint statement establishing a strategic partnership that covered cooperation on a range of matters, including defence.[67] The relationship was again upgraded

↑ Vietnam People's Navy ship FS18 ship's company line the upper decks while at sea underway during *Exercise* KAKADU 2024 off the coast of Darwin, Australia.

in 2024 with the signing of a CSP between the two countries.[68] While the CSP covered a broad range of focal areas, defence was a prominent element. Regarding defence cooperation, the CSP highlighted key areas that will serve as focal points for advancing interoperability. It stated:

• 'We acknowledge our close defence, security and justice ties, which contribute to peace, stability and the development of the region, including through education and training, practical exchange and peacekeeping support'.[69]

• 'We commit to broadening cooperation, including in defence industry, maritime security, information and intelligence sharing; strengthening maritime cooperation, including sustainable marine resource management and combating illegal, unreported and unregulated fishing'.[70]
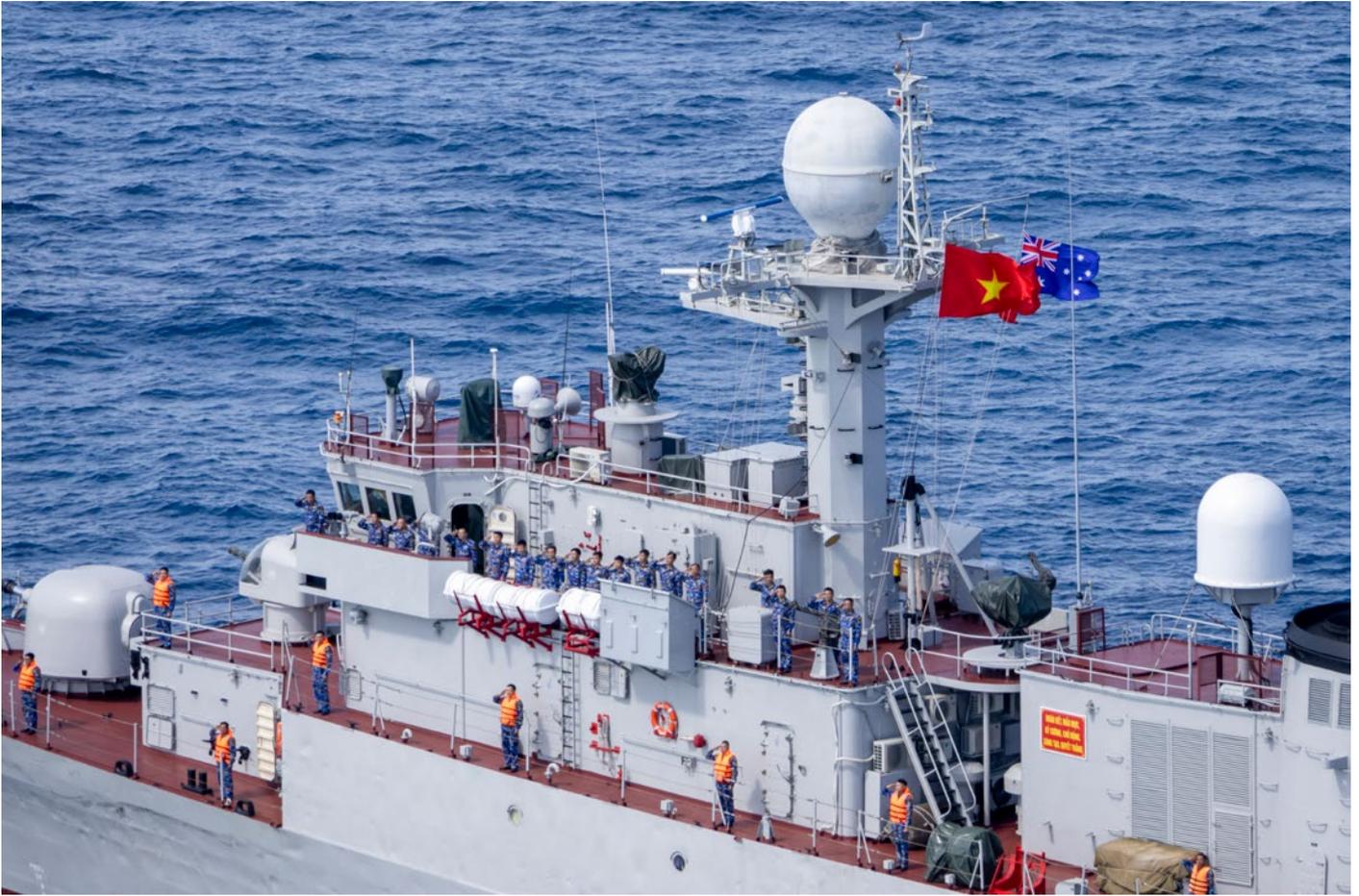
↑ People's Army of Vietnam United Nations peacekeepers pose for photos in front of a Royal Australian Air Force No. 36 Squadron C-17 Globemaster during a farewell ceremony at Noi Bai Airport in Hanoi, Vietnam.

