



**Professional
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The Royal
New Zealand Navy
TE TAUA MOANA
O AOTEAROA**

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COVER IMAGE:

The turret of HMNZS Achilles

The Leander-class light cruiser HMNZS Achilles was commissioned into the New Zealand Division of the Royal Navy in 1936. In December 1939, Achilles was part of 'Force G', alongside HMS Exeter and HMS Ajax, that intercepted the German pocket battleship Admiral Graf Spee at the Battle of River Plate.

On July 17, 1946, HMNZS Achilles departed Auckland for the final time, going on to recommission as INS Delhi and serve in the Indian Navy.

INS Delhi was decommissioned on 30 June 1978. The twin Mark 21 6-inch 'Y' gun turret and director control tower were offered to New Zealand as a memorial to the men who had fought in her. They are both mounted at the entrance to Devonport Naval Base.

Source: National Museum of the Royal
New Zealand Navy

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FOREWORD



COMMODORE KARL WOODHEAD, MNZM, RNZN

Deputy Chief of Navy

One of the many highlights of being DCN is leading the professional and enthusiastic editorial team publishing the *Professional Journal of the Royal New Zealand Navy*. Since the first edition was published in 2020, the *Navy Journal* has established itself as a high quality publication examining today's issues and their implications for our future, but always with a weather eye on the past.

I don't need to describe the challenges we face; but I would like to put them into context. We are in a period of generational convergence where the slow collapse of the International Rules Based System means demand for the things our Navy and the wider NZDF do is going up, while we face bloc obsolescence in our fleet and base infrastructure. We used to differentiate between the 'home game' and the 'away game' but this is no longer possible. The boundaries are blurred, creating an environment where the battle is as likely to be close to our shores as it is to be far away. If nothing else, the presence of TG107 in February 2025 demonstrated that what has been a hypothetical threat of a foreign expeditionary naval force in our region has materialised.

The decision to participate in a future conflict or not, and the timing, will not be ours. Therefore, we need to be prepared to go to war with the force we've got, rather than the one we would like.

To achieve that level of preparation, we have to work to three time horizons anchored in three questions. Firstly, how do we get the best out of the equipment and people we have today? Secondly, if we are granted time to prepare, what could we do in the medium term to defend New Zealand? Third, if time permits, what can we in the Navy develop in the long term which will enable us to do what we should?

It is a perfect storm, and the perfect opportunity, to transform our Navy by marrying up the skills and talents of our people with 5th and 6th generation technology to deliver effective naval combat for New Zealand.

We have some answers already. The Future Naval Base and Maritime Fleet Renewal plans, for example, are medium and long term measures which will produce the Navy we need for the future. But, if we need to go to war with what we've got, it means our people will be the key to our success. They need a fighting mindset: not the promise that we will win every fight, but a commitment that we will meet every fight ready.

What does it mean for us? For both the *Navy Journal* and our Navy, it means we must create certainty wherever possible; and where that is not achievable, we must be comfortable leading in an environment of ambiguity and volatility.

As you read this issue of the *Navy Journal*, I would ask that you reflect on these things, and on the *Journal's* themes of Partnerships, Policies, Strategic Perspectives, and Lessons, and ask yourself:

- Are we talking about the right things?
- Where are our blind spots?
- Where should we look that others aren't?
- How do we learn to fight with and through technology?

Most importantly, how do we prepare for the uncertain environment facing us?

I am very confident that collectively, we will find the right answers.

COMMODORE KARL E. WOODHEAD, MNZM, RNZN

Commodore Karl Woodhead joined the Royal New Zealand Navy in 1990 as a Seaman Officer in the Midshipman University Scheme. He subsequently served in RNZN frigates Southland, Te Mana, Waikato and Wellington, the survey ship Monowai, the tanker Endeavour, and the diving support ship Manawanui. He also served in a Singapore Navy amphibious vessel, a Swedish Navy minelayer, an Australian Navy training ship, and in RNZN patrol craft including roles as Commanding Officer.

His overseas postings included deployment to Afghanistan as both Engineer Officer and NZAID Programme Manager, where he established an aid programme and developed a strategy to consolidated multi-national aid efforts. In recognition of his service in Afghanistan he was made a Member of the New Zealand Order of Merit (MNZM) in 2005. He has also commanded the NZ Defence Support Unit (South East Asia), and served as the Assistant Chief of Navy (Strategy and Engagement), and Chief of Staff and Deputy Commander of Combined Task Force 151 in Bahrain.

Commodore Woodhead has completed a bachelor's degree in Planning and master's degree in Business Administration (with Distinction), and achieved a Post Graduate Diploma in International Security and Strategy (with Distinction) from King's College London. He is a certified Project Management Professional.

After a posting as Chief Defence Strategy Management, Commodore Karl Woodhead was named Deputy Chief of Navy in March 2025.

EDITOR'S OVERVIEW



HONORARY CAPTAIN DR STEPHEN HOADLEY, RNZN

General Editor, Professional Journal of the Royal New Zealand Navy

Welcome to this sixth edition of the *Professional Journal of the Royal New Zealand Navy*. Its mission is to provide information and insights for Navy, Defence and security policy personnel at all levels. Its method is to publish essays and book reviews by knowledgeable writers on timely topics in the broad fields of geopolitics, strategies, security, and defence. Topics herein centre on the RNZN but also relate to the NZDF, and to vital security roles played by New Zealanders and their counterparts abroad.

As the *Professional Journal's* General Editor, it is my pleasure to introduce the essays presented below. They are led by a timely **Foreword** by Deputy Chief of Navy **Commodore Karl Woodhead**, who identifies the challenges that face the Navy and the nation, and sets out the long term planning, adaptable mindset and flexible partnerships needed to meet those challenges.

Part One of this edition, **Partnerships**, leads with an essay by UK **Professor Carl Hunter** pointing out the contributions made by Britain's military presence and partnerships in the Indo-Pacific, including New Zealand. Following is an essay on the nature and value of one of New Zealand's oldest diplomatic and security links, with Singapore, by **Commander Phil Rowe**. Then **Major Jack Seabrook** advocates New Zealand's closer security and defence cooperation with Australia, and suggests how to achieve greater convergence.

Part Two, on **Policies**, features recommendations by **Major Andrew Gifford** on how to respond to the challenges posed by China in the Indo-Pacific theatre. Then **Lieutenant Commander Christopher Tisdall** warns of navigation vulnerabilities arising from dependence exclusively on GPS and provides useful advice on mitigation. **Lieutenant Commander Owen Peters** follows with advocacy of distributed synthetic training, a system to make specialized training of RNZN personnel not only more accessible and effective but also more economical. **Retired Captain A. G. A. Watts**, a contributor to prior *Professional Journals*, concludes this Policies section with a thoughtful opinion piece advocating combat capability as the core mission of the NZDF and the RNZN.

Part Three, on **Strategic Perspectives**, leads with the Chief of Navy **Rear Admiral Garin Golding's** sobering assessment of China's initiatives in Antarctica, complementing his article on China in the Arctic published in this *Professional Journal* in 2022. **Captain John McQueen** then finds US Indo-Pacific Command's policies in the western Pacific incapable of deterring

China's hybrid warfare initiatives, and recommends formation of focussed naval coalitions modelled on the Combined Task Forces currently operating in the Persian Gulf. **MS5 Lee Jing**, Singapore Armed Forces, explains how his city-state hedges between the demands of China and the United States despite growing pressure. MFAT's **Mr Rob Laurs** conducts a perceptive analysis of AUKUS, pro and con, and an update.

Part Four, on **Lessons**, looks back to learn how better to plan ahead. **Commander Allissa Auld** of the Royal Australian Navy draws insights from the Russo-Ukraine War that can usefully inform Indo-Pacific governments' policies. **Commander David Roderick** assesses the failures of Japan's World War II submarine strategy, notes how the United States succeeded and derives lessons for decision-makers on current submarine strategy. The vital lesson distilled by both is the necessity of rapid strategic and tactical adaptation.

Part Five is our **Book Reviews** section, managed by **Lieutenant Commander Marc Griffiths**. It features two books assessing New Zealand's current security and defence policies, one by Waikato University Senior Lecturer and security commentator Dr Reuben Steff, and the other by veteran defence analyst Dr Jim Rolfe, Senior Fellow of the NZ Centre for Strategic Studies. These are complemented by a review of conference papers tracing New Zealand's experiences in World War II. These reviews were contributed by **Mr Andrew Wierzbicki**, **Lieutenant Commander Aston Talbot**, and **Lieutenant Commander Marc Griffiths**, respectively.

As this sixth edition goes out to the Fleet and to the wider security community here and abroad, I'd like to acknowledge the team that have made the *Professional Journal of the Royal New Zealand Navy* possible. When making editorial decisions, I seek advice from Portfolio Manager (Navy) **Mr Russell Martin**, Deputy Editor **Lieutenant Commander Richard Davies** (who edited the 2022 edition of this *Professional Journal* upon the untimely death of the inaugural editor Dr Lance Beath), and Navy Liaison advisors **Captain Tony Masters** and **Commander Alex Trotter**. Illustrations Editor **Mr Andrew Bonallack** provides cover photos and advises on photo copyright and quality issues. Copy Editor **WOMTO Alyson Douglas** holds our grammar, style, and punctuation to a high standard of consistency and accuracy. Corresponding Editor **Dr Rory Paddock** recommends relevant essays from among his best students at the NZDF Command and Staff College. **Lieutenant Commander Marc Griffiths** steps in this year as Book Review Editor, replacing **Captain Andrew Dowling** who did the job for the five previous editions. With skilful formatting **Blue Star Group (New Zealand) Limited** renders the published *Professional Journal* pages visually attractive.

Finally, readers should be aware that many topics of interest are covered in prior editions of this *Navy Journal*. Featured from 2000 to 2025 were New Zealand's security relations with Australia, Japan, China, South Korea, the Pacific islands and NATO, and policy topics ranging from logistics and energy to climate change and international law. Readers may locate and download essays from all six editions of this *Journal* via the Internet at <https://www.nzdf.mil.nz/assets/Uploads/DocumentLibrary/RNZN-Journal-4June2025.pdf> or by entering the title *Professional Journal of the Royal New Zealand Navy* into any relevant search box.

We value your readership and support, and would welcome your comments directed by email to rnznjournal@gmail.com

HONORARY CAPTAIN DR STEPHEN HOADLEY, RNZN

Dr Stephen Hoadley, Honorary Captain RNZN, recently retired as Associate Professor of International Relations at The University of Auckland. He is the author of seven books, including *The New Zealand Foreign Affairs Handbook* and *New Zealand United States Relations*. He was general editor of a five-volume series on International Human Rights and three other books, including *Asian Security Reassessed*. He is an Honorary Professor of the NZDF Command and Staff College and a media commentator and public speaker.

PART 1:

PARTNERSHIPS



BRITAIN IN THE INDO-PACIFIC: INITIATIVES AND PARTNERSHIPS¹

Professor Carl Stephen Patrick Hunter OBE

The role of the United Kingdom in the Indo-Pacific is a key element of Britain's European and global leadership, Professor Carl Hunter asserts. After noting the strategic importance of the Indo-Pacific, he sets out an inventory of Britain's substantial assets, initiatives and partnerships in the region. He notes also the threats posed by challengers of the rules-based order. Professor Hunter concludes with recommendations for a more robust British defence posture and closer partnerships in the Indo-Pacific and around the globe, including New Zealand's role. – Ed.

Introduction

As we assess the role of the United Kingdom (UK) in the Indo-Pacific we need also to develop our understanding of the UK's role globally.² Britain cannot afford to ignore the Indo-Pacific, nor view the choice between the Euro-Atlantic and Indo-Pacific as binary in a zero-sum game. The Euro-Atlantic and the Indo-Pacific regions are inextricably linked, and the war in Ukraine is a stark reminder of Asia's role in European security. China is a logistical and financial enabler of Russia's ongoing illegal invasion, and 10,000 North Korean troops now fight in Europe in support of Russia's war efforts.

Therefore, Britain must be aware of threats emerging in the Indo-Pacific theatre as well as in the European theatre, and the links between them, and enhance our global resilience and preparedness accordingly. We must develop a long-term national strategy along a 75-year AUKUS timeline. This strategy must revitalise the UK's public sector-private sector relationship and leverage the synergistic potential of Government-economy-science-industry-society-academic relations.³

1 This essay is an abridged and updated edition of a talk delivered by Professor Hunter at Downing College, Cambridge, on 31 May 2025. – Ed.

2 See Professor Hunter's discussion "On Grand Strategy and Economic Intelligence" in this *Journal*, Volume Five (June 2025), 71-76. <https://www.nzdf.mil.nz/assets/Uploads/DocumentLibrary/RNZN-Journal-4June2025.pdf>

3 For a start, we should update, and adapt to the Indo-Pacific, the *Integrated Review 2021* <https://www.gov.uk/government/collections/the-integrated-review-2021> and its *2023 Refresh* <https://www.gov.uk/government/publications/integrated-review-refresh-2023-responding-to-a-more-contested-and-volatile-world> This would entail better integration of foreign with domestic policy, particularly cooperation between the Government and the private sector, especially the defence industrial sector.

The Indo-Pacific's growing strategic importance

The world's economic centre of gravity is shifting eastwards as the Indo-Pacific becomes the main global source of economic growth. To put it another way, the global economic Prime Meridian is shifting to Asia, but it is aligned along the seas, not necessarily centred on inland Beijing as popularly believed.



Figure 1. The United States Indo-Pacific Command | U.S. Department of Defense

The ability of democratic Asians to generate technological innovations and advances is astonishing. Their work ethic, manufacturing potential, skilled labour, technical staff, and their faith in liberal institutions (as demonstrated in South Korea's curbing of an authoritarian president) are strong and offer a strategic advantage over authoritarian challengers.

- Japan boasts the world's fourth-largest GDP and is an active promoter of regional trade liberalisation.
- South Korea is Asia's fourth largest economy and ranks 14th in the world by nominal GDP.
- The Indo-Pacific will account for 54% of global GDP growth in real terms between 2021 and 2050 – compared to 9% for the EU.

Furthermore, the Indo-Pacific is vital from defence, security, maritime, and legal perspectives. It is critical to the upholding of the rules-based international order (RBIO). The region is central to our collective success in combatting global challenges, from climate change to maritime security. Of the 54 members of the Commonwealth, 19 of them are in Asia.

The deepening cooperation between China, Russia, Iran and North Korea threatens to exacerbate and accelerate security challenges in the Indo-Pacific by catalysing existing tensions and disputes and undermining security. The combined Russian Far East and PLAN

submarine fleets now exceed 92 hulls. The enhanced modernisation and growth trajectory of the PLAN, centrally led by the CCP, is pointing to a 550-ship fleet. This potentially poses a significant threat to the RBIO which has, for all its imperfections, played an instrumental role in promoting peace, prosperity, and a respect for human rights.



Figure 2. China's PLA Navy aims to deploy over 500 ships. | PRC Ministry of Defence Online

China's interactions with the RBIO can be seen as potentially adversarial and can be characterised as a selective adherence to rules and a willingness to escalate or retaliate using illegal grey-zone tactics in pursuit of its own interests. This increasingly belligerent behaviour threatens our regional stability, our allies, and our partners. China continues to pursue unprecedented military growth and modernisation. The military is developing and integrating cutting edge technologies such as hypersonics, AI, uncrewed systems and advanced missiles and counter-space capabilities at an alarming pace. China's anti-access/area denial (AA/AD) Dong Feng missile deployments are designed to prevent any naval forces from operating off China's east coast within the first and second island chains.



Figure 3. Dong Feng missiles underpin China's anti-access/area denial strategy. | Wikipedia

This military modernisation remains focused on Taiwan. The CCP views annexation of Taiwan, entailing the extinguishing of its freedoms and democracy, as a fundamental condition of 'national rejuvenation' to be accomplished by 2049. This would be not only a significant loss of a friendly democracy but also denial of Western access to the 70% of global semi-conductors which are produced in Taiwan.

To that end, the PLA is aggressively developing capabilities to provide options for the PRC to dissuade, deter, or, if ordered, defeat third-party intervention in the Asia-Pacific region.

UK initiatives in the Indo-Pacific

Whether for collective security, democratic governance, trade and growth, culture and morality, the UK must promote a free and open Indo-Pacific underpinned by the RBIO.⁴

In pursuit of this aim, the UK has significant assets and a creditable track record of achievements.

- The UK-Australia FTA contains the most forward-looking innovation clause of any FTA.
- The UK is acceding to the CPTPP which accounts for 15% of global GDP.
- UK achieved Dialogue Partner status in ASEAN which is the UK's 3rd largest export market in financial services
- The UK with Japan and Italy will produce the world's most advanced, 6th generation combat aircraft.
- The UK-India Technical Security Initiative and FTA (and prospective Navy cooperation) are encouraging Indian alignment toward the west.
- FPDA coordination between the UK, Singapore, Malaysia, Australia and New Zealand allows influence over the Malacca Strait through which 30% of global trade passes.
- Initiation of CSG21 and CSG25 deployments demonstrated the Royal Navy's ability to work with 42 other nations' militaries.
- The RN has permanently positioned a Type 23 frigate and two OPVs in the Indo-Pacific.

UK alliances, partnerships and accords in the Indo-Pacific

When combined, the United States, United Kingdom, Australia, New Zealand, Japan, South Korea, and Taiwan represent an overwhelming majority of global wealth-generating economies. The following agreements enable them to work together so as to balance any disruptive challengers and demonstrate the indivisibility between the Euro-Atlantic and Indo-Pacific that has always existed.

- The UK-Japan Hiroshima Accords celebrate our similar constitutional monarchies, parliamentary democracies and archipelagic maritime outlooks.
- The Downing Street Accords link strengthen UK-South Korea relations.
- Initiation of AUKUS in 2022 is the most geo-strategically significant alliance established since NATO in 1949. It aims to deploy a joint submarine force Underwater Battlespace (UWB) throughout the Indo-Pacific from the Arctic to the Antarctic.
- The potential extension of Pillar 2 of AUKUS to allies such as Japan and New Zealand offers opportunities to dominate the electro-magnetic battlefield from the seabed to space.



Figure 4. Australia-United Kingdom-United States nuclear-propelled submarine project. | EUTODAY/AUKUS Defence Ministers

⁴ Ben Bland, Olivia O'Sullivan and Chietigj Bajpae, "Why the Indo-Pacific should be a higher priority for the UK". London: Chatham House, 22 July, 2025. <https://www.chathamhouse.org/2025/07/why-indo-pacific-should-be-higher-priority-uk>

Serious challenges remain

North Korea's evolution has become a threatening adversarial nuclear power in the Pacific, which we must take into consideration with all the complexities in nuclear deterrence theory it brings. The South China Sea remains a contested space, representing a threat to the maritime global commons and undermines deterrence.

Looking back home, we must acknowledge that because of personnel shortages, platform shortfalls and procurement delays our Royal Navy is at risk of failing to achieve our mission in the Asian region. Rebuilding the capabilities of not only the Navy but all the defence services and the defence industrial establishment that supports them is a task we must undertake with urgency.

But the strategic context remains favourable

One of the most important regions is the Malacca Strait and the nations which border it. Therefore, a close relationship of Singapore, Malaysia, and Indonesia with the Western world is essential, and the UK is contributing to that end.

In the South China Sea it is also vital that the Western world builds close relationships with the Philippines and with Vietnam. By leading Freedom of Navigation Patrols through the region the UK is reinforcing international law and the wider RBIO.



Figure 5. HMS Prince of Wales leads a freedom of navigation patrol in Asian international waters. | United Kingdom Permanent Joint Headquarters

Further to the north, Japan, South Korea, and Taiwan feel threatened. The UK supports all three directly or indirectly.

As a society the UK is capable of rapid scientific and technological innovation and adaptation, not least in the security, intelligence, and defence fields. We generate the world's second largest number of Nobel prize-winners for science.

At the cultural level the UK has world-class assets, not least in the mentoring of the English language and civic responsibility. The British influence is visible in the sporting institutions of the Indo-Pacific. We are the country that invented rugby and cricket and through this we enjoy much in common with India, for example, whose Cricket League is worth USD 12 billion! Our leadership in sport confers soft power.

Defence policy recommendations⁵

The UK should study the *Navigation Plan for America's Warfighting Navy 2024* by former Chief of Naval Operations Admiral Lisa Franchetti. This plan foreshadows 2027 as the date by which the U.S. Navy needs to be prepared for war.⁶



Figure 6. Admiral Lisa Franchetti, Chief of Naval Operations 2023-2025 | America's Navy

To that end the following 13 defence policies are recommended the UK Government and its partners.

1. Apply NATO command and control structures to military assets in the Indo-Pacific, incorporating also the Indo-Pacific Four (Japan, South Korea, Australia, New Zealand).⁷
2. Join the Partnership for Indo-Pacific Industrial Resilience (PIPIR) which would enable UK industry greater access to the Asian Indo-Pacific defence market.
3. Formulate a strategy for a Taiwan conflict contingency in support of the United States, whether economic, political, or military.
4. Emulate Japan, Korea, Australia, and Taiwan to establish UK consulate in Honolulu to engage closely with US INDOPACOM.
5. Ensure that AUKUS is effectively mobilised to maintain and develop the UK's SSBN and SSN Capabilities.
6. Accelerate AUKUS Pillar 2 so as to achieve enduring strategic technological dominance in the Rickover, Blackett, Wallis and Newtonian traditions, and encourage participation by New Zealand, Japan and South Korea.

⁵ These recommendations differ from but converge with those of Alec Smith, *What should be next for British policy in the Indo-Pacific?* The Big Ask - Council on Geostrategy, No. 31, 1 August.2025. <https://www.britainworld.org.uk/p/the-big-ask-31-2025> and William Choong and Eugene Tan, *The UK and the Indo-Pacific: The Need to Lean into the Tilt*. London: Royal United Services Institute (RUSI), 19 September 2024. <https://www.rusi.org/explore-our-research/publications/commentary/uk-and-indo-pacific-need-lean-tilt>

⁶ This initiative was led by then Admiral Lisa Franchetti. <https://www.navy.mil/leadership/chief-of-naval-operations/cno-navplan-2024/>

⁷ A 'NATO-first but not NATO-only' approach would align Britain with the UK-US Special Relationship, with those the Australia-UK-US AUKUS relationship, both of which can face up to the all-domain threat from China, and free the UK from the Euro-Atlantic constrictions of NATO by enabling Indo-Pacific operations too.

7. Adopt with allies a strategy of multidomain fusion, coalition, and combination across the eight core capabilities of defence, diplomacy, security, development, trade, finance, science, and culture.
8. Elevate the role of UK scientists and incentivise them to work alongside their counterparts in the defence industry to produce cutting-edge innovations.
9. Enhance Britain's conventional and nuclear deterrence posture by backing CSG25 with nuclear capability.
10. Configure Continuous-at-sea Deterrence (CASD) both conventional and nuclear at the centre of UK national security doctrine.
11. Develop torpedo-firing-capable TLAM-N for Britain's SSN fleet, plan for VLS-launched TLAM-N in AUKUS SSNs, and/or recreate a UK air-launched nuclear strike capability by adjusting UK nuclear policy to include theatre nuclear use.
12. Forward-base one of our aircraft carriers in Japan and rotate UK crews as is done with T23 frigates in Bahrain and OPVs in the Pacific.
13. Negotiate establishment of a joint UK-USA-Japan-South Korea F-35B air group in Japan.

Looking ahead

We must see the Euro-Atlantic and Indo-Pacific as one strategic operating environment, co-joined by the Arctic and Southern Oceans, with significant maritime events in each affecting those in the other.

We must work to realise forward-looking whole-of-Government, whole-of-nation, and whole-of-society synergism, entailing reform of the UK's public and private sector relationships, specifically the UK's unique defence-science-industry relationship.

As a country which has gifted the world many democratic ideals, laws, and institutions, Britain has a moral obligation to protect future generations. Let us not fear authoritarians, but confront them, from the seabed to space, using all our political, economic, diplomatic, scientific, technological and cultural means. In cooperation with our many partners, let us make the next 80 years as proactive as the last 80 years have been as we extend our benign influence to the Indo-Pacific region.



PROFESSOR CARL STEPHEN PATRICK HUNTER OBE

Professor Carl Stephen Patrick Hunter OBE is Director-General of the Durham Institute of Research, Development and Invention (DIRDI), Chairman of Coltraco Ultrasonics, and Director of the Centre for Underwater Acoustic Analysis (CUAA) and National Strategic Research Group (NSRG). He is a Distinguished Research Fellow of Pembroke College, Oxford. He chairs the Council on Geostrategy Forum and the National Strategic Research Group. Professor Hunter has advised HM Government and contributed to the Prime Minister's Integrated Review of Security, Defence, Development and Foreign Policy. He is a Fellow of the Royal Navy Strategic Studies Centre, the Royal Aeronautical Society, the Royal Institution of Naval Architects, the Durham Energy Institute, and the Institute of Marine Engineering, Science and Technology. He is currently Chairman of Coltraco Ultrasonics. He is founder and chair of Coltraco Ultrasonics. In 2019 Queen Elizabeth II awarded him the OBE.

NEW ZEALAND-SINGAPORE SECURITY AND DEFENCE RELATIONS

Commander Phil Rowe, RNZN¹

Commander Phil Rowe describes how New Zealand and Singapore are ready to advance from cooperation to co-creation in maritime domain awareness, undersea warfare, cyber and C2 resilience, and supply-chain assurance. Within the context of the FPDA's defensive posture and the centrality of the Association of Southeast Asian Nations (ASEAN), the emerging commonality of the New Zealand and Singapore P-8A Poseidon fleets offers further opportunities for data sharing and real-time situational awareness as well as rationalisation of logistics and training. –Ed.

Introduction

New Zealand and Singapore have built one of the Indo-Pacific's most durable small-state security partnerships. In 1956 Singapore became New Zealand's first Southeast Asian diplomatic partner in 1956. Bilateral links have been strengthened recently by the 2019 Enhanced Partnership which was further elevated to a Comprehensive Strategic Partnership (CSP) in October 2025. From 1971 these links have been anchored in the Five Power Defence Arrangements (FPDA).^{2,3}

For these two outward-facing, trade-exposed small states, security and defence collaboration is both a strategic necessity and pragmatic statecraft.⁴ New Zealand-Singapore ties span people, platforms, and policy, from regular FPDA exercises and bilateral training access to coordinated positions in regional forums and practical information sharing. The relationship continues to deepen. In May 2019, the governments launched an Enhanced Partnership (EP) with a dedicated defence and security pillar.^{5,6} In 2025,



Figure 1. Singapore Prime Minister Lawrence Wong and New Zealand Prime Minister Christopher Luxon signed the Comprehensive Strategic Partnership in October 2025. | Prime Minister's Office, Singapore

- 1 Commander Phil Rowe completed the Singapore Armed Forces Advanced Staff Course (ASC) in 2024. This essay is based on his professional observations and official sources. The views expressed herein are his own. –Ed.
- 2 The Five Power Defence Arrangements (FPDA) link New Zealand to Singapore, Malaysia, Australia and Great Britain. <https://www.fivepowerdefencearrangements.org/>
- 3 New Zealand Defence Force. (n.d.). "Security of our region–FPDA". <https://www.nzdf.mil.nz/nzdf/what-we-do/peace-and-security/security-of-our-region/>
- 4 On how Singapore successfully balances its relationships with China and the United States see ME5 Lee Jing's essay "How Singapore Hedges Against US-China Rivalry" below in this *Journal*. –Ed.
- 5 Ministry of Foreign Affairs and Trade (NZ). (n.d.). "New Zealand-Singapore Enhanced Partnership". <https://www.mfat.govt.nz/en/countries-and-regions/asia/singapore/new-zealand-singapore-enhanced-partnership>
- 6 Ministry of Foreign Affairs, Singapore. 17 May 2019. "Official visit & Joint Declaration on Enhanced Partnership". <https://www.mfa.gov.sg/Newsroom/Press-Statements-Transcripts-and-Photos/2019/05/20190517-NZPMV>

leaders agreed to elevate the relationship further to a Comprehensive Strategic Partnership (CSP) that prioritises a rules-based order and resilient supply chains, and includes an Agreement on Trade in Essential Supplies (AOTES),⁷ and in emerging defence technologies.

Historical foundations

The FPDA was established on 1 November 1971, following Britain's decision to withdraw from 'east of Suez'. Its founding communiqué committed the five powers (Australia, Malaysia, New Zealand, Singapore, and the United Kingdom) to 'immediately consult' in the event of an armed attack or threat against Malaysia or Singapore, without imposing NATO-style collective defence obligations.

In its early decades FPDA focused on air defence, centred on the Headquarters Integrated Air Defence System (HQIADS) at Butterworth, Penang. As Malaysia and Singapore's defence capacities matured, FPDA's remit broadened. By the early 2000s, training had evolved into combined and joint operations across air, land, and maritime domains, and HQIADS formalised a shift from air to area defence.⁸

This consultative posture is a principal reason FPDA has proven durable and politically acceptable in Southeast Asia. It is explicitly non-threatening, proceeds at a pace comfortable to all, and continually adapts to emerging domains (e.g., cyber, uncrewed systems, HADR) while sustaining reassurance for Malaysia and Singapore and transparency for the region.

Thus New Zealand and Singapore have evolved from parallel cooperation to the threshold of co-creation in defence, underpinned by FPDA's consultative design and now elevated by the CSP. Shared platforms (notably the P-8A Poseidon), interoperable C2, and institutionally anchored information-sharing through IFC and ASEAN Defence Minister's Meeting-Plus (ADMM-Plus) Expert's Working Groups create tangible opportunities to lift maritime domain awareness, undersea warfare, and cyber resilience, while maintaining FPDA's defensive posture and ASEAN centrality. The next section explores some of these opportunities.

The relationship today: Bilateral instruments, multilateral anchors, and strategic culture

Bilateral instruments and mechanisms.

The Enhanced Partnership from 2019 has formalised a defence and security pillar alongside trade, innovation, and people-to-people links. It upgraded the New Zealand–Singapore Closer Economic Partnership (ANZSCEP, effective 1 January 2020), modernising rules of origin, customs facilitation, and e-commerce frameworks. It also set the stage for expanded cooperation in cyber, border access, and defence (including supply-chain connectivity initiatives pioneered during COVID-19).⁹

On 10 October 2025, leaders launched the Comprehensive Strategic Partnership (CSP), describing it as 'forged in history' and 'fit for the future'. The CSP includes a first-of-its-kind essential supplies agreement code named AOTES to sustain critical flows during crises. It encompasses food, medicals, fuels and sets out aims for deeper security, digital, and green-economy cooperation. That agenda meshes with each country's emphasis on

7 Channel NewsAsia. 10 October 2025. "First-of-its-kind essential supplies deal as Singapore, New Zealand elevate ties". <https://www.channelnewsasia.com/singapore/lawrence-wong-new-zealand-singapore-christopher-luxon-5393731>

8 Republic of Singapore Air Force 1971/11. "Five Power Defence Arrangements (FPDA)". <https://www.rsaf.gov.sg/about-us/history/history-of-the-rsaf/1971-nov-five-power-defence-arrangements-fpda/>

9 Ministry of Trade and Industry, Singapore. 17 May 2019. "Upgraded ANZSCEP". <https://www.mti.gov.sg/Newsroom/Press-Releases/2019/05/Singapore-and-New-Zealand-sign-upgraded-agreement>

rules-based openness and resilient connectivity, while acknowledging the increasingly coercive environment in the maritime and cyber domains.¹⁰

Since 1997, the Singapore Armed Forces (SAF) have periodically conducted Exercise Thunder Warrior, an artillery live-firing package at Waiouru, New Zealand. This is a recurring indicator of bilateral trust and a venue to rehearse combined-arms fires integration in large manoeuvre areas.^{11,12}

Beyond training, the NZDF and SAF have interacted in overseas operations including in Afghanistan and Timor-Leste, and in multinational coordination networks hosted by Singapore such as the Information Fusion Centre, thus strengthening maritime domain awareness and counter-terrorism information sharing.

Multilateral anchors: FPDA and ADMM-Plus

Exercise Bersama Lima 2024,¹³ hosted by Singapore, involved more than 2,000 personnel, 38 aircraft, five ships, four Ground-Based Air Defence systems, and over 250 ground troops. It included the inaugural RAAF F-35A participation and an RNZAF P-8A, which raised ASW preparedness. FPDA links remain the only enduring sub-regional defence arrangements of their kind in Southeast Asia and offer NZDF a consistent venue for combined/joint operations with trusted partners.¹⁴ Figure 2 shows the Defence Chiefs of the Five Power Defence Arrangements at the 23rd FPDA Defence Chiefs' Conference in Singapore on 29 May 2025, underscoring the arrangements' enduring relevance and leadership's commitment to consultative security and evolving interoperability.



Figure 2. Defence chiefs at the 23rd FPDA Defence Chiefs' Conference, Singapore, 29 May 2025. | Singapore Ministry of Defence

- 10 NZTE, 15 October 2025. "Benefits of the Comprehensive Strategic Partnership". <https://my.nzte.govt.nz/article/the-benefits-of-new-zealands-enhanced-partnership-with-singapore>
- 11 Ministry of Defence, Singapore. 15 January 2019. "Senior Minister of State visits Exercise Thunder Warrior". https://www.mindef.gov.sg/news-and-events/latest-releases/15jan19_nr
- 12 *The Straits Times*, 19 January 2016. "Singapore Army participates in Exercise Thunder Warrior in New Zealand". <https://www.straitstimes.com/singapore/singapore-army-participates-in-exercise-thunder-warrior-in-new-zealand>
- 13 Ministry of Defence, Singapore. 14 October 2024. "FPDA militaries participate in Exercise Bersama Lima 2024". https://www.mindef.gov.sg/news-and-events/latest-releases/14oct24_nr/
- 14 FPDA, 1 October 2024. "Exercise Bersama Lima 2024 - Opening". <https://www.fivepowerdefencearrangements.org/newsroom/exercise-bersama-lima-2024-opening-ceremony>

In addition, as an ADMM-Plus 'Plus Country', New Zealand participates in ministerial dialogues and Experts' Working Groups (EWGs) focused on seven practical policy areas: maritime security; counter-terrorism; Humanitarian Assistance and Disaster Relief (HADR); peacekeeping operations; military medicine; humanitarian mine action; and cyber security. These provide complementary capacity-building and transparency to FPDA's primarily defence-of-Malaysia/Singapore remit.¹⁵

Singapore's strategic culture.

During the 2024 Advanced Staff Course, I observed a Singaporean strategic culture anchored in 'pragmatism and preparedness',¹⁶ reflected in rigorous training cycles, constant evaluation of emerging threats,¹⁷ and a 'system-of-systems' approach aimed at seamless integration across air, land, and sea. A premium is placed on multinational interoperability, reflected in common operating procedures and secure data-sharing frameworks with partners like New Zealand. These observations were reinforced during site visits to RSS Singapura–Changi Naval Base, Paya Lebar Air Base, Sungei Gedong Army Camp, and the Information Fusion Centre (IFC),¹⁸ a regional maritime security hub at the Changi Command and Control Centre (C2C) that fuses 'white shipping' and other data to cue real-time responses by regional operators.¹⁹

The Advanced Staff Course's module *Evolution of Strategic Thought* provided conceptual scaffolding. FPDA's consultative design reflects a small-state strategy that privileges legitimacy, reassurance, and dense institutional ties (more 'concert' than alliance) well suited to an environment where deterrence credibility must coexist with regional sensitivities.²⁰

While both SAF and NZDF exercise Mission Command, the SAF staff processes I observed were more structured, systematic, and technologically integrated and optimised for rapid operations in a resource-constrained environment. In syndicate work this manifested in a digital C2-centric planning cycle prioritising rapid information fusion across networked platforms; war-gaming was data-intensive, frequently leveraging sophisticated modelling or Serious Games²¹ to simulate complex multi-domain engagements and stress-test assumptions. Red-teaming was 'designed-in'. It was not merely adversary simulation, but a deliberate, integrated process to challenge Blue-force decision-making and uncover cognitive biases, an essential antidote to groupthink in a fast-changing regional threat environment. Digital C2 infrastructure (common operating picture and secure data-sharing) was a clear force-multiplier for tempo and analytic rigour and aligns with Singapore's broader effort to integrate cyber/information resilience, manifested in the ADMM Cybersecurity and Information Centre of Excellence, ACICE,²² and maritime fusion (IFC) at the Changi Command and Control Centre. Figure 3 depicts the IFC's operations room, where fused maritime data supports real-time cueing and regional coordination, reinforcing Singapore's system-of-systems approach.

15 ASEAN, 2025. "ADMM-Plus overview & membership". <https://admm.asean.org/index.php/about-admm/about-admm-plus.html>

16 RSIS Commentary, *SAF 2040: Behind the SAF's Future Transformation Plans*

17 *Total Defence Strategy* (Taylor & Francis) outlines Singapore's whole-of-society approach to threat evaluation and resilience.

18 Information Fusion Centre (RSN). (n.d.). "About IFC & CC2C". https://www.ifc.org.sg/ifc2web/app_pages/User/commonv2/aboutus.cshhtml

19 Ministry of Defence, Singapore. 26 August 2022. "SEACAT: IFC enhances cooperation for maritime security". https://www.mindef.gov.sg/news-and-events/latest-releases/26aug22_nr/

20 Carlyle A. Thayer, "The Five Power Defence Arrangements at FortY (1971-2011)." *Southeast Asian Affairs*, 2012, 61-72. <http://www.jstor.org/stable/41713986>.

21 Serious Games Showcase & Challenge (2013). "Decisive Combat". <https://sgschallenge.org/game/decisive-combat/>

22 Ministry of Defence, Singapore, 18 July 2023). "ACICE Fact Sheet". https://www.mindef.gov.sg/news-and-events/latest-releases/18jul23_fs/



Figure 3. IFC operations room, Singapore. | Republic of Singapore Navy

The ASC's naval curriculum, which included war-gaming, strategic naval history and conceptual thinking, spotlighted historically recurring tasks: sea control, sea lines of communication protection, and coalition interoperability. These enduring requirements underpin the FPDA's evolution from air defence to joint and combined operations and validate current investments in sensor-to-shooter speed, ASW de-risking, and joint targeting rehearsal. The logic of shared platforms and interoperable mission systems – now visible in New Zealand's P-8A fleet and Singapore's September 2025 decision to acquire four P-8A Poseidon aircraft²³ – directly enables higher-fidelity maritime domain awareness and undersea warfare cooperation.

The strategic logic of NZ–Singapore complementarity

Singapore sits astride critical maritime chokepoints and serves as a regional hub for logistics, maintenance, repair, and overhaul (MRO), and information exchange. New Zealand contributes niche maritime ISR with its P-8A fleet, sustainment with HMNZS Aotearoa and HMNZS Canterbury, and a reputation for principled multilateralism. Together, within FPDA and beyond, they specialise complementarily and integrate to punch above their weight to enhance regional reassurance.²⁴

The cadence of FPDA serial exercises, bilateral ministerial meetings, cross-attendance at courses, and Singapore-hosted dialogues fosters consultation habits and operational familiarity. This process adds value for crisis response readiness as much as does platform mix. The EP/CSP agenda and long-standing New Zealand–Singapore commitments emphasise openness, free navigation, and resilient supply chains, principles that are central to both countries' prosperity and security and now operationalised via AOTES.²⁵

23 Naval News, 11 September 2025, "Singapore selects Boeing P-8 Poseidon". <https://www.navalnews.com/naval-news/2025/09/singapore-selects-p-8-poseidon-as-next-maritime-patrol-aircraft/>

24 Inside Government NZ / GlobalSecurity. 15 April 2025. "NZDF deepens Southeast Asian commitment". <https://insidegovernment.co.nz/nzdf-deepens-south-east-asian-region-commitment/>; <https://www.globalsecurity.org/military/library/news/2025/04/mil-250415-nzdf02.htm>

25 The Agreement on Trade in Essential Supplies (AOTES). <https://www.mfat.govt.nz/assets/Trade-General/Trade-policy/AOTES-Infographic.pdf>

Challenges and constraints

NZDF's personnel and platform shortfalls limit the scale and frequency of Southeast Asian deployments, especially amid concurrent commitments such as monitoring of DPRK sanctions evasions and Pacific HADR. These pressures necessitate prioritisation and surge planning if FPDA and CSP goals are to be met.