Level of Engagement

Key elements of the defence relationship between the two countries have focused on low level engagement concentrated in the areas of training, support to VPA peace-keeping endeavours and maritime engagement from increasing Australian naval ships visits, now reportedly on an annual basis.[71] From a peacekeeping standpoint, the relationship has involved Australia taking a leading role in providing English language and specialist training to VPA peacekeepers prior to their deployment on UN peacekeeping missions in South Sudan since 2014.[72] Since 2018, this support has expanded to include assistance with transporting Vietnam's peacekeeping personnel and equipment to South Sudan for the United Nations Mission in South Sudan (UNMISS).[73] This peacekeeping partnership was further solidified with the signing of a peacekeeping partnership arrangement in 2024.[74] Under the interoperability framework

outlined in this paper, Vietnam offers a valuable case study for approaching interoperability in Southeast Asia, aligned with the proposed definition of 'a shared familiarity in operating together across a range of agreed mission sets or operational scenarios'. The strategic framework highlights the importance of Australia's partnership with Vietnam, with clearly defined mission sets in the peacekeeping and maritime domains.

Technical

Under the technical dimension on interoperability, Australia and Vietnam will likely struggle to obtain a degree of interoperability above the level of deconflicted. Vietnam's military acquisition across the board has predominantly been supported by acquiring defence equipment from Russia. Vietnam has recently announced plans to modernise its forces,[75] however, sanctions placed on Russia because of Russia's illegal invasion of Ukraine have stalled this

modernisation.[76] But the stall in Vietnam's modernisation has opened opportunities for greater technical collaboration with other countries and it is notable that the Vietnam-Australia CSP included an intent for defence industry collaboration.[77] However, despite the opportunity for greater collaboration across defence industry Australia and Vietnam are unlikely to achieve a degree of interoperability above that of deconflicted, and in many areas true deconfliction may only be aspirational.

Procedural

From a procedural standpoint, increased familiarity across the agreed mission sets is important and this is clearly occurring between the two partners. The nature of the engagement outlined under the CSP does not warrant a dedicated focus on laying down a detailed procedural framework between the two countries for the agreed focal areas of peacekeeping, maritime security, and

intelligence or information sharing. However, increased familiarity and deconfliction could be gained by encouraging the use of an existing procedural framework between the two countries. Australian planners could adopt an existing regional standard operating procedure, such as the unclassified maritime tactical publications used by the Five Power Defence Arrangements (FPDA) countries or the US INDOPACOM Multinational Force Standard Operating Procedure (MNF SOP). Using these standard operating procedures in military engagements or training opportunities could help generate a degree of procedural interoperability through commonality of procedures. However, given the strategic context of the relationship, achieving a deconflicted level of interoperability within the agreed mission sets is likely the most realistic aspiration. Most notably, the Vietnamese Navy participated in Australia's multilateral exercise *Kakadu* for the first time in 2024, sending a ship for the exercise. While the specific nature of their participation is unclear, Vietnamese reports suggest that they were involved in the non-combat elements of the exercise.[78]

↑ RAN farewells representatives of Vietnam People's Armed Forces at the Port of Danang, Vietnam during a Regional Presence Deployment.

Human

The human dimension of interoperability has been a clear focus of the defence relationship between Vietnam and Australia. A notable example is the training of 3,500 VPA officers through Australian-sponsored programs conducted both in Australia and Vietnam under the DCP.[79] Additionally, discussions on maritime security, the law of the sea, and the legal aspects of HADR response were key components of the ADF's 2023 *Indo-Pacific Endeavour* visit to Vietnam.[80] Human interoperability offers the greatest potential for enhancing cooperation between the two countries and should remain a key focus. Expanding training opportunities and providing observer roles in *exercises* like *Talisman Sabre* could further strengthen this dimension. However, these opportunities must be carefully balanced against the priorities of other partner nations, given the finite resources available to support engagement.

Informational

Given the constraints identified in the technical and procedural aspects of the relationship, the informational dimension is unlikely to be a primary focus for interoperability between the two countries. However, this dimension can be enhanced through continued emphasis on the human element of the relationship.

Summary

Australia's military interoperability with Vietnam, while still in its formative stages, has steadily grown since the 1999 establishment of Defence attaché representation in both countries. This partnership emphasises cooperation in areas such as peacekeeping and maritime security, reflecting both nations' shared commitment to regional stability and balance of power, particularly given Vietnam's strategic position and cautious stance towards China. However, the current level of interoperability between Australia and Vietnam is broadly classified as 'deconflicted' in the agreed areas of cooperation, with potential for growth in other specific areas. Technical interoperability faces challenges due to Vietnam's reliance on Russian military equipment, although there are emerging opportunities for collaboration in defence industry under the CSP. Procedurally, the partnership lacks a dedicated military framework, but increased familiarity through existing regional standards could enhance cooperation. The human dimension offers the greatest potential, with ongoing training and exchanges laying a strong foundation for future collaboration.

CHAPTER 4
Interoperability with the Philippines

Strategic Framework

Australia and the Philippines have an extensive history of defence cooperation with Australia's personnel, ships and aircraft engaged throughout Word War II in the liberation of the Philippines from Japanese invasion. Australian and Philippine personnel served together in 1951 in Korea under the United Nations Command, and again in Timor Leste in 1999 under the Australian led International Force East Timor.[81] The two countries have outlined a detailed strategic framework for defence activities commencing with the signing of the MOU on Defence Cooperative Activities in 1995.[82] Relationships were further enhanced by the signing of the 2003 MOU to Combat International Terrorism, and the 2012 Status of Visiting Forces Agreement.[83] While the relationship is longstanding, the closeness of the defence relationship between the two countries has undoubtedly accelerated in recent years in response to PRC's aggressive behaviour towards the Philippines in areas of the South China Sea.

The defence relationship between Australia and the Philippines and its future trajectory was cemented by the signing of the 2019 Enhanced Defence Cooperation Program (EDC-P),[84] a series of logistics agreements in 2022,[85] and the cementing of the relationship as a strategic partnership in 2023.[86] The key pillars or focal areas under the 2019 EDC-P are maritime security and counterterrorism, in addition to training and education, HADR, and Gender, Peace and Security.[87] These priorities are further highlighted in the 2023 joint statement on the CSP, which outlines the following areas of focus for cooperation:

'We will continue high-level defence consultations; cooperation in humanitarian and disaster response; education and training; cooperation and support on law enforcement, counterterrorism, countering violent extremism, money laundering, human trafficking, illegal drug trafficking, supporting women and youth, peace and security, and maritime security; and participation in joint exercises and activities'.[88]

The 2023 strategic partnership between Australia and the Philippines was further enhanced by the signing of a MOU in February 2024 on 'Enhanced Maritime Cooperation to strengthen our existing civil and defence maritime commitments'.[89]

In examining the Australia-Philippines defence relationship as an interoperability case study, both governments have clearly defined the mission sets or operational scenarios in which interoperability will be pursued. A broader question remains whether these defined mission sets are ambitious enough, given the deteriorating security situation in the region, and whether they should be expanded to include air control activities, amphibious operations, and ballistic missile defence. However, for the purposes of this case study, the key point is that both governments have established these areas of focus. Notably, while Australia and the Philippines are classified as 'strategic partners – rather than having the Comprehensive Strategic Partnerships that Australia shares with Indonesia and Vietnam – their relationship offers greater potential for a higher degree of interoperability. This potential is driven by three key factors: increased strategic alignment, shared alliances with the US, and the Philippines' ongoing modernisation program, which is likely to introduce capabilities compatible with Australia's, thereby enhancing technical interoperability.

Thanks to Australia and the Philippines both being US allies, their shared strategic ties with Washington provide a boost to their mutual interoperability. The United States' bilateral initiatives with each country – alongside its encouragement of Australia's inclusion in previously exclusive US-Philippines activities such as *Exercise Balikatan* – further deepen the operational relationship between Australia and the Philippines.

↑ An Australian Army special operations force soldier meets with an Armed Forces of the Philippines special forces soldier during the Regional Special Operations Planners Course at HMAS Kuttabul in Sydney.