Cyber intrusions, disinformation, and grey-zone maritime coercion put a premium on domain awareness, resilience, and whole-of-government coordination. Here, ADMM-Plus centres (e.g., ACICE)²⁶ and Changi C2C hubs (e.g., IFC) can be leveraged for practical capacity-building and information fusion. As depicted in Figure 4, ACICE provides a regional platform for cyber resilience and C2 hardening, aligning with FPDA's evolving posture.



Figure 4. Official opening of ACICE, Singapore. | Singapore Ministry of Defence

ADMM-Plus discussions in 2024²⁷ highlighted friction points such as the South China Sea and Myanmar, underscoring the need for robust norms and crisis-management mechanisms in addition to growing 'like-minded' multilateral cooperation.²⁸ New Zealand and Singapore will need to balance ambition with transparency and reassure neighbours that FPDA/CSP activities remain defensive and non-threatening. Despite these structural limits, several forward-looking initiatives suggest room for deepening collaboration, and these are outlined below.

Recommended future trajectories

Translate CSP ambitions into practical defence outcomes

One potential avenue for advancing CSP objectives involves joint uncrewed ISR trials using UAS and UUV platforms. RNZAF P-8A acoustic and ISR data could be fused with IFC feeds and maritime C2 systems, with Changi serving as the analytics and cueing hub. This concept aligns with Singapore's maritime security refresh and New Zealand's network-centred operational model. Another area for development includes using CSP frameworks to pre-agree crisis-time prioritisation of spares and consumables for FPDA surge rotations, such as maritime patrol detachments. Leveraging Singapore's MRO ecosystem alongside NZDF

26 Asia Pacific Task Force, 23 November 2024. "ADMM and ADMM-Plus 2024: ASEAN's blueprint for a Secure and Resilient Region. Beyond the Horizon". <https://behorizon.org/admm-and-admm-plus-2024-aseans-blueprint-for-a-secure-and-resilient-region/>

27 Asia Pacific Task Force, *ibid.*

28 CSIS, 5 December 2024. "Results of the 18th ADMM and 11th ADMM-Plus". <https://www.csis.org/blogs/latest-southeast-asia/latest-southeast-asia-results-18th-admm-and-11th-admm-plus>

sustainment planning offers a way to mitigate supply chain disruptions during high-tempo operations.

Lift FPDA complexity at a pace comfortable to all

FPDA capability development should be paced through a structured ASW spiral anchored in Bersama Lima and Bersama Shield. This could involve coordinated use of P-8A missions, RAAF F35A sensor fusion, RSN subsurface assets, and robust air and ground-based air defence C2 at a SAF airbase. Alternating host leadership and incorporating SME exchanges would support gradual capability uplift among all members. Additionally, FPDA exercises might expand to include integrated cyber and electromagnetic spectrum effects. Designing Command Post Exercise and Field Training Exercise scenarios that simulate degraded communications, spoofed data, and mission-data compromise would align with ACICE's remit and ADMM-Plus cyber EWG practices, offering a non-provocative path to collective resilience.

Grow ADMM-Plus practical cooperation where New Zealand and Singapore add value

New Zealand and Singapore have the opportunity to co-lead table-top exercises that merge maritime security and HADR playbooks, particularly for climate-amplified events. Building on ADMM-Plus EWG precedents, the exercise could use the IRIS portal of the IFC to rehearse multi-country information flows, liaison roles, and asset cueing. In the cyber domain, Changi CC2C and ACICE provide a strong foundation for hosting SME exchanges focused on C2 hardening, AI-enabled anomaly detection, and cyber incident response. This approach can build regional capacity while maintaining FPDA's defensive and transparent posture. Figure 5 shows an ADMM-Plus EWG session, a venue where New Zealand and Singapore can co-lead practical exercises in maritime security and HADR.



Figure 5. ADMM-Plus Experts Working Group on maritime security | Singapore Ministry of Defence

Deepen bilateral training and professional military education (PME)

Exercise Thunder Warrior 2.0 presents a platform to integrate artillery–UAS teaming, enabling ISR cueing for fires. Figure 6 captures a live-fire moment from Exercise Thunder Warrior, showcasing bilateral trust and combined-arms rehearsal in New Zealand’s manoeuvre space.



Figure 6. Singapore Army artillery at Exercise Thunder Warrior, Waiouru, New Zealand, 2025. | Singapore Army Facebook

NZDF observers and controllers could be cross-attached to SAF firing units, while SAF JTACs and liaison officers could participate in NZDF P-8A mission planning during FPDA serials. This would enhance joint targeting proficiency. At the PME level, staff college modules may be institutionalised to address small-state strategy, coercion management, and resilience. These modules would codify the shared ethos of pragmatism and preparedness and foster common conceptual frameworks for deterrence under resource constraints.

Make P-8A the centrepiece

Singapore’s decision to acquire four Boeing P-8A Poseidon aircraft, announced in September 2025,^{29,30} opens immediate opportunities for joint TTP development and maritime domain awareness fusion with the RNZAF fleet. This marks a shift from cooperation to co-creation in maritime security. Building ASC insights into digital C2, both countries could launch a joint program to harden mission systems – including data links, sensor fusion, and analytics pipelines – against cyber and EMS threats. As shown in Figure 7, the RNZAF P-8A Poseidon provides a common platform for maritime ISR, enabling tactical co-development with Singapore’s newly acquired fleet. Using the P-8A as an operational testbed and IFC/IRIS as the integration layer, this initiative would deliver a flagship CSP outcome that enhances interoperability and reassures regional partners through transparency and ADMM-Plus engagement.

29 Ministry of Defence, Singapore, 10 September 2025. “Minister of Defence and US Secretary of War Reaffirm Commitment to Strengthen Defence cooperation”. <https://www.mindef.gov.sg/news-and-events/latest-releases/10sep25-nr/>

30 Asian Military Review, 12 September 2025. “P-8A acquisition to enhance Singapore’s MDA”. <https://www.asianmilitaryreview.com/2025/09/p-8a-acquisition-to-enhance-singapores-maritime-domain-awareness-foc/>



Figure 7. RNZAF P-8A Poseidon at Ohakea | NZDF

Conclusions

Evolving New Zealand–Singapore defence relations demonstrate how small states can aggregate credible strategic influence through institutional depth, interoperability, and a shared commitment to a stable Indo-Pacific. FPDA remains the central, most politically durable institution that enables combined and joint training in a non-threatening framework, now increasingly characterised by next-generation platforms and more realistic multi-domain serials. ADMM-Plus complements this by reinforcing practical cooperation across maritime security, cyber, humanitarian assistance, and other essential workstreams, providing both countries with trusted channels for transparency and operational coordination.

The elevation of the partnership to a CSP is significant. It affirms a mutual intent to shift from cooperative interaction towards co-creation, particularly in areas where each state brings distinctive strengths. In the coming decade, shared platforms—most notably the P-8A Poseidon—will offer a natural centrepiece for joint tactical development, integrated maritime domain awareness, and enhanced undersea warfare proficiency. As both air forces modernise, the ability to harden mission systems, data links, and analytic pipelines against cyber and electromagnetic threats is likely to become a defining feature of the partnership's next phase.

Within FPDA, the environment is set for a deliberate, confidence-building rise in exercise complexity. The gradual incorporation of contested electromagnetic spectrum scenarios, degraded communications, and cyber-resilience injects—aligned with ACICE and ADMM-Plus practices—has the potential to strengthen collective readiness without undermining the arrangement's long-standing pacing principle or its defensive posture. This evolution would reinforce FPDA's credibility as a modern, adaptable framework that remains sensitive to regional concerns.

At the institutional level, the continued exchange of professional military education offers a pathway to entrench shared strategic concepts that match the platforms and systems now in service. Embedding modules on small-state deterrence, coercion management, resilience, and multi-domain integration across staff college cohorts would help cultivate a common intellectual foundation for future leaders. Such alignment would ensure that both forces, despite different sizes, structures, and operating rhythms, approach emerging challenges with compatible mental models and planning methodologies.

While personnel and platform pressures will continue to constrain the NZDF's scale and frequency of deployments, the strategic logic of the partnership with Singapore remains sound. Singapore operates as a logistics, information, and innovation hub, while New Zealand contributes niche maritime ISR, sustainment, and principled multilateral engagement. Melded, these attributes position both states better to navigate an increasingly contested Indo-Pacific geopolitical environment. The relationship is therefore well placed to move from cooperation to co-creation, able to shape future defence outcomes to enhance collective security while upholding regional reassurance and openness.



COMMANDER PHIL ROWE, RNZN

Commander Phil Rowe joined the Royal Navy in 1986. His service in hydrography, meteorology, seamanship and maritime operations included deployments across the Atlantic, UK waters, the Persian Gulf, Indian Ocean, the Arctic, Antarctica and SE Asia. His Royal Navy service has included tours of duty onboard HMS Hecate, HMS Roebuck, HMS Bulldog, HMS Endurance, HMS Cumberland, HMS Scott, and HMS Echo.

Achieving officer rank in 2000 and transferring to the Royal New Zealand Navy in 2006, Commander Rowe served on HMNZS Resolution, and as Executive Officer of HMNZS Endeavour he contributed to the national response to the MV Rena grounding. He took command of HMNZS Manawanui in 2008 and HMNZS Wellington in 2013.

Subsequently, Commander Rowe served as Lead Maritime Planner at HQ Joint Forces New Zealand, taught nautical studies at the Nelson and Marlborough Institute of Technology, and coordinated multi-nation maritime surveillance operations at the Forum Fisheries Agency, Honiara, Solomon Islands.

Returning to New Zealand in 2020, he was posted to HMNZS Matataua as Executive Officer. Promoted to commander in 2021, he served as Fleet Executive and Seamanship Officer and in 2024 he completed the Advanced Staff Course at the Goh Keng Swee Command and Staff College in Singapore.

Commander Phil Rowe currently serves as the NZDF Operating Seaworthiness Regulator in the Defence Maritime Authority.

WORKING WITH AUSTRALIA TO ACHIEVE NEW ZEALAND'S SECURITY AND DEFENCE AIMS¹

Major Jack Seabrook, NZ Army

With an eye to Australia's National Defence Strategy 2024 as a benchmark, Major Jack Seabrook reviews New Zealand's National Security Strategy 2023 and related security sector documents. From these he distils key security and defence aims, and then offers recommendations how better to achieve them. He groups his recommendations with reference to the DIME framework's instruments of national power: Diplomatic, Informational, Military, and Economic. A common thread is his conviction of the utility of closer defence cooperation with Australia. –Ed.

Introduction

This essay is grounded on a review of New Zealand's National Security Strategy 2023 and associated sector strategies, as listed in Figure 1. It distils the key aims of a whole-of-government policy approach as follows.

- Secure New Zealand and the Realm states
- Deter hostile actors
- Maintain the Australian-New Zealand alliance and international security partnerships
- Protect defence capabilities, and
- Enhance national economic resilience.

The discussion that follows sketches New Zealand's instruments of national power according to the widely-employed DIME framework, which spotlights Diplomatic, Informational, Military, and Economic capabilities.² The essay unfolds in relation to each instrument, with an eye to the key aims listed above. It references the Australian *National Defence Strategy 2024*, as appropriate. Throughout, this author offers a series of summary recommendations for discussion, critique, and hopefully adoption by the New Zealand security community and decision-makers when developing the next *NZDF Strategic Plan*.³

1 This is an abridged version of an essay written by Major Seabrook while studying in the Advanced Course (Joint) at the NZDF Command and Staff College in 2025. The opinions expressed herein are his own. -Ed.

2 See The Instruments of National Power, Smartbooks Online, accessed 3 January 2026. <https://www.thelightningpress.com/the-instruments-of-national-power/?srsltid=AfmBOopXUCJWRveewMkNXybA6mXnHs9h8V4IYZgdeBbWTmws4I9EGVU>

3 These recommendations have been distilled and abbreviated from a longer essay available on request from john.seabrook@nzdf.mil.nz. -Ed.

Cyber Security Strategy 2019
Transnational Organised Crime (TNO) Strategy 2020-2025
National Security Strategy (NSS) 2023
Defence Policy and Strategy Statement (DPSS) 2023
Strategic Foreign Policy Assessment 2023
Maritime Security Strategy 2024
Border Sector Strategy 2024
Space and Advanced Aviation Strategy 2024-2030
Defence Industry Strategy (DIS) 2025
Defence Capability Plan (DCP) 2025

Figure 1. Key New Zealand security policy documents 2019-2025 | Author's compilation

Diplomatic instruments of national power

New Zealand diplomatic influence is pursued not only by diplomats but also by NZDF personnel and operations. The *Defence Policy and Strategy Statement* (DPSS) in 2023 asserted that defence activities span from 'defence diplomacy through to combat operations'.⁴ Military engagements short of war such as training, exchanges, and capacity-building are also tools of foreign policy that reassure partners and deter adversaries. Consequently, the NZDF should strengthen New Zealand's position internationally by building relationships, demonstrating New Zealand's commitment, and contributing to regional stability.

Deterrence through detection should become a guiding concept.⁵ The NZDF should deploy personnel in the Southwest Pacific to enhance 'deterrence through denial of opportunity'.⁶ Proactive military as well as diplomatic engagement with partners to meet their needs and cooperate on their terms can deny opportunities to adversaries. Engagement should yield information that can be passed to New Zealand and Australian intelligence agencies to anticipate and counter transnational threats. NZDF training, with Australian and host-nation counterparts when feasible, should include techniques of information gathering and sharing regarding potential hostile activities.

To optimise the potential of defence diplomacy, the NZDF and ADF should shift from short-term deployments to a continuous presence in the Pacific islands, for example by dispatching a frigate or drone-capable vessel to patrol in teamwork with frequent air-surveillance missions.⁷ There is precedent: from 1941 to 1965, No. 5 Squadron was based in Fiji, specifically to optimise maritime-surveillance aircraft deployment.⁸ So New Zealand should again look at negotiating renewed forward-basing options.

4 NZ Government, *Defence Policy and Strategy Statement 2023*, 6.
<https://www.defence.govt.nz/assets/publications/23-0195-Defence-Policy-and-Strategy-Statement-WEB.pdf>

5 Thomas G. Mahnken, Travis Sharp, & Grace Kim, *Deterrence By Detection: A Key Role for Unmanned Aircraft Systems in Great Power Competition*. Washington D.C.: Center for Strategic and Budgetary Assessments, 2020.
[CSBA8209 \(Deterrence by Detection Report\) FINAL.pdf](https://www.defence.govt.nz/assets/publications/23-0195-Defence-Policy-and-Strategy-Statement-WEB.pdf)

6 NZ Ministry of Defence, *2025 Defence Capability Plan*, 21.
<https://www.defence.govt.nz/our-work/equip/defence-capability-plan/>

7 Mahnken, Sharp and Kim, *Deterrence by Detection*, op cit, 32.

8 Geoffrey Bentley, *RNZAF: A Short History*. Wellington: A.H. & A.W. Reed, 1969, 243.

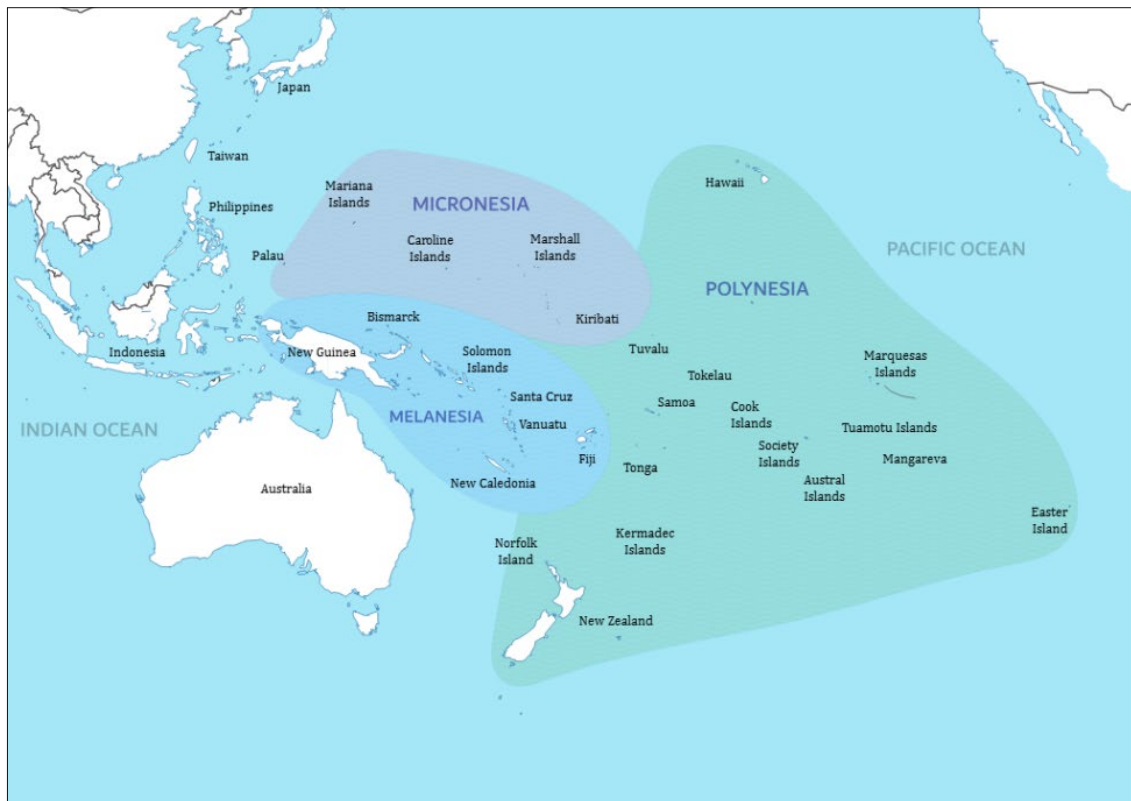


Figure 2. New Zealand, Australia, and the Pacific island states | Wikipedia

The NZDF currently deploys training teams to help Pacific defence and police forces. For example, NZ Army engineers train Pacific counterparts and provide advisory support and secondees to Pacific security institutions. In a paradigm shift, the NZ Army could move its basic training unit from Waiouru to Fiji's Joint Task Force Camp Black Rock. This non-combat unit could integrate with and reinforce Fiji's United Nations training, while also supporting local stability. A forward-deployed training unit could act as a Pacific hub and show commitment to building regional-response capacity. Should the RNZN maintain frigates interoperable with the RAN, and if joint NZ-Australia naval training and maintenance teams were permanently posted to Suva, Nuku'alofa, or Rarotonga, the utility and reach of both navies would be drastically extended.⁹ In addition, maintenance teams could support Pacific Patrol Boat Programme fleet maintenance.¹⁰

Australian and New Zealand foreign ministers have stated an intent of, "[E]xpanding rotations of New Zealand force elements in Australia,"¹¹ suggesting an opportunity to deepen NZDF expertise using shared operational objectives and expenditure, and possibly Kiwi forward basing in Australia. This offers New Zealand the ability to demonstrate its commitment to regional security with potential fiscal advantage to both Australia and New Zealand. Rotating an infantry platoon through the US Marine Rotational Force-Darwin, for example, would provide not only cost-shared training opportunities but co-locate all three nations' forces in one strategically important defence location.¹²

9 As suggested in: Justin Ong Guang-Xi, "'First of its kind' deal on essential supplies made as Singapore, New Zealand elevate ties," Channel News Asia, 10 October 2025. ['First of its kind' deal on essential supplies made as Singapore, New Zealand elevate ties - CNA](#)

10 Audrey Young, "NZ Navy to send Hawea patrol vessel to Fiji for six months to help patrol fisheries," New Zealand Herald, 6 April 2017. <https://www.nzherald.co.nz/nz/nz-navy-to-send-hawea-patrol-vessel-to-fiji-for-six-months-to-help-patrol-fisheries/> cited in Robert Ayson, "New Zealand's Alliance Obligations to a China-Australia War," The Australian Journal of International Affairs, 77 (3), 2023, 15. doi:10.1080/10357718.2023.217725

11 Australia-New Zealand Joint Statement on Closer Defence Relations, 6 December 2024. <https://www.minister.defence.gov.au/statements/2024-12-06/australia-new-zealand-joint-statement-closer-defence-relations>

12 United States Marine Corps, Marine Rotational Force - Darwin, 14 September 2025. [Marine Rotational Force - Darwin](#).