Level of Engagement

The strategic framework on Defence cooperation between Australia and the Philippines is supported by a series of high-level dialogues. These dialogues include the Joint Defence Cooperation Committee, its subordinate Defence Cooperation Working Group, and service-level staff talks. Additionally, Defence collaborates with DFAT in the biennial Philippine-Australia Strategic Dialogue, engaging with counterpart agencies from the Philippine government.[90]

Technical

Unlike the Indonesian and Vietnamese case studies, the Philippines offers the greatest opportunity for enhancing technical interoperability. Historically, the Philippine armed forces relied heavily on outdated World War II-era equipment, particularly within the army and navy. However, in response to evolving strategic challenges, the Armed Forces of the Philippines (AFP) have embarked on significant modernisation efforts across all three services. This includes the Philippine Air Force's upgrade to South Korea's FA-50 Golden Eagle fighter jets,[91] and the procurement of several naval vessels from South Korea.[92] While the AFP primarily sources its military equipment from the US, it also imports from countries such as South Korea, Turkey, Italy, Spain, France, Sweden, Germany,[93] and increasingly India.[94] Although Australia and the Philippines do not currently share a large amount of common military equipment, the AFP's modernisation and its diverse sources of imports present significant opportunities for technical interoperability. Many of these platforms employ tactical data links common to Australia and its partners, which, with the right information-sharing agreements, could enable a transition from a compatible to an integrated level of interoperability.

Procedural

From a procedural standpoint, the relationship between Australia and the Philippines has been driven by operational needs. The rise of Islamist terrorism in the Philippines, including the 2017 siege of Marawi by ISIS-East Asia, significantly enhanced cooperation in counterterrorism and maritime security under the framework of *Operation Augury*.[95] Although

↑ A General from the Armed Forces of the Philippines with a RAAF Flying Officer at Clark Air Base, Philippines.

the full details of Australia's role in combating terrorism in Mindanao remain limited, Australia provided substantial support. At the peak of the operation, the ADF deployed two aircraft, two navy patrol boats, special forces teams, and over 100 personnel to assist in containing the spread of extremism.[96] Between 2018 and 2020, the ADF reportedly trained more than 10,000 members of the Philippine Army and Marine Corps.[97] This training focused on urban combat operations, airstrike coordination in urban environments, and enhancing maritime security capabilities. This collaborative effort reflects the growing importance of procedural interoperability, ensuring that both forces can effectively respond to shared security threats. The training contribution to *Operation Augury* transitioned into the Joint Australian Training Team – Philippines (JATT-P).[98] Under the E-DCP,[99] the JATT-P 'with two large Land Mobile Training Teams (MTTs) [work] closely with specialised units of the AFP, in addition to discrete maritime and air training across the Philippines'.[100] Examples include explosives training through the basic mobile fire controller course,[101] and training on 'First Scout Ranger Regiment (FSRR) close combat shooting, urban operations, tactics, techniques and procedures, tactical care of combat causality and urban explosive breaching'.[102]

Until the 2023 escalation from the PRC, the level of exercises between the Philippines were limited. The main exercises consisted of the bilateral exercise, *Exercise Lumbas,* which dates back to at least 2000,[103] and *Exercise Balikatan. Exercise Lumbas*, last conducted in 2023, is a low level maritime training activity that focused on navy-to-navy engagement on maritime security operations.[104] Australia joined the annual trilateral exercise *Balikatan* in 2014 alongside its US ally, aiming to enhance its defence relationship with the Philippines. Over the years, *Balikatan* has evolved significantly, with the 2024 iteration being the most ambitious to date. It involved more than 16,000 soldiers, sailors, airmen, and marines, and focused on territorial defence activities in Luzon and Palawan. The exercise included the relocation of long-range precision-strike systems, tracking and targeting simulated air and missile threats, and integrating multilateral air and land platforms to enhance maritime security awareness. One of the exercise's key events was a 'SinkEx' in the South China Sea, showcasing the participants' ability to simulate the sinking of maritime targets in contested waters.[105]

↑ Australian Army soldiers and members of the Philippine Marine Corps Force Reconnaissance Company conduct littoral assault training during Joint Australian Training Team – Philippines (JATT-P) program at Marine Base Ternate, Philippines.