The RNZAF could use its P-8A Poseidon crews more cost-effectively by flying both RNZAF and Royal Australian Air Force (RAAF) fleets from Australian bases. The NZDF could cover part of its personnel expenditures by tapping into Australian offset funds, and vice versa. As New Zealand replaces its obsolete SH-2G Seasprite helicopters, bilateral training could lead to cost-savings by re-training NZDF crews and maintenance teams on Australian MH-60R Seahawks prior to the NZDF receiving that platform.¹³ This would reduce NZDF personnel costs and ease some ADF staffing pressure by relieving personnel shortages while maintaining deterrent capabilities.

These examples of deepening cooperation on operations, aircrews, platform maintenance and basing are recommended to improve interchangeability and cost-sharing. Likewise, commitments to common procurement of platforms, systems, bilateral training, and personnel exchanges would enhance interoperability. Most importantly, forward-basing assets in the Pacific or Australia provides greater flexibility to Pacific countries' needs and priorities, as articulated in the Boe Declaration and the *2050 Strategy for the Blue Pacific Continent*.¹⁴ An NZDF that is present, capable, and engaged globally can give New Zealand a diplomatic voice more persuasive than its relatively small size would normally afford.

Information instruments of national power

New Zealand increasingly recognises information policy – encompassing strategic communications, public relations, intelligence, cybersecurity, and counter-disinformation – as a key instrument of power. The NZDF, alongside other agencies, plays a vital role in this domain by collecting and analysing information and intelligence, safeguarding information channels, and conducting information operations to support New Zealand's interests and values. The NZDF role is respected in New Zealand society, and its communications can build public resilience and trust during crises. In peace time, the NZDF should bolster the government's strategic communications messaging by providing factual on-the-ground accounts of deployments and by countering misinformation and disinformation.

The NZDF should expand its legal-officer capability and staff each stage of information collection from first awareness through to supporting collection platforms or intelligence-fusion centres. NZDF legal and intelligence staff should liaise with MFAT and NZ Police to efficiently convert information into intelligence and thence into policy assessment and execution, particularly regarding potential illegal or hostile conduct.¹⁵ By sharing information and capabilities with partners, the NZDF can shape collective strategies and give New Zealand and its Pacific partners a voice in broader geopolitics disproportionate to their size.¹⁶ Perceptive information collection is crucial to our national defence, by broadening preparedness amongst our partners and reinforcing New Zealand's reputation for cooperation in the upholding of international rules.

The NZDF can economise by adopting Australian doctrines and research-and-development findings, as envisioned by *Plan ANZAC*, which aims for interchangeable Australian and NZ Army units.¹⁷ Extending this logic, the RNZN and RNZAF could align with RAN and RAAF

13 New Zealand Government, "Defence helicopter, plane decisions announced," Press release, 21 August 2025. [Defence helicopter, plane decisions announced | Beehive.govt.nz](#)

14 Pacific Islands Forum, *2050 Strategy for the Blue Pacific Continent*, 14 March 2024. [2050 Strategy for the Blue Pacific Continent | Pacific Islands Forum Secretariat](#); Pacific Islands Forum, *Boe Declaration on Regional Security*, 5 September 2018. [2018 Boe Declaration.pdf](#)

15 Sally Burt, David Kilcullen, Ian Langsford, and Andrew Maher, *Unconventional deterrence in Australian Strategy*, Special Report, Australian Strategic Policy Institute, October 2025, 14. [Unconventional deterrence in Australian strategy](#).

16 NZ Government, *Defence Policy and Strategy Statement 2023*, 21.

17 Andrew Woods, "OIA-2023-4699 Plan Anzac," 08 June 2023, 4 and 8. [OIA-2023-4699 Plan-ANZAC.pdf](#) Also see press release at <https://www.defence.gov.au/news-events/releases/2023-04-18/australian-new-zealand-armies-sign-plan-anzac>



Figure 3. New Zealand Chief of Army Major General John Boswell met with Australian Chief of Army Lieutenant General Simon Stuart in 2023 to sign Plan ANZAC | NZDF

doctrines, facilitating combined operations and training for both nations, and for Pacific partners, consistent with the *Defence Industry Strategy's* intent.¹⁸ Closer Defence Relations agreements already encourage such interoperability 'in the most cost-effective way'.¹⁹ Consequently, Pacific islands' security training burdens could be eased by offering unlimited access to Australian doctrine enabled by joint Australian and New Zealand training teams.

Similarly, complementing the aforementioned intent to reinforce ADF units and provide useful logistic support across the Pacific, the NZDF should confirm an approach to make all capabilities inter-supportable with the ADF. This would mean the deliberate adoption of interchangeable supplies, such as ammunition, fuels, and parts. This would set a standard for logistics integration across New Zealand and Australia that could drive common economic initiatives such as production, maintenance contracts, and sharing industry requirements to better integrate economies. Large-scale efficiencies could then be made available to Pacific partners to both ease their overhead costs and also strengthen military-logistics systems across the Pacific for the region's common defence.

Further, an NZDF presence can dispel disinformation in the Pacific islands. For instance, if malign actors attempt to undermine New Zealand's initiatives through disinformation, the personal relationships and on-the-ground interactions that the NZDF builds can act as a reality check. Pacific partners who have exercised or trained alongside NZDF personnel are less likely to believe false narratives about New Zealand. This reinforces arguments for a more persistent presence across the Southwest Pacific. The NZDF should prioritise operations and activities in an expanded area of operations from Perth east to Hawaii to demonstrate commitment to the region. This would shape where maritime and air-surveillance patrols operate. Along with permanently posted units, NZDF exercises, engagements, and sports diplomacy should all be focused solely on this area of operations. By concentrating resources

18 New Zealand Ministry of Defence, *Defence Industry Strategy*, Wellington, 2025, 15.

<https://www.defence.govt.nz/publications/new-zealand-defence-industry-strategy-delivering-capability-faster/>

19 Woods, "Plan Anzac," op cit, 13.

geographically, the NZDF can enhance its influence among partners and gain access to information relevant to New Zealand's defence and security.

The *Strategic Foreign Policy Assessment* and *National Security Strategy* both list foreign interference and coercion as top concerns. Consequently, both governments will need to harness capabilities from across the security sector, including Defence, to counter threats. Illustrative of this is countering coercive diplomacy in the Pacific by sharing intelligence with partners and providing secure communications systems.²⁰ These capabilities help island countries resist coercion, thus protecting the information autonomy of the region. Increased NZDF patrolling in the Pacific alongside ADF counterparts would yield more information and intelligence to share, thus deepening Pacific information resilience. This could be enhanced with provision of artificial-intelligence and data-analytics capabilities that integrate all Pacific government leaders' situational awareness and decision-making.

The *Cyber Security Strategy* calls for government agencies to be prepared to 'detect, respond to, and recover from intrusions,'²¹ and the DCP calls for strengthening the NZDF's cyber capabilities.²² But Pacific island governments are likely to remain vulnerable to malicious cyber activity, complicating the NZDF's communications with them. A meaningful contribution to regional security would be making NZDF Defensive Cyber Operations Teams available to Pacific partners, possibly using infrastructure at Pacific forward base locations and Australian facilities. In this way, the NZDF can benefit from real-time cyber-operations training, while also helping to secure the information lines of communication to and from New Zealand.

In summary, to enhance the information instrument, the NZDF should focus on securing New Zealand's lines of communication. This entails sharing doctrine, providing resources to secure communications, physically protecting the SLOCs, detecting threats and passing information/intelligence, and maintaining a Pacific presence to achieve layered information effects.²³ These policies demonstrate a commitment to protect New Zealand's lines of communication with Australia. By looking after its own approaches, New Zealand protects Australia's eastern flank in pursuit of common interests in the Pacific.

Military instruments of national power

Military power is defined by the hard-power capabilities that New Zealand can wield, principally through the NZDF's physical ability to deter aggression, defend sovereignty, and contribute to coalition operations. Strengthening military power means ensuring that the NZDF's force structure, readiness, and interoperability suit the security challenges of 2025–2030. Recent defence policy documents set clear aims for bolstering NZDF military effectiveness, including the following policies.

- focus on improved force design,
- higher readiness for joint operations,
- closer integration with key allies (especially Australia),
- enhanced strike and surveillance capabilities, and
- a posture of credible and comprehensible deterrence.

Achieving these goals entails rationalisation of NZDF capabilities and a shift from a balanced force to a force with focus and depth in critical areas.²⁴ Rationalising the force according to

²⁰ Burt, Kilcullen, Langsford, and Maher, *Unconventional deterrence in Australian Strategy*, op cit, 14.

²¹ NZ Government, *New Zealand's Cyber Security Strategy 2019*, 4.

²² NZ Government, *Defence Capability Plan 2025*, 32.

²³ Burt, Kilcullen, Langsford, and Maher, *Unconventional deterrence in Australian Strategy*, op cit.

²⁴ New Zealand adapted effectively in World War II by providing the Allies with a focused and deep minesweeping capability that addressed gaps in Allied navies' capabilities. See Sydney Waters, *The Royal New Zealand Navy*, (Wellington: New Zealand Electronic Text Centre, 2003). [Archived Page: CHAPTER 12 – Minesweeping in New Zealand Waters | NZETC](#)

the Defence Act and key national security objectives can generate strategic momentum and help the service chiefs secure the resources and personnel required to meet new challenges. For example, the RNZN should reduce its fleet to three classes: frigate (combatant), Polar-class (sustainment) and multi-role sealift vessels only. One commentator has argued for more multi-role ships capable of deploying large drone forces, thereby trading prestige kinetic but expensive platforms, like frigates, for more numerous patrol and sealift vessels projecting greater presence and practical utility in the Pacific.²⁵ In contrast, Captain Andrew Watts, in this *Journal*, has argued that the lethality projected by frigates is essential to deterrence. Accordingly, the RNZN should grow to a fleet of four frigates, complementing its global sustainment and sealift ships. The RNZN should then maintain one frigate patrolling the Southwest Pacific, ideally reinforcing ADF operations. Multi-role sealift-capable HMNZS Canterbury should act as a drone mothership during patrolling and transit.²⁶



Figure 4. HMNZS Canterbury | NZDF

The RNZN should avoid acquiring ships dedicated solely to humanitarian assistance and disaster relief (HADR). The NZDF has proven that it can adapt a variety of ships or aircraft for HADR. For example, the Polar-class sustainment vessel HMNZS Aotearoa responded effectively to the 2022 Tongan volcano eruption.²⁷ American and Japanese destroyers, and Australian, Singaporean, and Canadian frigates, supported the Kaikōura earthquake response in 2016.²⁸ HADR operations can be conducted effectively by any land, sea or air military asset capable of moving stores and people.

But if New Zealand cannot afford to operate at least three frigates,²⁹ perhaps the NZDF should retire frigates in favour of smaller ships allowing greater coverage and presence. Acquiring more sustainment and multi-role vessels such as two Polar-class sustainment vessels to support Southern Ocean and South Pacific patrols simultaneously would give New Zealand more flexibility in its foreign policy. It would also give New Zealand capacity to detect threats earlier and farther away.³⁰

25 Graeme Doull, "In Depth: New Zealand Defence Needs a Pacific-centric Reset," *Line of Defence Magazine*. [In Depth: New Zealand Defence needs a Pacific-centric reset](#)

26 Ibid. See also "Multi Role Strike Ships - the future of Royal Navy amphibious capability," *Navy Lookout*, 4 September 2023. [Multi Role Strike Ships - the future of Royal Navy amphibious capability - Navy Lookout](#)

27 New Zealand Defence Force, "Tonga Response," 23 April 2023. [Tonga Response - New Zealand Defence Force](#)

28 New Zealand Government, "Ships heading south to aid earthquake response," 16 November 2016. [Ships heading south to aid earthquake response | Beehive.govt.nz](#)

29 Four frigates would be ideal to ensure that one is always deployed and another is ready for contingencies.

30 Graeme Doull, "In Depth: New Zealand Defence needs a Pacific-centric rest," *op cit*.

Whenever possible, the NZDF should buy, train on, and operate with Australian platforms. RNZN crews could serve on RAN frigates and deepen their training and operational experience. This could mitigate ADF personnel shortfalls and foster a culture of interchangeable personnel.³¹ Likewise, rather than sinking funds into training on obsolete helicopters, the NZDF could decommission them early and tap into Australian MH-60R Seahawks conversion training. This would require diplomatic negotiation around potential availability of maritime helicopters for New Zealand operations but could be a good test case for transferring squadrons throughout trans-Tasman areas of operations as needed. The concerted effort to mirror Australia's capabilities is part of a collective deterrence posture. If New Zealand and Australia present a unified, capable force, any hostile actor in the region must consider both nations' responses.

In considering cost savings from early decommissioning, two recommendations would better focus the NZDF on its most likely strategic imperatives. Firstly, by choosing the Airbus A321XLR aircraft to replace the aging Boeing 757s,³² the Government introduced another platform's logistics demands on the RNZAF, which now manages ten distinct aircraft types. A better decision would have been acquiring either Boeing 737s or additional C-130J Hercules. The former would mean the NZDF could match the leased RAAF Boeing 737-BBJ capabilities and potentially integrate into the RAAF's maintenance arrangements.³³ Or, the NZDF could deepen its pool of C-130J Hercules and create greater platform depth. While VIP air transport is not mentioned in legislation,³⁴ if this is a desired public service, it could be more cost effective with VIP modules in C-130J aircraft rather than maintaining logistics for another platform type.

Secondly, the NZDF should standardise its helicopters to be logistically compatible. This could see the early decommissioning or sale of the NH-90s and replacement with UH-60 Black Hawk helicopters. As with the MH-60R Seahawk recommendation, this would facilitate joint training in Australia and shifting squadrons between trans-Tasman areas of operations based on joint priorities. This decision could also trigger a reframing of how New Zealand provides search and rescue capabilities.³⁵ In February 2025, the NZDF deployed a P-8A Poseidon and an NH-90 helicopter to search for a man missing in the Cook Strait, costing thousands of dollars an hour.³⁶ The NZDF should transfer land and local-maritime search-and-rescue responsibilities to civil authorities and commercial drone-operators, reserving costly platforms for long-range searches only. By 2030, this move would better orient the NZDF around New Zealand's priority missions: protecting the realm and immediate region, while contributing to global security.

In summary, boldly aligning to Australian capabilities for combat and logistic interchangeability would help the NZDF achieve ministerial and NSS aims. Likewise, decommissioning unsuitable platforms and tasks in favour of more efficiently consolidating resources should be one of the next Strategic Plan's guiding aims. These decisions could see the NZDF better able to deter threats, contribute meaningfully to regional-security operations, and defend the nation's sovereignty across all domains.

Economic instrument of national power

New Zealand's huge EEZ and maritime assets are impossible to police with extant capabilities.³⁷ To achieve deterrence through 'denial of opportunity' or detection, the NZDF would need

31 New Zealand would first need to increase recruitment and retention rates to free RNZN personnel for secondment to the RAN. -Ed.

32 New Zealand Government, "Defence helicopter, plane decisions announced," Press release, 21 August 2025. [Defence helicopter, plane decisions announced | Beehive.govt.nz](#)

33 Australian Government, "Special Purpose Aircraft," [Special Purpose Aircraft | Defence](#)

34 New Zealand Parliament, Defence Act 1990, Part 1, Section 5 - Power to raise armed forces. (Purposes)

35 As indicated by Australia in Mahnken, Sharp & Kim, Deterrence by Detection, op cit, 35.

36 Andrew Woods, "OIA-2024-5057Flying-costs," 28 August 2024, [OIA-2024-5057-Flying-costs.pdf](#)

37 Juhn Chris Espia, "Smart Power or Strategic Apathy?: The New Zealand Defence Force and the Politics of

to rapidly expand its maritime-detection capabilities. Professor Paul Dibb argues that New Zealand ‘must not waste time or money on such worst-case contingencies as an invasion or direct military attack’.³⁸ James Walsh argues deterrence through detection relies on a suite of capabilities, recognition, and attribution.³⁹ New Zealand can create deterrence through overt litigiousness. As Singapore has pursued a strategy of being viewed as a ‘poisonous shrimp’ to deter invasion,⁴⁰ New Zealand should be perceived as projecting ‘a high risk of detection and prosecution’. To do this, the NZDF should expand its fleet of drones and sensors, and thus local manufacturing thereof.

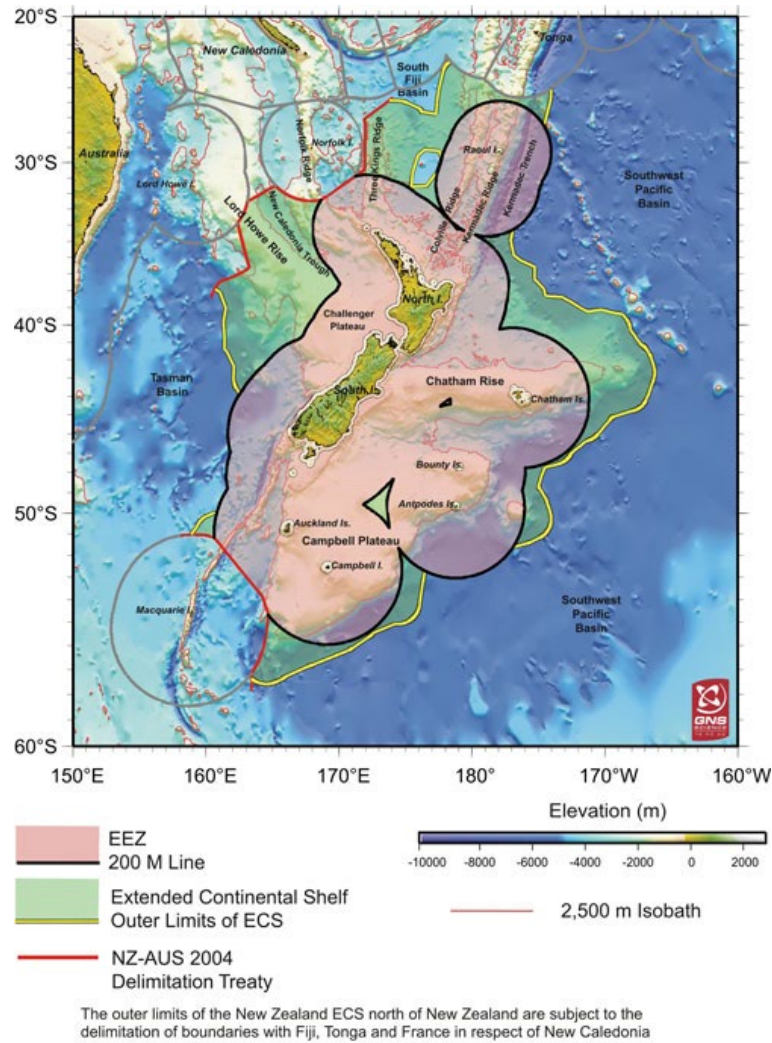


Figure 5. New Zealand's Exclusive Economic Zone and continental shelf | MFAT

Breakthroughs in technology are transforming New Zealand's space and advanced technology sectors. This industry should drive an expansion of uncrewed vessels to patrol and detect threats. In analysing deterrence, Michael Mazarr argues that ‘a combination of the small, fast, and many watercraft coupled with larger “exquisite” vessels sitting safely outside an enemy's

Capability Building and Deployment in the Indo-Pacific,” *Journal of Indo-Pacific Affairs*, November-December 2024, 38. [Smart Power or Strategic Apathy?: The New Zealand Defence Force and the Politics of Capability Building and Deployment in the Indo-Pacific](#)

38 Paul Dibb, “Designing a force structure for New Zealand's strategic circumstance,” *The Strategist*, 5 December 2024. Designing a force structure for New Zealand's strategic circumstances | *The Strategist*

39 Christopher Paul “Confessions of a Hybrid Warfare Skeptic” *Small Wars Journal*. Confessions of a Hybrid Warfare Skeptic | *Small Wars Journal*

40 Pak Shun Ng, “From ‘Potionous Shrimp’ to ‘Porcupine’: An Analysis of Singapore's Defence Posture Change in the Early 1980s,” Working Paper No. 397, National Library of Australia, Canberra, April 2005. 01 WP 376. Also see MS5 Lee Jing's essay in this edition of this *Navy Journal*.

weapon engagement zone serving as motherships and protectors might be an optimal combination.⁴¹ Uncrewed surface and underwater vessels – if layered as sophisticated submarine-detectors alongside low-cost easily-modified general-purpose drones – can free up traditional warships for priority tasks. A growing reliance on networked drone and space systems, however, will make ports, ships, and networks targets for missile and cyber attacks.⁴² Investments in artificial-intelligence-enabled surveillance drones and maritime sensors will not only boost the RNZN's and RNZAF's reach, but also act as a deterrent to New Zealand's adversaries. The Royal Navy is planning for this by pairing two AI-enabled drones with Britain's frigates.⁴³ Professors Walsh and Schulzke note that 'drones have substantially reduced the costs of conflict for the United States.'⁴⁴

As an island nation, New Zealand's economy depends on open SLOCs. This presents the NZDF with a unique opportunity to attract multilateral investment to New Zealand's advanced-technology industries to support its national security objectives at sea. If diplomatically well negotiated, it could also lead to industry supporting New Zealand and Pacific islands' integrated drone and sensor fleets for better surveillance of the vast waters between islands.⁴⁵ Their networked employment would expand market access and improve poaching and environmental threat detection. Fisheries-focused patrolling USVs thus become a deterrent for hostile actors targeting SLOCs or resources. Providing open access to drone-collected footage would also protect economic resources (like fisheries, oil and minerals) and ensure that commercial vessels can operate safely as well as legally.