Outside of the mission sets outlined in the E-DCP of focussing on counterterrorism and maritime security – the new focus *Exercise Balikatan* provides a significant vehicle for increasing procedural interoperability between Australia and the Philippines in high end warfighting. The increased complexity of *Exercise Balikatan* has been a key trend in enhancing procedural interoperability between Australia and the Philippines, moving toward multilateral, high-end warfighting activities. Another significant trend has been the growth of multilateral operations. In response to the PRC's increased

aggression toward the Philippines' EEZ and following the upgrade of the bilateral relationship to a strategic partnership, Australia and the Philippines participated in joint maritime cooperation activities. These involved an Australian Boeing P-8 Poseidon, an Australian frigate, a Philippine offshore patrol vessel, and a landing platform, demonstrating deeper operational coordination.[106]

Throughout 2024, the series of multilateral maritime activities between Australia and the Philippines expanded to include cooperation with the US, Japan, Canada, and New Zealand.[107] This growing

collaboration and multilateral approach demonstrate that Australia and the Philippines have achieved a level of compatible interoperability for increasingly complex maritime security operations. The Philippines has also periodically participated in Australia's multilateral maritime exercise *Kakadu* since 1999.[108] In 2024, the Philippines further expanded its engagement by joining *Exercise Pitch Black* and the air combat portion of the exercise, deploying FA-50PH Fighting Eagle aircraft.[109] Beyond the E-DCP mission sets focused on counterterrorism and maritime security, these

closer collaboration between personnel from both countries.[110] Additionally, the Australia Defence Force Academy (ADFA) and the Philippine Military Academy have fostered long-term interpersonal relationships between officers from both countries.[111] These relationships contribute to mutual trust and a deeper understanding of each other's operational cultures, enhancing the capacity for real-world cooperation. Continued investment in human interoperability should remain a priority, with both countries benefiting from increased officer exchanges, professional military education, and participation in multilateral forums.

Informational

Australia and the Philippines do not have formal agreements on information or intelligence sharing, and little public information exists to assess their interoperability in this domain. While the exchange of information was highlighted in the Joint Statement accompanying the 2023 upgrade of their relationship to a strategic partnership,[112] it appears that this is an area that could benefit from further focus to enhance interoperability – though its full extent is difficult to gauge outside the classified environment. The respective alliances both countries maintain with the US will likely contribute to improving information interoperability over time.

Summary

The Australia-Philippines relationship demonstrates significant potential for high levels of military interoperability across multiple mission sets. Despite the formal strategic classification of the partnership, the relationship reflects the ability to achieve compatibility across several mission sets, with the potential to progress toward integrated interoperability across various domains. The enhancement of interoperability between the two strategic partners has been shaped by evolving strategic circumstances but, in practical terms, driven by several key factors. These include the increasing complexity of exercises, particularly in multilateral settings; foundational operational support through *Operation Augury* to improve procedural interoperability; the potential for greater information interoperability; and opportunities for enhanced technical interoperability, fuelled by the AFP's modernisation efforts and shared alliances with the US.

activities highlight the progress in procedural interoperability through high-end warfighting exercises. Although no publicly available common doctrine exists between the two countries, their mutual alliance with the US likely results in some degree of doctrinal alignment. However, although some doctrinal alignment may have emerged through each country's bilateral exercises with America, maintaining a strong focus on doctrinal coherence should be a priority for Australia and the Philippines as they move toward more complex joint exercises and operations.

Human

One of the strongest dimensions of the Australia-Philippines defence relationship lies in human interoperability, driven by personnel exchanges, defence education, and joint training programs. Following the success of the JATT-P land training and MTT maritime training programs, the ADF conducted its inaugural Joint Warfighting Planning Foundations course in the Philippines in 2024. This initiative not only strengthens procedural interoperability through doctrinal alignment but also enhances human interoperability by fostering

Conclusion

Interoperability is essential for Australia's defence relationships in Southeast Asia, especially given the absence of a formal multilateral alliance structure in the region.

As the Indo-Pacific evolves into a latticework of partnerships and minilateral groupings, Australia must rethink interoperability beyond traditional frameworks, tailoring its approach to the strategic contexts of individual partners. This paper has demonstrated that interoperability in Southeast Asia requires flexibility, with varying degrees and dimensions of cooperation based on the unique characteristics of each bilateral relationship.

The case studies of Indonesia, Vietnam, and the Philippines highlight both the opportunities and challenges of achieving meaningful interoperability in the region. While human and procedural interoperability show promise across all three partnerships, technical and informational dimensions remain constrained, particularly due to diverse procurement practices, limited formal agreements on intelligence sharing and differing levels of strategic alignment.

Nevertheless, targeted interoperability can be achieved within each strategic framework. By building on existing strengths, investing in technical integration, expanding joint exercises, and leveraging regional groupings, Australia can enhance its defence partnerships, ensuring that these relationships remain adaptable and capable of addressing future security challenges.

↑JS Hakuryu leads (l-r) JS Asayuki, HMAS Ballarat, HMAS Adelaide, JS Umigiri and HMAS Success in formation on approach to Sydney Heads during *Exercise NICHI GOU TRIDENT.*

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