Modern economies rely on undersea cables, satellite communications, and secure networks. New Zealand's geography suggests protecting and controlling these will be essential to defending New Zealand. As such, any surface drone fleet should be complemented by uncrewed underwater vessels, satellite-linked maritime sensors, and space-based detection and communications systems. Fortunately, the NZDF already works with six NZ-based drone manufacturers (surface, sub-surface, air and land),⁴⁶ and New Zealand is one of 12 space powers globally. The Defence Industry Strategy made space and uncrewed systems 'Strategic Industrial Base Priorities.'⁴⁷



Figure 6. New Zealand's Defence Industrial Strategy 2025 | NZ Ministry of Defence

41 Chris Smith, "Implications of emerging changes in land warfare for the focused all-domain defence force," Special Report, ASPI, 13 December 2024. [The implications of emerging changes in land warfare for the focused all-domain defence force, 10.](#)

42 Zubeda Anjum Niazi, "Future of Maritime Security Navigating Complex Waters in the Indo-Pacific," *Journal of Indo-Pacific Affairs*, March-April 2024, 129. [\(PDF\) Future of Maritime Security Navigating Complex Waters in the Indo-Pacific](#)

43 Navy Lookout, "First Sea Lord sets very ambitious targets for Royal Navy transformation," 9 September 2025. [First Sea Lord sets very ambitious targets for Royal Navy transformation - Navy Lookout](#)

44 James Igor Walsh and Marcus Schulzke. "Introduction." In *Drones and Support for the Use of Force*. Ann Arbor: University of Michigan Press, 2018, 6.

45 Mahnken, Sharp & Kim, *Deterrence by Detection*, op cit, 35.

46 Adrian Weller, Email to Author, "RE: NZDF and Autonomous Systems", 13 March 2025.

47 New Zealand Government, Defence Industry Strategy, 16. <https://www.defence.govt.nz/assets/Defence-Industry-Strategy.pdf>

Thus, the NZDF can expand its drone fleet quickly through local companies while enabling government policy for greater investment in these sectors. Where possible, New Zealand and Australia should negotiate defence-industry investment plans that apportion each country's investments fairly, much the same as the Anzac frigate construction was spread between trans-Tasman defence industries.⁴⁸

Another subtle NZDF economic contribution is through workforce development and integration. The NZDF trains thousands of individuals in technical trades, leadership, and professional skills annually. When personnel eventually transition to civilian careers, they carry skills into the national workforce, enhancing productivity and generating productivity, in line with the *Defence Industry Strategy's* workforce-development vision.⁴⁹ Accordingly, the Government should invest in the NZDF's role of providing training and skills to the economy.

Conclusion

In summary, NZDF personnel, institutions, acquisitions, logistics, and operations support not only New Zealand's diplomacy, information security, and military outreach but also central and regional economic power by investing in manufacturing, securing trade routes, and enhancing national skills. A strategic plan's economic considerations should ensure that the NZDF remains capable of patrolling vast maritime zones, limiting disasters' impacts, and countering threats (physical or cyber) to the economy. As the Defence Minister's foreword in *Defence Capability Plan 2025* noted, 'our economic security is inextricably tied to our national security'. Sustaining New Zealand's prosperity requires continued investment in the NZDF and the defence industries. By integrating NZDF efforts with diplomatic, informational, and economic initiatives, New Zealand can leverage the military instrument to enhance national security and prosperity.

48 Peter Greener, *Timing is Everything: The Politics and Processes of New Zealand Defence Acquisition Decision Making*. Canberra: ANU Press, 2009, 44.

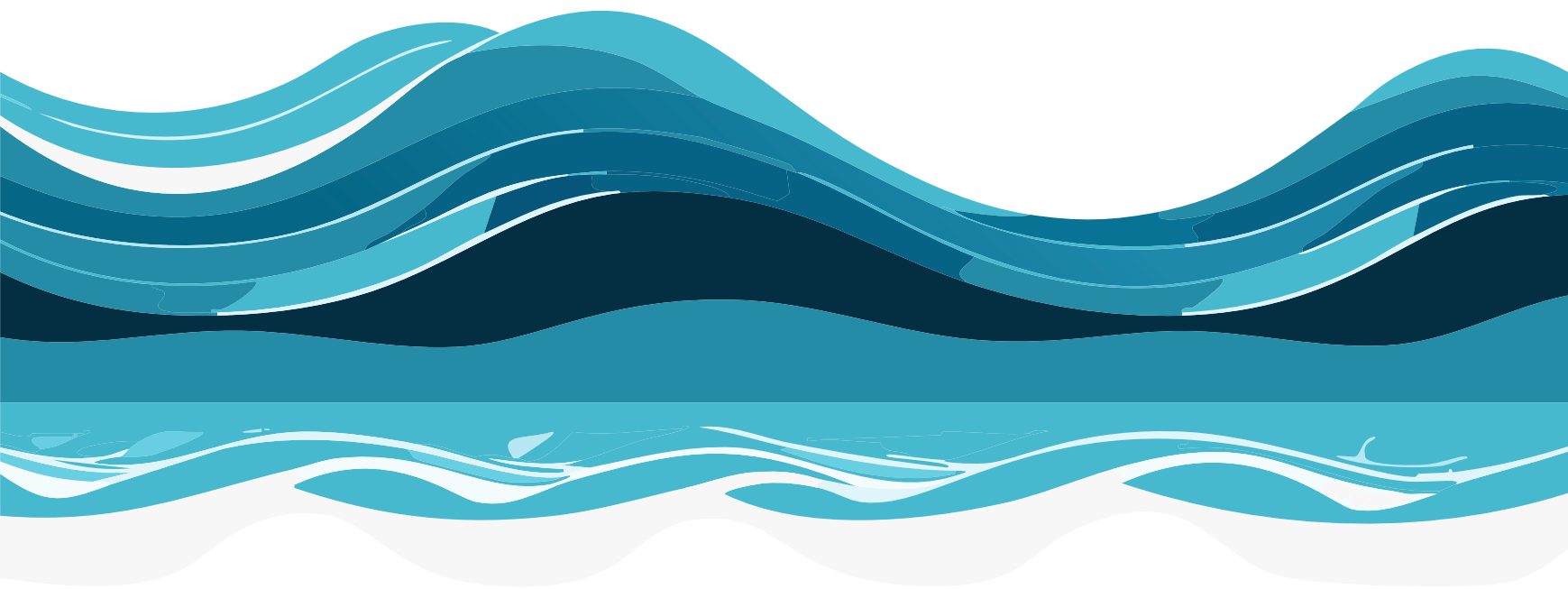
49 New Zealand Government, *Defence Industry Strategy*, 35.



MAJOR JACK SEABROOK, NZ ARMY

Since commissioning in 2009, Major Jack Seabrook has served at all levels of the New Zealand's defence and security communities. He deployed overseas to support New Zealand's contributions to Iraq; to contribute to the Regional Assistance Mission Solomon Islands (RAMSI); and recently to serve as Deputy Director for Operation of Gallant Phoenix, a multinational, multiagency fusion centre based in Jordan, focused countering violent extremism. Between overseas duties Major Seabrook was seconded to the Department of the Prime Minister and Cabinet (DPMC), posted to support New Zealand's Explosive Ordnance Disposal capability, and commanded combat-support sub-units. He is a graduate of Auckland Grammar School, achieved degrees from the University of Auckland, Massey University, and Victoria University of Wellington, and has studied in France. Major Seabrook currently serves as a staff officer in Army General Staff.

PART 2: **POLICIES**



NEW ZEALAND'S RESPONSES TO CHINA'S CHALLENGES: A DIME ANALYSIS¹

Major Andrew Gifford, NZ Army

To assess China's challenges to New Zealand, Major Andrew Gifford adopts a DIME framework. This analytic tool highlights four instruments of China's national power – Diplomatic, International, Military, and Economic – and thus their challenges to New Zealand. Major Gifford concludes that New Zealand must respond to each, but with a whole-of-government approach, requiring reinforcing multilateral institutions, enhancing informational and cyber resilience, reorienting defence planning towards the Pacific, and diversifying trade to reduce economic dependency. He recommends developing fresh national defence and economic security strategies, entailing coherent and farsighted leadership. –Ed.

Introduction

Accounts of China's rise and challenges to the post-WWII international order are numerous, not least in this *Journal*.² This essay assembles publicly available information about China's policies and summarises them in a national power framework, the DIME analysis. This analytic tool can help clarify a complex array of challenges and policy responses. See Figure 1. DIME analysis does not prescribe policies but usefully identifies salient types of national power – diplomatic, informational, military, and economic – that can clarify the challenges to which New Zealand needs to respond. This essay first offers a summary of China's challenges, then recommends how New Zealand might respond.

1 This is an abridged edition of an essay Major Gifford wrote while studying at the NZDF Command and Staff College in 2025. The views expressed here are his own. –Ed.

2 For more on China's policies see essays in this *Journal* by Commodore Garin Golding, Captain John McQueen, and ME5 Lee Jing.

Instruments of National Power			
D Diplomatic	I Informational	M Military	E Economic
<ul style="list-style-type: none"> ▪ Embassies/ Ambassadors ▪ Recognition ▪ Negotiations ▪ Treaties ▪ Policies ▪ International forums 	<ul style="list-style-type: none"> ▪ Military information ▪ Public diplomacy ▪ Public affairs ▪ Communications resources ▪ International forums ▪ Spokespersons, timing, media and venues for announcements 	<ul style="list-style-type: none"> ▪ Military operations ▪ Engagement, Security Coop, Deterrence ▪ Show of force ▪ Military technology ▪ Size, composition of force 	<ul style="list-style-type: none"> ▪ Trade policies ▪ Fiscal and monetary policies ▪ Embargoes ▪ Tariffs ▪ Assistance

Figure 1. DIME framework of instruments of national power. | Lightning Press³

Summary of China’s strategic challenges

The DIME analysis reveals a long-term Chinese strategy that blends influence, inducement, and coercion. The Pacific, once considered a benign environment, has become a theatre of sustained competition in which the PRC plans to reorder regional governance, connectivity, and allegiance. Beijing is undermining the norms that underpin Pacific island stability and sovereignty. These dynamics risk marginalising Wellington’s influence and constraining its ability to act as the trusted and values-based partner of choice.

1. *Diplomatic penetration.* Beijing’s preference for bilateralism and debt dependency weakens multilateral norms and replaces consensus with transactional loyalty, diminishing the cohesion of the Pacific Islands Forum (PIF), and fragmenting the Pacific island region. New Zealand risks exclusion from key decision-making if Pacific partners are captured or coerced by Chinese diplomatic persuasion. Furthermore, the gradual normalisation of PRC influence activities may degrade New Zealand’s capacity to promote democratic governance and the rules-based order on which it depends.⁴



Figure 2. Pacific Islands Forum (PIF) members. | Pacific Islands Forum Secretariat

2. *Information vulnerability:* Unregulated digital infrastructure, opaque social media ecosystems, and disinformation spread through the Chinese diaspora networks

³ The Lightning Press. *Instruments of National Power*. SMARTbooks. https://www.thelightningpress.com/the-instruments-of-national-power/?srsltid=AfmBOoo0V4K9cbcezUbcFh_d2bNdA64oDKbb7mEl-q7-B5-cfYwtob

⁴ Pacific Islands Forum Secretariat. “The Pacific Islands Forum.” Accessed 16 September 2025.

amplify China's informational leverage, undermining both New Zealand's and Pacific democracies' resilience and inducing political self-censorship.

3. *Military conflict risk.* A Taiwan confrontation or other Pacific clash could pull NZ into a conflict for which it is currently militarily ill-prepared. China's covert military facilities in the Pacific islands will undermine the New Zealand, Australian, French and American military balance and stability efforts.
4. *Economic Dependency and Weakened Resilience:* Overreliance on Chinese trade and investment constrains NZ's policy freedom and erodes its credibility as an advocate for transparency and sovereignty. China's infrastructure projects and associated debt reduce Pacific island governments' freedom of manoeuvre.

Diplomatically, the PRC's engagement with Pacific elites and institutions challenges the cohesion of the PIF, undermining collective decision-making. Economic dependence and opaque lending foster elite capture, normalising authoritarian and corrupt governance, weakening New Zealand's influence.

Informationally, China's media and digital investments amplify pro-Beijing narratives while eroding transparency and public trust, diminishing the normative power of liberal democratic models.

Militarily, dual-use infrastructure and security relationships extend the PLA's reach into the South Pacific, shrinking New Zealand's strategic depth.

Economically, China is creating trade and investment dependency and increasing its influence through loans for infrastructure of questionable value to sustainable development.

Figure 3. DIME analysis of China's strategic challenges | Author's summary

Diplomatic responses to China's challenges

Promote multilateralism. New Zealand could redouble efforts to strengthen multilateral mechanisms and promote the PIF as the central framework for Pacific engagement. This entails advocating for regional standards on transparency, debt sustainability, and the disclosure of security assistance to constrain opaque bilateral deals. Wellington could strengthen the Pacific Islands Forum Secretariat's analytical and administrative capacity, reducing the appeal of Beijing's fast-moving bilateralism, and restoring faith in collective processes.⁵

Deepen bilateral engagement on Pacific terms. Whilst multilateralism remains the foundation, Wellington could also increase its bilateral presence through sustained high-level visits and improve the flexibility and rapidity of funding mechanisms. Establishing sincere 'no-surprise' relations with partner states, enhancing transparency, trust and coordination, and (with Cook Islands in mind) incentivising early disclosure of negotiations with external powers.⁶

Coordinate and collaborate. Collaboration with Australia, the US, Japan, and the EU remains essential, but should be framed as Pacific-led, not Western-imposed. Co-financing projects under PIF or national priorities should avoid zero-sum competition with China while delivering credible alternatives to Chinese infrastructure investment.⁷

5 Kathryn Paik and Augé John, "China Courts the Pacific: Key Takeaways from the 2025 China- Pacific Island Countries Foreign Ministers' Meeting," Center for Strategic and International Studies, 3 June 2025, 25. <https://www.csis.org/analysis/china-courts-pacific-key-takeaways-2025-china-pacific-island-countries-foreign-ministers>

6 Caleb Fotheringham, "Mark Brown Slams New Zealand for Its 'Patronising Approach' over China Deal." RNZ, 20 June 2025. <https://www.rnz.co.nz/news/pacific/564705/mark-brown-slams-new-zealand-for-its-patronising-approach-over-china-deal>.

7 Laura Walters, "NZ Could Formalise Its Say over Pacific Nations' Security Policy." Newsroom, 14 February 2025. <https://newsroom.co.nz/2025/02/14/new-zealand-could-formalise-its-say-over-pacific-nations-security-policy/>.

Embed transparency as a public good. New Zealand could embed transparency and parliamentary oversight into aid and infrastructure agreements. This entails funding civil-society watchdogs, media and parliamentary training, reinforcing democratic checks and reducing vulnerability to opaque deals. This could be done independently, through the PIF or by supporting the UNDP's Parliamentary Support Program.⁸ By embedding transparency in the governance of external agreements, Wellington can strengthen Pacific resilience while advancing its own values-based diplomacy.

Deliver Pacific priorities at speed. China's advantage often lies in its responsiveness.⁹ New Zealand must accelerate project delivery in community initiatives, wharves, clinics, renewable energy, and water systems, using local labour. Up-scaling climate adaptation funding would demonstrate alignment with Pacific priorities and counter Beijing's climate diplomacy narrative. New Zealand alignment with the US in the region has the potential to complicate relations with Pacific island governments over climate change denial and reduction in USAID funding. New Zealand could integrate development funding mechanisms better with regional partner-donors.¹⁰ The perception that New Zealand delivers aid slowly, or conditionally, risks ceding influence to faster-moving competitors such as China.

Reform domestically. New Zealand leaders could strengthen counter-interference measures and accurately publicise the PRC's misdeeds or political and diaspora interference. Despite domestic legislation tightening foreign political donation rules, vigilance must be maintained to prevent malign foreign entities from exploiting loopholes. Resourcing the New Zealand Security Intelligence Service diaspora outreach initiatives to mitigate and disrupt China's United Front activities should be expanded. Additionally, development of an 'all-of-government China strategy', as proposed by Professor Anne-Marie Brady, could balance economic engagement with security safeguards, reinforcing transparency and social cohesion.¹¹

Informational responses to China's challenges

New Zealand cannot match China's resources, but it can compete on credibility, transparency, and partnership.¹² A coherent response could blend support for Pacific information resilience, protection of digital sovereignty, and defence of democratic integrity. New Zealand should prioritise sustained funding for independent journalism and public-interest media across the Pacific.¹³ A Pacific Media Resilience Fund to provide grants for investigative journalism, newsroom training, and digital literacy is recommended. Such an initiative would demonstrate a tangible commitment to democratic governance, an area where New Zealand holds a clear comparative advantage. Academic and journalist exchange programmes should emphasise media ethics, fact-checking, and coverage of malign external influence. In parallel, MFAT could work with the PIF to embed media-freedom principles in regional development frameworks, reducing the appeal of state-controlled content syndication from Beijing.

The protection of Pacific and New Zealand undersea cables is paramount. New Zealand could expand its role in Pacific telecommunications by co-financing alternative subsea cable

8 Graham Hassall, "Pacific Island Parliaments: Developmental Aspirations and Political Realities." *Australasian Parliamentary Review* 27, no. 1 (Autumn 2012), 213-37. *Australian Parliamentary Review/Association of Secretaries of Parliament (ASPG)*. <https://www.aspg.org.au/wp-content/uploads/2017/09/21-Hassall.pdf>.232.

9 Meg Keen and Alan Tidwell, *Geopolitics in the Pacific Islands: Playing for Advantage*. Lowy Institute, 31 January 2024. <https://www.lowyinstitute.org/publications/geopolitics-pacific-islands-playing-advantage>

10 Lagipoiva Cherelle Jackson, "Explainer: What Will the Withdrawal of USAID Mean for the Pacific?" *The Guardian*, 17 February 2025. <https://www.theguardian.com/world/2025/feb/17/donald-trump-usaid-withdrawal-impact-pacific-explainer>.

11 Brady, 2021, 76-77.

12 Reuben Steff, "Our Region Is Now a Strategic Theatre': New Zealand's Balancing Response to China." *The Pacific Review* 2004 37 (6), 1124.

13 Blake Johnson and Joshua Dunne, "Seeking to Undermine Democracy and Partnerships: How the CCP Is Influencing the Pacific Islands Information Environment". *Australian Strategic Policy Institute*, 7 March 2023. <https://www.aspi.org.au/report/seeking-undermine-democracy-and-partnerships/>

routes and encouraging multi-vendor networks that prevent monopoly control.¹⁴ However, New Zealand's capacity to act is constrained by limited fiscal resources and its economic exposure to China. Collaboration with Australia, Japan, and the United States could deliver secure, open-access infrastructure governed by transparent procurement standards. Wellington could also provide cybersecurity assistance, helping Pacific governments develop cybersecurity strategies, audit critical systems, and build incident-response capability.¹⁵ The expansion of intelligence sharing on cyber threats and other activities should be normalised. Consideration should be given to expanding the funding for the Pacific Security Fund.



Figure 4. The Pacific island region¹⁶ | DPMC

New Zealand officials could engage with resident Chinese communities to build trust and resilience against coercion. Efforts to strengthen the reporting and law-enforcement pathways for diaspora communities experiencing intimidation are vital to domestic identification of influence operations. The reluctance to name the PRC in the case studies in the NZ's Security Threat Environment Report 2025 should be abandoned.¹⁷ This diplomatic self-censorship undermines efforts to robustly counter the PRC narrative, and New Zealand should serve as a role model for Pacific leaders by identifying and calling out malign behaviour by China. New Zealand could, in conjunction with partners, establish auditing and incident response teams that could be deployed to Pacific island governments upon request.

Additionally, the rules against foreign interference by means of political party donations could be enhanced by further limiting single donations, anonymous donations and foreign

14 C. Girard, ed, Perspectives on Pacific Security (Development Bulletin No. 82, Part 27). Pacific Security Network, 2021. https://pacificsecurity.net/wp-content/uploads/2021/10/DB82_Part27.pdf, 132.

15 Ibid. 132

16 New Zealand Government DPMC, Secure Together Tō Tātou Korowai: New Zealand National Security Strategy 2023-2028, 2023. <https://www.dPMC.govt.nz/sites/default/files/2023-11/national-security-strategy-aug2023.pdf>.

17 New Zealand Security Intelligence Service. New Zealand's Security Threat Environment 2025. Wellington: NZSIS, 2025. <https://www.nzsis.govt.nz/assets/NZSIS-Documents/New-Zealands-Security-Threat-Environment-2025.pdf>

donations, and making them public.¹⁸ The Serious Fraud Office (SFO) could be augmented by a unit dedicated to Pacific island state-sponsored crime.¹⁹

Military responses to China's challenges

China's growing military engagement in the Pacific aims to secure strategic depth, embed dual-use infrastructure, and normalise China's regional presence. For New Zealand, the challenge is to prevent the militarisation of its neighbourhood while maintaining credibility with both Pacific partners and traditional allies. Wellington's response could centre on strengthening maritime awareness, scaling defence diplomacy around Pacific priorities, and promoting transparency and resilience to ensure it remains the security partner of choice, without fuelling escalation with China. Achieving this requires a comprehensive Strategic Defence Review to guide a coherent, long-term defence strategy aligned with the realities of a contested Pacific, focusing current resources and future capabilities.



Figure 5. First and second island chains. | US Department of Defense

18 Derek Cheng. "Political Corruption, Donations and Lobbying in New Zealand: New Report from the Helen Clark Foundation on Rules in Need of Overhaul." NZ Herald, 17 August 2024. <https://www.nzherald.co.nz/nz/politics/political-corruption-donations-and-lobbying-in-new-zealand-new-report-from-the-helen-clark-foundation-on-rules-in-need-of-overhaul/NG3RVJJAXRCXXDCJL75TX4KJCO/>

19 Judith Collins, Government supports Anti-Corruption pilot (July 18, 2025). "Hon Judith Collins KC" & "Hon Mark Mitchell" as co-authors. Beehive.govt.nz. <https://www.beehive.govt.nz/release/government-supports-anticorruption-pilot>

New Zealand's announcement of a major increase in defence spending alongside the 2025 Defence Capability Plan (DCP) is a positive development for a force long described as critically underfunded.²⁰ Defence Minister Judith Collins admitted in 2025 that the New Zealand Defence Force (NZDF) had been degraded to the point of requiring 'intensive care'.²¹ Yet increased spending must be guided by strategy. Investment should be based on the threats New Zealand faces and the environment in which its forces operate, not simply to keep an atrophied limb of national power alive. Critics argue that the DCP appears politically rushed to signal intent but lacks coherence and ambition, offering little genuine change.²²

New Zealand could consider reorienting its defence planning to meet the growing Chinese military challenge in the Pacific. As Line of Defence Magazine notes, New Zealand's limited ships and aircraft will not alter the balance of power but can still contribute meaningfully if designed for resilience and interoperability across kinetic, cyber, and informational domains.²³ The NZDF could prioritise flexible, lower-cost, multi-role ships and platforms suited to Pacific island conditions: small islands with shallow water, short runways, and unsealed roads, rather than attempt to mirror larger partners' capabilities. Lessons from Ukraine, where 70 per cent of battlefield casualties stem from drones, highlight the need to innovate and invest in unmanned and precision systems.²⁴ New Zealand is currently weak in remote and uncrewed systems, a missed opportunity if procurement remains focused on modernising legacy capabilities. This is the moment to deliberately plan and equip for future conflicts, not past ones.

The DCP forms part of a suite of documents, alongside the Defence Policy and Strategy Statement 2023 (DPSS) and Future Force Design Principles 2023 (FFDP), but New Zealand still lacks an overarching defence strategy. The UK's Strategic Defence Review (SDR), authored jointly by a minister, a senior officer, and a foreign-policy expert, sought to 'ruthlessly' modernise defence and discard notions of business as usual.²⁵ Australia's 2024 Defence Strategic Review performed a similar role, identifying capability gaps before producing its strategy and investment program. New Zealand requires an equivalent forward-looking SDR, drafted by Defence and independent experts, to define roles, capabilities, and funding priorities.²⁶

A formal Defence Strategy would also guide prioritisation. Australia's strategy documents explicitly reference China and Taiwan dozens of times, while New Zealand's DCP mentions China only three times and omits Taiwan entirely. The NZDF Strategic Plan 2019–2025 also ignores both. Most NZDF deployments are directed outside the Pacific, to the Middle East, Europe, and Africa, diluting focus and resources for our region. To counter China's growing presence, New Zealand's current Pacific military engagement is not on the scale or frequency to maintain enduring partnerships and effect deterrence. A more robust defence strategy could focus defence policy and tasks on regional priorities and New Zealand's immediate neighbourhood.

That reorientation could extend existing training and exchange programs. Australia's 2025 defence deal with Papua New Guinea includes basing, mutual defence provisions, and allows up to 10,000 Papua New Guineans to join the Australian Defence Force with a pathway

20 A.J. Woods, Official Information Act Request: NZDF Attrition-and-Retention (Wellington , 2023), <https://www.nzdf.mil.nz/assets/Uploads/DocumentLibrary/OIA-2023-4794-Attrition-and-Retention.pdf>.

21 Judith Collins, "Multi-Billion Dollar Defence Plan Unveiled," The Official Website of the New Zealand Government, 7 April 2025. <https://www.beehive.govt.nz/release/multi-billion-dollar-defence-plan-unveiled>.

22 "New Zealand Defence Needs a Pacific Reset." Line of Defence Magazine. 3 September 2025. <https://defsec.net.nz/2025/09/03/new-zealand-defence-needs-pacific-reset/>

23 Ibid.

24 Ibid.

25 United Kingdom. The Strategic Defence Review 2025: Making Britain Safer – Secure at Home, Strong Abroad. London: Her Majesty's Government, 2025. https://assets.publishing.service.gov.uk/media/683d89f181deb72cce2680a5/The_Strategic_Defence_Review_2025_-_Making_Britain_Safer_-_secure_at_home_strong_abroad.pdf 12-13.

26 Australian Government. 2024 National Defence Strategy and 2024 Integrated Investment Program. Canberra: Department of Defence, 2024. <https://www.defence.gov.au/about/strategic-planning/2024-national-defence-strategy-2024-integrated-investment-program>

to citizenship.²⁷ Facing recruitment and retention challenges, New Zealand could adopt a similar initiative with Pacific island governments. Shared service would deepen trust, build interoperability, and strengthen family and cultural links across the region, making us a leader among our counterparts. Such arrangements could create enduring security relationships and counter China's influence through people-to-people and heritage ties.

Economic responses to China's challenges

The Belt and Road Initiative (BRI) and PRC lending are not neutral economic policies. They are vehicles for geopolitical influence that can compromise sovereignty, democracy, security, and the rules-based international order.²⁸ China's economic strategy in the Pacific blends infrastructure-building, resource access, and inducements to embed long-term influence. This undermines New Zealand's relative economic influence, complicates its values-driven diplomacy and risks environmental and debt vulnerabilities. New Zealand, alongside its partners, could offer a credible, high-quality alternative through enhanced development partnerships that prioritise sustainability, transparency, and local ownership. Supporting Pacific economic resilience through trade facilitation, vocational training, and climate financing would position New Zealand as a valued partner.

Countries trapped in PRC debt, such as Tonga, require targeted assistance. While it may be unpalatable for Western nations to provide relief that indirectly services Chinese loans, carefully structured multilateral arrangements, potentially coordinated through the World Bank, Asian Development Bank, or the PIF, could help stabilise vulnerable economies while maintaining accountability.²⁹ By not rewarding opaque lending practices, this would weaken Beijing's leverage.³⁰ New Zealand could therefore advocate for debt transparency mechanisms and promote the adoption of international financial standards across the Pacific to ensure that future borrowing aligns with long-term national interests rather than short-term political expediency.

Enhancing New Zealand's economic statecraft is equally critical. Deepening initiatives like the Pacific Resilience Facility and The Pacific Agreement on Closer Economic Relations (PACER Plus) can improve regional integration and market access while aligning with the 2050

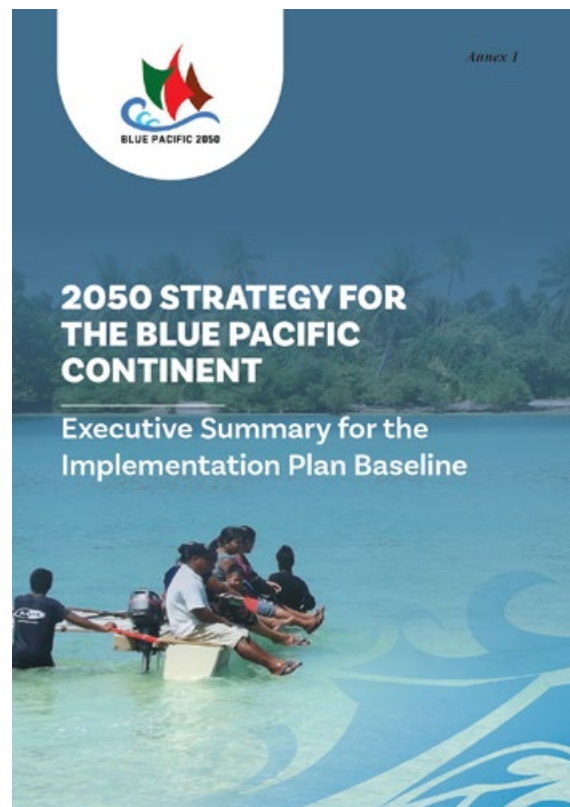


Figure 6. 2050 Strategy for the Blue Pacific Continent. | Pacific Islands Forum

27 Lana Lam and Kelly Ng, "Australia Signs Key Defence Deal with Papua New Guinea." BBC News, 5 October 2025. <https://www.bbc.com/news/articles/cp9824r3p31o>

28 Riley Duke, "Peak Repayment: China's Global Lending." Lowy Institute Interactives, May 2025. <https://interactives.lowyinstitute.org/features/peak-repayment-china-global-lending/>

29 Riley Duke, "Tonga Walks a Tightrope on Its Chinese Debts." The Interpreter, Lowy Institute, 31 January 2024. <https://www.lowyinstitute.org/the-interpreter/tonga-walks-tightrope-its-chinese-debts>

30 Anna Gelpert, Sebastian Horn, Scott Morris, Brad Parks, and Christoph Trebesch. "How China Lends: A Rare Look Into 100 Debt Contracts with Foreign Governments." *Economic Policy* 38, no. 114 (April 2023): 345-416. <https://doi.org/10.1093/epolic/eiac054>

Strategy for the Blue Pacific Continent.³¹ Aid and investment should focus on Pacific-identified priorities, such as climate adaptation, digital connectivity, and sustainable fisheries, thereby reinforcing local agency and demonstrating that Wellington's engagement is responsive rather than prescriptive.

Domestically, New Zealand could diversify export markets and supply chains to reduce exposure to coercive leverage. Treasury reports warn that New Zealand's agricultural export concentration, nearly one-third to China, creates structural vulnerability to economic coercion.³² A deliberate diversification strategy would not only enhance economic resilience but also reduce Beijing's diplomatic leverage.³³ Also recommended are expanding trade regionally, with the EU, North America, South Asia and the Middle East, and supporting alternate or domestic capability for critical technologies such as semiconductors and renewable-energy components.

Economic diplomacy could also be enhanced by informational transparency. By collaborating with Pacific media, civil-society networks, and educational institutions, New Zealand can help build regional literacy on the risks of opaque lending and debt distress. Public diplomacy that highlights values of democratic accountability, environmental stewardship, and fair-debt practice would contrast constructively with the transactional nature of some PRC engagements and mitigate the economic debt predicaments nations such as Tonga find themselves in.

Finally, New Zealand's credibility depends on coherence between rhetoric and policy. Developing a national economic-security strategy that integrates trade, aid, and strategic resilience would allow Wellington to respond proportionately to coercive measures without over-reliance on any single partner. Through consistent, values-based engagement, New Zealand can sustain its role as a principled partner, one that strengthens Pacific sovereignty not by opposing China outright, but by investing in enduring regional prosperity and self-determination to balance China's appeals.

Policy recommendations

If China's initiatives are left unchecked, the Pacific island region risks bifurcation into competing spheres of influence, undermining the collective agency of small island states and weakening regional institutions such as the PIF. For New Zealand, dependence on the PRC for trade and on the US for deterrence produces an uncomfortable asymmetry with economic exposure potentially constraining diplomatic choice. Without a clear strategy, Wellington may find itself reacting to crises rather than shaping outcomes.

To avoid this, New Zealand requires an integrated approach built on foresight and candid analysis of its strategic situation. New Zealand's strategic response must be whole-of-government, leveraging all instruments of power coherently and consistently. This requires clarity of purpose, sustained resourcing, and political courage to articulate national interests even when inconvenient.

Again, the DIME framework can provide a method to order diverse policies. The following policy recommendations are grouped as Diplomatic, Informational, Military, and Economic.

Diplomatically, Wellington is recommended to invest in Pacific resilience as a strategic end state. Supporting debt transparency, climate adaptation, digital security, and vocational

31 New Zealand Ministry of Foreign Affairs and Trade. "PACER Plus Overview." Manatū Aorere (New Zealand Ministry of Foreign Affairs and Trade), accessed 18 July 2025. <https://www.mfat.govt.nz/en/trade/free-trade-agreements/free-trade-agreements-in-force/pacer-plus/overview>

32 Susan Edmunds, "How NZ Economy Is Tracking after Gloomy GDP Figures." RNZ, 23 September 2025. <https://www.rnz.co.nz/news/business/573802/how-nz-economy-is-tracking-after-gloomy-gdp-figures>

33 NZ Treasury. "FEU Special Topic: Assessing New Zealand's Economic Risks from Export Commodity Concentration." Rangitaki: Staff Insights Blog, 5 August 2025. <https://www.treasury.govt.nz/publications/research-and-commentary/rangitaki-blog/feu-special-topic-assessing-new-zealands-economic-risks-export-commodity-concentration>

training demonstrates a values-based alternative to Beijing's model. While New Zealand cannot out-spend or out-lend the PRC, New Zealand's values and membership in the Pacific family are its points of difference. Empowering Pacific-led initiatives under the PIF 2050 Strategy for the Blue Pacific Continent will reinforce collective ownership and counter the narrative that external partners impose conditions. New Zealand could expand its defence diplomacy, training, and secondments, and consider Pacific island recruitment into the NZDF, to build enduring human networks that outlast shifting geopolitical deals. While implementing such reforms will test political will and budgetary priorities, failure to do so risks reactive policy and diminished sovereignty.

Informationally, an effective information strategy is essential. Public diplomacy and strategic communications should expose China's opaque and 'grey zone' practices while promoting open governance and accountability. Collaborating with Pacific media and civil-society groups can enhance resilience to disinformation and elite capture. At home, strengthening cyber defences and protecting the integrity of diaspora communities are vital elements of national resilience.

Militarily, an urgent imperative exists to conduct a Strategic Defence Review (SDR). This is recommended to provide a comprehensive assessment that defines national objectives, clarifies threat perceptions, and aligns resources with strategies. From this, a National Defence Strategy should flow, establishing how New Zealand contributes to collective deterrence and crisis management in the Pacific, including contingencies arising from a Taiwan conflict and what our partners will ask of New Zealand. Defence capability decisions, which transcend those embodied in the Defence Capability Plan, will follow logically from the new defence strategy. Only by sequencing strategy before procurement can New Zealand ensure that spending enhances readiness, resilience, and interoperability rather than perpetuating repetition.

Economically, New Zealand would benefit from a National Economic Security Strategy that integrates trade, supply-chain resilience, and industrial policy. The goal is to insulate critical sectors, technology, energy, and food security from coercive leverage while diversifying export markets beyond China. Building domestic capacity, or supporting partners, in advanced manufacturing, renewable-energy components, and digital infrastructure will strengthen both economic sovereignty and deterrence resilience. Closer coordination with Australia, Japan, India, Southeast Asia, and the EU can provide collective resilience against external shocks.

While the DIME framework can help analyse challenges and prescribe policies, coherent leadership across government must integrate the policy elements. If New Zealand's diplomatic, informational, defence, and economic instruments remain siloed, national power will remain less than the sum of its parts. Core national security issues must be accompanied by a clear implementation plan that provides the coordinating architecture across government needed to operationalise policy coherence.

Conclusion

New Zealand cannot, and should not, disengage from the PRC. As the world's second-largest economy with a market of 1.4 billion people, China remains integral to New Zealand's prosperity. Trade with China has underpinned our national growth. Around five per cent of New Zealand's population is ethnically Chinese, constituting an essential element of our economic, social and cultural identity. However, New Zealanders must remain alert to Beijing's strategic intentions in the Pacific and how these could undermine New Zealand's and New Zealand's partners' interests. New Zealand's reticence in calling out China when its policies conflict with our values has reflected too much courtesy, caution, and conformity. Our diplomatic instinct to show respect and 'speak softly' so as not to provoke Beijing is increasingly ineffective, and may become counterproductive. Firm, whole-of-government responses to China will project New Zealand's focus and seriousness of national purpose, which will be respected by New Zealand's Pacific and global partners and taken more seriously by Beijing's leaders.

MAJOR ANDREW GIFFORD, NZ ARMY

Major Andrew (Andy) Gifford's roles have spanned command, education and operations. His deployments include: to Afghanistan in 2012 in a New Zealand Task Group Head Quarters; to the Combined Joint Task Force, Operation Inherent Resolve Headquarters in Kuwait in 2015; and in 2024 to Operation Gallant Phoenix as Senior National Officer and Deputy Director. In these roles, Major Gifford and his team worked within a joint, multinational, multi-agency headquarters in the Kingdom of Jordan, focused on countering violent extremism and terrorism.

In country, Major Gifford served as Chief Instructor within the Mission Command Training Centre and was a Company Commander within the first Command Support Regiment.

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Major Andrew Gifford is currently posted to Defence Strategy Management as Staff Officer Force Development (Army) at Headquarters NZDF.

NAVWAR: NAVIGATION VULNERABILITIES AND MITIGATION MEASURES¹

Lieutenant Commander Christopher Tisdall, RNZN, AFRIN

RNZN bridge officers rely heavily on electronic charting systems like the Warship Electronic Chart Display and Information System (WECDIS) which integrates position, navigation, and timing (PNT) data sourced from the Global Navigation Satellite System (GNSS). But in a future contested Indo-Pacific region, these systems are vulnerable to electronic warfare and cyber threats, warns Lieutenant Commander Christopher Tisdall. If geopolitical tensions rise and motivated adversaries seek to exploit the electromagnetic spectrum to degrade, disrupt or manipulate PNT data, this could jeopardise RNZN operations. To mitigate these risks, Tisdall advocates new doctrine and policy, improved training, enhanced PNT resiliency, and investment in alternative navigation technologies to ensure RNZN personnel can operate effectively in GNSS-degraded conditions. – Ed.

¹ This is an abridged version of an essay written by Lieutenant Commander Tisdall while studying at Kingston University London in 2025. – Ed.

Introduction

RNZN ships routinely use positioning, navigation, and timing (PNT) data generated by the Global Navigation Satellite System (GNSS). PNT data is displayed on the Warship Electronic Chart Display and Information System (WECDIS) which allows bridge teams and command to seamlessly integrate and exploit PNT data while overlaid with bathymetric and geospatial information for both navigation and operational outputs. The interlinkage of the GNSS, PNT, and WECDIS systems enhances RNZN ships' navigational safety and operational efficiency.



Figure 1. Warship Electronic Chart and Information Display (WECDIS) | Naval News/Raytheon Anschutz

NAVWAR

However, GNSS/PNT denial, whether accidental in peacetime or deliberate in conditions of navigational warfare (NAVWAR),² can seriously degrade safety of navigation and impact mission achievement. Bridge officers must remain vigilant in identifying system discrepancies and signs of degraded or interrupted PNT data on WECDIS. The bridge team are likely to be the first to recognise PNT anomalies such as unexpected positional shifts or inconsistent system readings, which could indicate accidental or deliberate interference. Timely recognition of these discrepancies can allow the bridge team to take immediate corrective actions to ensure safety of navigation and maintain operational effectiveness. This heightened situational awareness is essential especially in contested or high-risk areas where the reliability of GNSS signals cannot be guaranteed. But bridge teams can suffer from a number of vulnerabilities in the event that their GNSS interface is interrupted. Examples, and applications to the RNZN, are discussed later.

2 NATO defines NAVWAR as: 'Preventing the hostile use of PNT information while protecting the unimpeded use of the information by NATO forces and preserving peaceful use of this information outside the area of operations.' <https://publications.sto.nato.int/publications/STO%20Meeting%20Proceedings/STO-MP-MSG-094/MP-MSG-094-17.pdf>

Over the last decade, there has been a growing occurrence of surreptitious GNSS denial and spoofing related incidents impacting both commercial marine and aviation traffic.³ The Norwegian Broadcasting Corporation in 2017 reported of anomalous GNSS signals in the Black Sea, likely intentionally initiated. The specific motivations of many of these recorded incidents are unknown, though they are likely attributed to Russia.⁴ Incidents such as these however have negatively impacted mariners requiring reliable GNSS services for safety of navigation purposes. Irrespective of motivations they have exposed the marine industry's vulnerabilities and reliance on GNSS sourced PNT data.

In the context of military operations, PNT systems like GPS are increasingly being targeted in conflict and war zones. Incidents of malicious GNSS-denial activity have been widely publicised by media⁵ throughout the war in Ukraine, in Syria, the East and South China Seas and eastern Mediterranean.⁶ Jamming and interference can cause denial of GNSS services to large geographical areas, with minimal effort or financial investment by potential perpetrators.⁷ Such interference imposes not only operational risks for the military but also costs on the commercial sector and on national economies, thus constituting an economic element of hybrid warfare.



Figure 2. Global Navigation Satellite System (GNSS) | NASA Archive

Geopolitical threats to the RNZN's PNT resiliency

The RNZN is presented with an increasingly complex and uncertain regional environment. This is shaped by the rising interests and projection of regional powers into the wider Indo-Pacific, of which China is the most prominent power but not the only one. This strategic competition motivates a surge in influence contestation and geopolitical manoeuvring.

With heightening tensions and regional powers seeking to assert dominance over critical maritime routes, the manipulation of GNSS services and access to the broader electromagnetic spectrum is likely to become a key tool. The ability to disrupt or deny GNSS access presents a low-cost, high-impact method for controlling sea lanes. It forces opposing parties into navigational uncertainty while simultaneously reinforcing the perpetrator's territorial claims or political objectives. As reliance on GNSS for PNT continues to grow across both civilian and military sectors, malign actors may increasingly deploy jamming or spoofing techniques to hinder maritime operations, impact logistic chains and movements, disrupt operations for critical national infrastructure, and even create strategic ambiguity in contested waters.

GNSS-denial activities, such as jamming and spoofing, have been strategically employed by China in the South China Sea to disrupt satellite navigation systems.⁸ These activities

3 Henrik Lied, 'GPS Freaking Out? Maybe You're too Close to Putin'. NRK Beta Norwegian Broadcasting System, 18 September 2017. <https://nrkbeta.no/2017/09/18/gps-freaking-out-maybe-youre-too-close-to-putin/>

4 Ibid.

5 Zak Doffman, 'New Warning As 'Spike' In GPS Spoofing Attacks Hit Passenger Planes—Fasten Your Seatbelts'. Forbes Magazine, 12 August 2024. <https://www.forbes.com/sites/zakdoffman/2024/08/12/warning-as-frightening-airline-gps-attacks-soar-fasten-your-seatbelts/>

6 Dong L. Wu, 'Innovation: Recent GPS Jamming in Regions of Geopolitical Conflict'. GPS World Magazine, 2024. <https://www.gpsworld.com/innovation-recent-gps-jamming-in-regions-of-geopolitical-conflict/>

7 M. Psai, B. Stauffer, and T. Humphreys, 'Attackers Can Spoof Navigation Signals Without our Knowledge. Here's how to Fight Back GPS Lies'. IEEE Spectrum, Vol 53, Issue 8, 2016

8 Dong L. Wu, 'Innovation: Recent GPS Jamming in Regions of Geopolitical Conflict'. GPS World Magazine, 2024. <https://www.gpsworld.com/innovation-recent-gps-jamming-in-regions-of-geopolitical-conflict/>

have been linked to obscuring the movements of vessels or aircraft in contested areas. For example, GNSS spoofing has been reported near Chinese ports and critical installations, where false signals are transmitted to mislead navigation systems. This can mask illegal activities, such as unauthorised fishing or smuggling, and serve as a security measure to conceal sensitive locations such as circumventing detection of sanctioned ships.⁹ Additionally, GNSS interference has been observed during Western military exercises, apparently aimed at restricting surveillance or navigation capabilities of foreign entities in the East Asian region.¹⁰

As the RNZN is committed to regular deployments in the Indo-Pacific region, there exists a reasonable likelihood that units will encounter degraded or denied GNSS services. As outlined above, such scenarios could arise from deliberate jamming or spoofing by adversaries, or as unintended consequences of the evolving electronic warfare landscape.

The possibility of GNSS disruptions will challenge both commercial and military operators, requiring greater resilience in navigation practices, improved electronic warfare countermeasures, and heightened vigilance from bridge officers to detect and mitigate GNSS interference. Recognising these emerging threats, navies must prepare to operate effectively in GNSS-denied environments, ensuring navigational integrity even amid deliberate disruption efforts aimed at shifting regional power balances.

The deployment of three People's Liberation Army-Navy (PLA-N) warships (Task Group 107) in February 2025 into the Tasman Sea served multiple strategic purposes for China. The live-fire drills conducted by the PLA-N task group demonstrated China's naval capabilities and its ability to operate far from its home waters.¹¹ It is fair to assume, the demonstrated ability to sustain operations within the Tasman Sea also includes the ability to conduct activities which could exploit the electromagnetic spectrum.

The Task Group 107 deployment tested the reactions of both New Zealand and Australia, highlighting regional sensitivities and the importance of maritime security.¹² Additionally, the deployment showcased China's commitment to asserting its presence in international waters, reinforcing its status as a global maritime power. The operation, while legal under international law, raised concerns about transparency and the proximity of military activities to civilian air routes.



Figure 3. Chinese warships transit the Tasman Sea February 2025 | NZDF

9 Katie Zeng Xiaojun, 'BACKGROUND: GNSS spoofing in China and beyond'. Risk Intelligence, 29 June 2021. <https://www.riskintelligence.eu/background-and-guides/background-gnss-spoofing-in-china-and-beyond>

10 A. Kauranen, 'Finland detects satellite navigation jamming and spoofing in Baltic Sea'. Reuters, 1 November 2024. <https://www.reuters.com/world/europe/finland-detects-satellite-navigation-jamming-spoofing-baltic-sea-2024-10-31/>

11 N. Dynon, 'Showboat Diplomacy: Chinese navy mousetrap mission achieves Tasman objective.' Line of Defence Magazine, Autumn 2025.

12 S. Convery, 'China conducts second live-fire drill near New Zealand'. The Guardian, February 2025. <https://www.theguardian.com/australia-news/2025/feb/22/china-conducts-second-live-fire-drill-near-new-zealand>

Assessment of RNZN preparedness

The RNZN faces significant susceptibility when operating in contested maritime areas, particularly as adversaries prepare to leverage electromagnetic warfare and GNSS-denial activities to disrupt PNT data. The RNZN's reliance on WECDIS and GNSS-based navigation systems leaves its ships vulnerable should the fidelity or availability of GNSS signals come into question. As adversaries refine jamming, spoofing, and cyber-attack techniques, the RNZN risks operational uncertainty, reduced situational awareness, and even navigational incidents, especially when operating in regions where GNSS manipulation is actively employed as a strategic tool.

A critical vulnerability lies in the reduced ability of bridge officers to detect PNT data corruption through the WECDIS interface. Overconfidence in the accuracy of displayed GNSS data, without rigorous cross-checking using traditional navigation techniques, means errors in positioning may go unnoticed until they pose a safety risk. The automation within WECDIS, while enhancing situational awareness, creates a psychological bias where operators assume its data is infallible. Without dedicated training to recognise degraded GNSS inputs, bridge officers may struggle to identify subtle inaccuracies, leaving ships exposed to navigational hazards. This passive acceptance of PNT data undermines operational resilience in environments where GNSS denial activities are actively employed.



Figure 4. Bridge personnel on watch aboard HMNZS Te Mana during a combat exercise. | NZDF

Additionally, RNZN bridge teams often exhibit a lack of confidence in using degraded functions of WECDIS, including switching between various sensor sources or effectively employing traditional navigation techniques such as celestial navigation or dead reckoning. The reluctance to transition between alternative positioning sources when GNSS is compromised further amplifies the risk of navigation incidents, leaving ships without a reliable contingency plan. The erosion of traditional navigation practices and limited emphasis on training for GNSS-denied operations restricts the Navy's ability to manoeuvre effectively in contested waters.

Recommendations for management of PNT vulnerability

From a broader organisational perspective, several key vulnerabilities have been identified within the RNZN's NAVWAR capabilities, which impact its ability to counter GNSS-denial activities and maintain PNT resiliency. These include the:

1. Development of doctrine and policies for PNT resiliency;
2. Removal of financial barriers;
3. Early adoption of technology; and
4. Focus on training.

Building PNT resiliency and expanding NAVWAR capabilities within the RNZN requires significant organisational change to counter the growing threat of GNSS-denial activities. A structured approach focused on policy development, resource allocation, technological adoption, and training evolution is essential to ensuring navigational dominance in contested environments. Without these strategic adjustments, HMNZ ships remain vulnerable to adversarial interference, reducing their ability to manoeuvre confidently, project power, and maintain maritime security.

Preparedness 1: Development of PNT doctrine and policies

The creation of doctrine and generation of policies are fundamental steps in establishing NAVWAR strategies. Without clear guidelines and operational direction, RNZN commanders lack the tools to detect, counter, and mitigate threats to PNT data effectively. A dedicated NAVWAR doctrine would outline defensive countermeasures, alternative navigation methods, and the importance of maintaining multi-source PNT solutions in degraded environments. Furthermore, creating standardised procedures for GNSS-denied operations would equip bridge officers with the necessary skills to ensure safe and effective navigation in electromagnetic warfare conditions.

Additionally, the removal of financial and introduction to service barriers is essential to accelerating NAVWAR capability development. The fast-paced evolution of NAVWAR technologies demands flexible procurement processes, allowing the RNZN to acquire cutting-edge anti-jamming systems, alternative PNT technologies, and resilient communication networks without bureaucratic delays. Investing in early adoption of technology, including existing and emerging innovations would provide a technological edge against adversarial interference. These solutions bolster the ability to navigate with confidence even in compromised environments, ensuring RNZN vessels remain operational despite GNSS-denial.

A cultural shift in training mentality must accompany technological advancements. Reinforcing traditional navigation techniques will ensure bridge officers maintain resiliency in GNSS-denied conditions. By embedding NAVWAR awareness into RNZN operations, the Navy will ensure its ability to mitigate emerging threats and safeguard navigational integrity under the evolving realities of modern conflicts.

Countering the growing threat of GNSS-denial and developing NAVWAR capabilities requires a fundamental shift in how leadership perceives both the risks and operational impacts of degraded or denied PNT data. As potential adversaries look to leverage the electromagnetic spectrum to undermine maritime situational awareness, RNZN leadership must prioritise PNT resiliency. Access to GNSS and PNT data is a critical enabler of operational success. The current lack of dedicated policy and doctrine leaves HMNZ Ships vulnerable to interference, creating navigational uncertainty and limiting the RNZN's ability to operate confidently in contested waters. A proactive organisational stance, one that views PNT degradation as a predictable battlefield challenge rather than an anomaly, will help reinforce the urgency of investing in both defensive and offensive NAVWAR strategies.

To achieve this transformation, leadership must dedicate resources toward identifying, assessing, and mitigating GNSS-denial threats. This requires a structured approach that includes investing in alternative navigation technologies. Additionally, allocating funding for

training programmes will prepare seagoing commands to confidently operate in GNSS-denied conditions, ensuring personnel develop situational awareness, critical thinking, and rapid decision-making skills.

Without focused leadership action, RNZN platforms risk being disadvantaged in modern maritime conflict, unable to adapt swiftly when PNT data is compromised. Embedding NAVWAR capabilities into operational doctrine will safeguard navigation and reinforce RNZN's ability to manoeuvre effectively under evolving threats.

As adversaries look to exploit GNSS systems through denial activities the absence of a structured approach to PNT resiliency makes RNZN platforms vulnerable to navigational incidents, degraded operational effectiveness, and potential mission failure.

The RNZN currently lacks a formalised policy and doctrine for ensuring PNT resiliency or for employing offensive and defensive NAVWAR capabilities. This absence represents an operational vulnerability, particularly as GNSS-denial activities become more prevalent in contested maritime environments. Without a dedicated framework, the RNZN does not actively assess the risks associated with GNSS-disruption, leaving bridge officers and operational commanders unaware of the full extent of NAVWAR threats.

The lack of institutional focus on PNT resiliency also means there is no strategic emphasis on developing countermeasures or allocating resources to mitigate GNSS-denial threats. Without clear policy direction, funding and capability development for alternative navigation methods, anti-jamming technologies, and electronic warfare systems remain limited. This gap in policy leaves the RNZN reactive rather than proactive, relying heavily on external GNSS support without a contingency plan for when adversaries attempt to manipulate or deny satellite-based navigation services.

To address this vulnerability, organisational change and policy development must drive efforts toward PNT resiliency and NAVWAR capabilities. Establishing doctrine would provide clear direction and guidance on how to secure GNSS-dependent navigation systems, train personnel in GNSS-denied operations, and invest in resilient technologies. A structured policy would also promote collaboration with partner navies, integrating multi-source PNT solutions and ensure that RNZN platforms can concurrently maintain freedom to manoeuvre and safety of navigation even in hostile environments. By prioritising the development of robust NAVWAR strategies, the RNZN can enhance maritime security, safeguard operational effectiveness, and ensure its ability to operate in the modern battlespace where GNSS interference is an expected reality.

Preparedness 2: Removal of financial barriers

To effectively counter GNSS-denial threats and develop NAVWAR capabilities, the RNZN must embrace a permissive culture for financial investment in emerging technology. Traditional procurement processes emphasise risk aversion and cost-saving measures, leading to delays in acquiring advanced solutions. However, the fast-paced nature of NAVWAR technology development demands a shift toward proactive spending to ensure naval platforms remain operationally competitive. Leadership must recognise that hesitation in investment risks placing warships at a technological disadvantage, particularly as adversaries continually refine their electromagnetic warfare tactics. By fostering an appetite for investment in cutting-edge solutions, the RNZN can reinforce PNT resiliency and safeguard maritime security.

Beyond financial commitment, procurement strategies must be quick, dynamic, and adaptive to enable the rapid introduction of emergent capability. The conventional approach to acquisition, often burdened by bureaucratic approval chains, fails to match the speed at which threats evolve. Instead, the RNZN should streamline procurement mechanisms, allowing for fast-tracked evaluations, trial processes, and accelerated integration of navigation systems, electronic warfare countermeasures, and GNSS solutions. By shifting to an agile procurement model, the Navy can ensure that ships and supporting elements receive timely access to disruptive technologies, reducing vulnerabilities in contested environments.

Additionally, decentralising decision-making by granting purchasing power to operational users is vital for aligning technological solutions with real-world naval challenges. The bridge officers and warfare specialists who interact daily with navigation systems are best positioned to identify capability gaps and recommend effective solutions. Instead of relying on high-level purchasing processes, operational users must be empowered to directly engage with the NZDF's Capability Branch and advise the procurement of technology tailored to their requirements. By granting decision-making autonomy to those responsible for maintaining navigational integrity, the RNZN ensures that investments reflect operational necessity rather than administrative convenience.

Ultimately, empowering operational users to identify technology solutions strengthens the RNZN's adaptability in GNSS-denied environments. Personnel who experience navigation threats firsthand must be encouraged to explore emerging technologies. Establishing user-driven technology assessment frameworks ensures that solutions undergo rigorous field testing before fleet-wide adoption. By integrating operator expertise into procurement, the RNZN will cultivate a resilient, forward-thinking approach to PNT security, ensuring it remains combat-ready in a landscape of evolving electronic threats.

Preparedness 3: Adoption of technology

The RNZN should adopt a proactive approach to technology integration, leveraging both existing and emerging solutions. The growing threat of GNSS-denial activities highlights the importance of moving beyond reliance on a single system such as GNSS and WECDIS to invest in advanced navigation technologies. This requires an accelerated effort to incorporate multi-GNSS receivers, anti-jamming measures, inertial navigation systems, and AI-powered sensor fusion into naval platforms. By embracing cutting-edge innovations, the RNZN can strengthen its ability to operate in GNSS-contested environments, ensuring uninterrupted access to reliable PNT data for navigation and the conduct of operations.

A proactive technology strategy also demands a cultural shift within the RNZN, where leadership prioritises early adoption of new capabilities rather than waiting until threats materialise. This will require the RNZN to develop industry partnerships, engage in joint research initiatives, and remaining adaptable to the fast-paced evolution of NAVWAR technology. By committing to innovation-driven procurement, RNZN can safeguard its operational effectiveness, reinforce navigational security, and ensure its fleet remains prepared to manoeuvre confidently under any circumstances.

The following are examples of currently available technologies related to PNT resiliency:

- **Inertial Navigation Systems (INS)** are a foundational technology for PNT resiliency, enabling ships to maintain accurate positioning without external signals.¹³ INS relies on accelerometers and gyroscopes to track movement by calculating velocity and direction changes over time. Unlike GNSS, which depends on satellite signals, INS operates independently, making it impervious to jamming and spoofing attacks. Modern laser-ring and fibre-optic gyroscopes offer high-precision navigation, ensuring vessels can continue operating confidently even when satellite access is degraded or denied. Integrating INS alongside GNSS enhances redundancy and navigational reliability, reducing vulnerability to electronic warfare threats.
- Similarly, **Ground-Based Radio Navigation systems**, such as LORAN (Long Range Navigation), provide terrestrial-based positioning alternatives that bolster PNT resiliency. LORAN uses synchronised low-frequency radio signals transmitted from ground stations to determine a vessel's geolocation, independent of satellite constellations.

13 'Inertial Navigation Systems (INS) - An Introduction'. Advanced Navigation, 24 February 2023. <https://www.advancednavigation.com/tech-articles/inertial-navigation-systems-ins-an-introduction/>

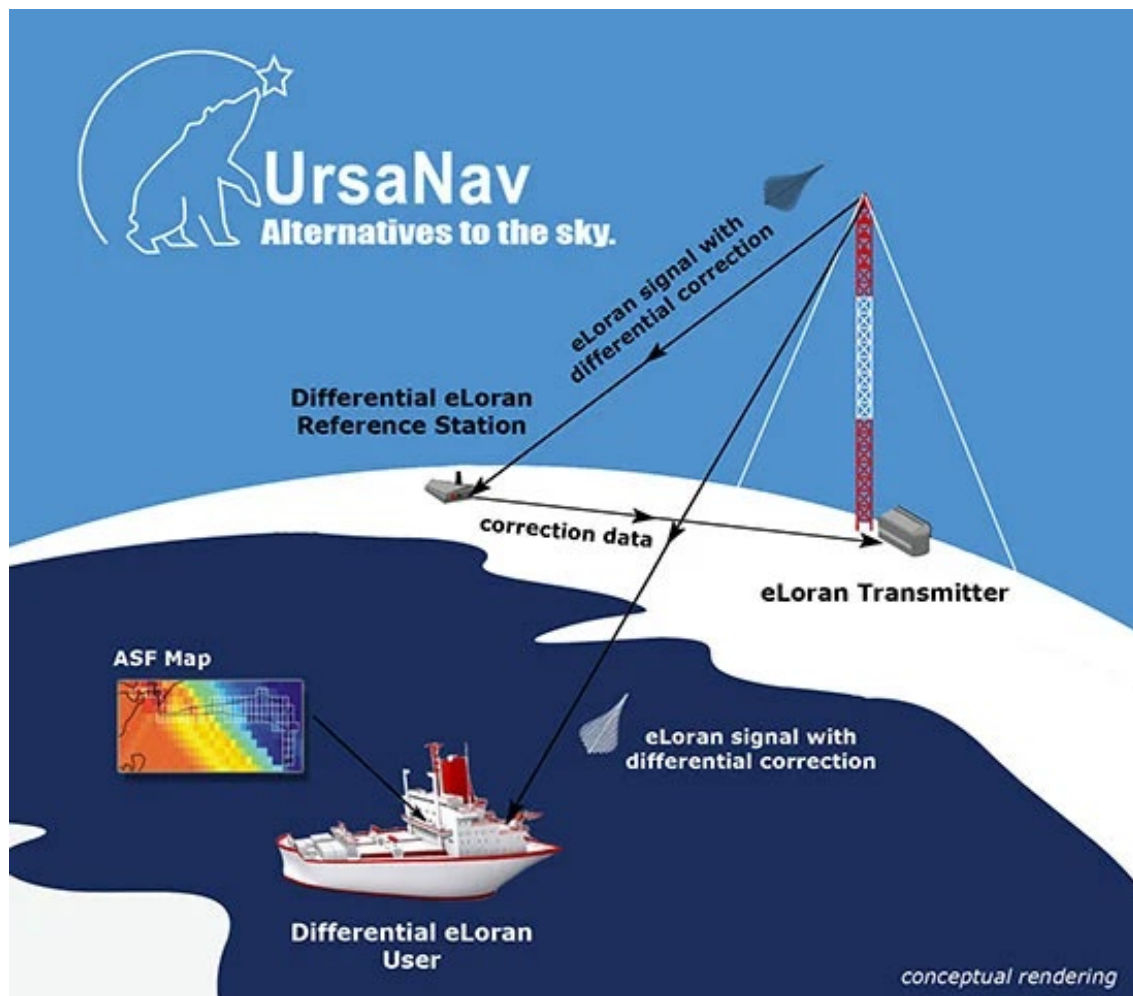


Figure 5. A LORAN system diagrammed. | GPS World

Additionally, anti-jamming and anti-spoofing technologies play a vital role in preserving GNSS integrity. Jamming mitigation systems employ advanced filtering techniques, directional antennas, and interference detection algorithms to safeguard signal reception.¹⁴ Anti-spoofing measures focus on signal authentication and encryption, ensuring that maliciously manipulated location data does not deceive systems. By integrating adaptive beamforming, multi-frequency GNSS receivers, and AI-driven interference monitoring, ships can actively defend against electromagnetic warfare tactics, preserving accurate PNT data for critical navigation and operational taskings.

The following are examples of emerging and developing technologies related to PNT resiliency:

- **AI-Powered Sensor Fusion** plays a crucial role in achieving PNT resiliency by leveraging machine learning algorithms to combine data from multiple sources, including radar, optical sensors, and INS.¹⁵ By dynamically processing and analysing these inputs, AI-powered systems can compensate for the loss of GNSS by providing precise real-time positioning data. This approach strengthens navigational accuracy, enabling warships to detect anomalies, predict signal disruptions, and operate effectively without satellite-dependent positioning.

¹⁴ Ibid.

¹⁵ S. Meheretu, S. Hailesilassie, and E. Ethiopia Nigussie, 'GNSS-Independent Navigation of UAV through Utilization of Sensor Fusion and Intelligence System'. International Conference on Information and Communication Technology for Development for Africa (ICT4DA), 2022.

- **Quantum-Assured Navigation** represents a revolutionary advancement in PNT technology.¹⁶ Quantum navigation uses the principles of quantum mechanics, particularly quantum sensing, to enable highly accurate and precise navigation. This technology utilises the unique properties of atoms, such as their movement and interactions, to measure position, speed, and orientation. Emerging quantum sensing technologies, such as those developed by Q-CTRL, utilise quantum sensors to detect subtle environmental signals, allowing for GNSS-free navigation that is resistant to jamming and spoofing.¹⁷ These systems offer high-precision positioning, independent of external signals, making them highly valuable for operations in electromagnetic warfare environments. Quantum-assisted navigation ensures long-term accuracy, providing naval forces with greater resilience when traditional GNSS systems are compromised.
- Additionally, star cameras and star trackers serve as reliable celestial reference devices, offering a time-tested navigational method that predates modern technology. This technology has been actively used by satellites to maintain accurate orbit, since the 1960s. These systems, using active pixel sensors and IR imagery, recognise star patterns, constellations, and single stars, allowing navigators to establish accurate positioning without requiring GNSS.¹⁸ Celestial navigation, though star cameras and trackers remain viable backups for maritime forces operating in degraded conditions. By incorporating automated star-tracking technologies, naval platforms can ensure self-sufficient navigation, reducing reliance on external satellite signals.

By proactively adopting these cutting-edge technologies, the RNZN can fortify its PNT resiliency, ensuring continuous operational capability even in GNSS-contested environments.

Preparedness 4: Focus on training

To ensure operational effectiveness in future operating environments, the RNZN must refocus its approach to training bridge officers in both navigationally constrained waters and operational contexts. Future training requirements must do so without the aid of GNSS-derived PNT data. Recent observations indicate a decline in traditional navigation skills, leading to reduced situational awareness and an overreliance on WECDIS and GNSS-based PNT data. Addressing these vulnerabilities requires a dedicated training shift, emphasising traditional navigation principles, enhanced system proficiency, and human factors awareness to mitigate the risks of automation bias and overconfidence in technology.

A renewed training mentality is essential to reinvigorate core navigation techniques such as celestial navigation, fixing principles, including generation of lines of position from alternative means, and dead reckoning. This training mentality shift aims to ensure bridge officers can maintain accurate knowledge of position – sufficient to maintain safety of navigation and conduct operation, despite GNSS disruption. Hands-on practical exercises must simulate GNSS-denied scenarios (both alerted and unalerted), reinforcing confidence in manual cross-fixing, use of visual bearings, and alternative navigation sources. Additionally, training should prioritise proficiency in degraded functions of WECDIS, including the ability to switch between various sensor sources, validate data integrity, and operate without GNSS inputs. Bridge teams must develop critical thinking skills, actively questioning positional data rather than passively accepting system outputs.

An integral component of this refocused training must be the identification and mitigation of GNSS-denial activities. Bridge officers must be trained to recognise signs of jamming, spoofing, and other interference tactics, ensuring they can rapidly assess the reliability of PNT data in contested environments. Beyond technical skill sets, training should incorporate

¹⁶ “Unjammable” Quantum Sensors Navigate by Earth’s Magnetic Field’, Discover Magazine, 23 April 2025. <https://www.discovermagazine.com/technology/unjammable-quantum-sensors-navigate-by-earths-magnetic-field>

¹⁷ Q-CTRL is an Australian firm and a global leader in quantum sensing infrastructure, originating from the University of Sydney’s Quantum Science Group.

¹⁸ Technology Newsletter, ‘Space Technology 6’, NASA/ Jet Propulsion Laboratory, 2005. https://www.jpl.nasa.gov/nmp/st6/TECHNOLOGY/Tech_index.php

human factors awareness, addressing cognitive biases such as automation dependence and complacency. Officers should learn to identify when they are falling into these psychological traps and implement cross-referencing strategies to maintain navigational integrity. By embedding NAVWAR training into operational doctrine, the RNZN can equip its personnel with the skills and mindset needed to fight and manoeuvre effectively in GNSS-degraded battlespaces, ultimately enhancing maritime security and navigational resilience.

Conclusion

Looking ahead, investing in NAVWAR capabilities will play a crucial role in protecting the integrity of navigation systems, equipping operators with the tools to counteract interference tactics and safeguard operational effectiveness.

The RNZN must prioritise PNT resiliency by investing in robust alternative navigation technologies. This includes integrating multi-source PNT solutions and reinforcing situational awareness training to ensure that bridge teams and navigators remain effective in degraded environments. The ability to operate seamlessly without reliance on GNSS will enhance both navigational safety and operational effectiveness, allowing the RNZN to respond decisively to emerging challenges. This investment can reduce vulnerabilities not only in the military sector but also in the civilian maritime and aerospace sectors.

By embedding PNT resiliency as a core component of naval operations, the RNZN will future-proof its capabilities, ensuring it can navigate and fight effectively in the increasingly complex operating conditions of modern warfare.



LIEUTENANT COMMANDER CHRISTOPHER TISDALL, RNZN, AFRIN

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He completed his Advanced and Warfare Bridge Watchkeeping Certificates while on secondment to the Royal Australian Navy, serving aboard warships HMAS Stuart and Darwin. On return to New Zealand, Lieutenant Commander Tisdall served as the Navigating Officer of HMNZS Te Mana.

He completed the Royal Navy's Principal Warfare Officer course at HMS Collingwood, and subsequently served as Gunnery Officer aboard HMS Prince of Wales and Richmond. He later completed the RN's Specialist Navigation Course and joined the RN's Fleet Operational Standards Team as Staff Warfare Officer (Navigation).

Subsequently posted as the RNZN's Fleet Navigating Officer, Lieutenant Commander Tisdall delivered navigation training and operational assurance for the RNZN and Asia-Pacific partner navies.

Lieutenant Commander Tisdall holds a Master of Science in Technology (Maritime Operations) degree from Kingston University of London and an Associate Fellowship to the Royal Institute of Navigation.

DISTRIBUTED SYNTHETIC TRAINING: A STRATEGIC IMPERATIVE FOR THE RNZN¹

Lieutenant Commander Owen Peters, RNZN

Distributed Synthetic Training (DST) allows military units to conduct safe real-time exercises using internationally-connected virtual networks, notes Lieutenant Commander Owen Peters. But he points out that the capability to conduct DST at scale, while achieved by many partner militaries, has not yet been fully developed in New Zealand. He concludes that integration of DST into RNZN training architectures is a strategic imperative, and explains why. –Ed.

Introduction

Exercise is the best method of disciplining soldiers; for by practicing without blood, they learn to fight with advantage and without danger.

Flavius Vegetius Renatus²

Individual and collective training ensures that Royal New Zealand Navy (RNZN) and New Zealand Defence Force (NZDF) personnel maintain the ‘proficiencies required for effective military operations’.³ Our current training models achieve this through a combination of synthetic training and live training, with the balance adjusted to the mission skill requirements of varied units and ranks. Combat Enhancement Training (CET) and Force Integration Training (FIT)⁴ are currently achieved by the RNZN by attending live training exercises such as RIMPAC, Talisman Sabre or the FPDA Bersama Lima series. Whilst personnel on ships may train against simulated threats through utilising an on-board simulation or through data-sharing networks such as TDL,⁵ this involves their physical deployment at sea, with attendant disruption, costs and risks, and where the simulation’s fidelity may be sub-standard.

However, there is a method of training which allows RNZN units the ability to conduct CET/FIT with partner forces to a high-quality standard without ships even leaving the wharf. This method is Distributed Synthetic Training (DST).

1 This essay is an abridged version of a paper Lieutenant Commander Peters has written for Kingston University, UK, in pursuit of a MSc degree in Technology (Maritime Operations). –Ed.

2 Flavius Vegetius Renatus, *The Military Institutions of the Romans: In Five Books*. Translated from the Latin by John Clarke. London: J. and R. Tonson, 1767. https://archive.org/details/bim_eighteenth-century_de-re-militari-english-vegetius-renatus-flaviu_1767

3 New Zealand Defence Force. *New Zealand Defence Doctrine Publication - D*. 4th ed. Wellington: Headquarters New Zealand Defence Force, 2017. <https://www.nzdf.mil.nz/assets/Uploads/DocumentLibrary/NZDDP-D-4th-ed.pdf>

4 North Atlantic Treaty Organization (NATO), *Bi-Strategic Command Directive (Bi-SCD) 075-003: Collective Training and Exercise - Exercise Process*, Brussels: NATO Allied Command Operations / Allied Command Transformation, 1 September 2023, 99. https://coemed.org/files/Branches/DH/075-003_BI-SCD_Collective_Training_and_Exercise_Exercise_Process_01Sept2023.pdf

5 Tactical Data Link (Link 16). <https://www.baesystems.com/en-uk/product/tactical-data-links>

The US Training and Doctrine Command defines DST as follows.

An event enabled by distributed simulation where the training participants are at different locations (i.e., different cities, countries or continents).⁶

DST offers substantial benefits, including enhanced interoperability, cost-effective repetition of complex scenarios, and the ability to train across multiple domains without the constraints of physical presence. It should be noted that the adoption of DST also introduces certain risks, such as increased dependency on network infrastructure and vulnerability to cyber-hacking, and initial investment costs.

The evolution of DST

The use of computer-based simulations to achieve individual, collective, and command team training, through to force generation, force integration, and mission rehearsal, can be traced back to the 1960s.⁷ The US Navy developed simulation programs for fleet engagements, often called combat-simulation models. Before the 1980s, simulators were mainly stand-alone devices for individual training. The challenge of training teams and units in coordinated scenarios led the Defense Advanced Research Projects Agency (DARPA) to initiate SIMulator NETworking (SIMNET) in 1983, which linked vehicle and crew simulators over networks so that multiple participants could train together in shared virtual environments.⁸

Building on this success, Distributed Interactive Simulation protocols were developed in the early 1990s to allow heterogeneous simulators to interoperate in more complex training in real time.⁹ Advances in computing power and memory storage have permitted ever more complex scenarios and higher fidelity of simulation.



Figure 1. The US Army adopted DST in 2017 | US Army

- 6 US Army. *Synthetic Training Environment: Training Simulation Software Statement of Need*, 26 April 2018, 23. <https://imlive.s3.amazonaws.com/Federal%20Government/ID325124382103975423822156800368857642541/DRAFT-STE-TSS-Statement-of-Need-26-APR-2018.pdf>
- 7 Peter P. Perla, *The Art of Wargaming: A Guide for Professionals and Hobbyists*. Annapolis, MD: Naval Institute Press, 1990.
- 8 Duncan C. Miller, "SIMNET and Beyond: A History of the Development of Distributed Simulation" I/ITSEC Fellows Paper, 2015. Available at: <https://www.iitsec.org/-/media/sites/iitsec/link-attachments/iitsec-fellows/2015-fellowpaper-miller.ashx>. Also see Debasis Dutta, "Simulation in Military Training: Recent Developments," *Defence Science Journal* 49, no. 3, 2013, 275-28. <https://doi.org/10.14429/dsj.49.3840>
- 9 "DIS Background. DIS: The Missing Handbook, Open-DIS Tutorial". <https://open-dis.github.io/dis-tutorial/DIS-Background.html>

Advantages of DST

DST provides potential economic advantages by enabling defence organisations to sustain operational readiness in a fiscally sustainable manner. Contemporary militaries face rising operating costs, ageing platforms, and increasingly complex training demands. DST offers a mechanism to address these pressures by shifting a proportion of training activity from expensive, resource-intensive live environments, into scalable, networked synthetic ones.¹⁰ Australia and the United States have reported that the use of DST has reduced dependence on live flying for training, thereby lowering the operational burden placed on real platforms, decreasing wear of high-value assets and maintenance demands.¹¹ This ability has a direct ability to reduce the operating hours of platforms and therefore extend the service life of critical capability, resulting in a higher return on investment for the unit and longer periods between Fleet Renewal Programs.¹² At the policy level, DST strengthens a defence force's ability to adapt within constrained fiscal environments.

Synthetic training environments can be updated rapidly to reflect emerging threats. As adversaries develop new capabilities and tactics, coalition and alliance partners, in NATO for example, can train in a synthetic environment how they would respond. Furthermore, defence forces are able to train using their own new operational concepts or capability changes without the expense of generating equivalent live training conditions. This flexibility accelerates learning cycles, enhances interoperability, and enables decision-makers to test and refine concepts prior to committing scarce resources.¹³ Collectively, these effects contribute to creating a more agile and strategically resilient training ecosystem.



Figure 2. Figure 2. NATO ministers approved a Distributed Synthetic Training High Visibility Project on 15 October 2025 | NATO

Despite these efficiencies, DST can present economic challenges that must be carefully managed. Establishing a distributed simulation ecosystem requires significant investment in digital infrastructure, simulator hardware, software licences, secure networking, and specialist personnel.¹⁴ These systems demand continuous upgrades to remain aligned with evolving platforms, and create ongoing requirements for technology refresh and contractor

- 10 Yasmin Tadjeh, "Study: Virtual Simulation Training Can Reduce Costs, Improve Readiness." *National Defense Magazine*, 29 January 2015. <https://www.nationaldefensemagazine.org/articles/2015/1/29/study-virtual-simulation-training-can-reduce-costs-improve-readiness>
- 11 Defence Science & Technology Group. "DSC 2068: Live, Virtual and Constructive (LVC) Simulation and Synthetic Environments". Canberra: Defence Science & Technology Group, 2025. <https://www.dst.defence.gov.au/sites/default/files/publications/documents/DSC%202068%20LVC%20Fact%20Sheet%20PRO.pdf> Also see Sean Carberry, "Naval Air Warfare Center Taking Virtual Training Afloat." *National Defense Magazine*, 15 November 2024. <https://www.nationaldefensemagazine.org/articles/2024/11/15/naval-air-warfare-center-taking-virtual-training-afloat>
- 12 Carberry, *ibid*.
- 13 Kalle Saastamoinen, Antti Rissanen, and Riku Linnervuo, "Usage of Simulators to Boost Marine Corps Learning." *Procedia Computer Science* 159 (2019): 1011-1018. <https://doi.org/10.1016/j.procs.2019.09.268>
- 14 Jyotika Sawal, "Military Simulation & Training Market Size, Growth Outlook 2034". Emergen Research, 31 October 2025. <https://www.emergenresearch.com/industry-report/military-simulation-training-market>

support, and risk of obsolescence.¹⁵ Competition for scarce specialist personnel and budget funds can trigger political controversies. The financial case for DST is therefore a balance of costs against benefits, a balance which leadership, bureaucratic, and political factors can influence.¹⁶

DST addresses strategic threats

DST significantly enhances national defence readiness by equipping defence forces with a scalable and flexible system to prepare for contemporary and emerging threats that live training alone cannot replicate. The modern threat environment is characterised by long-range precision strike systems, pervasive electronic warfare, cyber disruption, grey-zone activities, and adversaries capable of rapid adaptation across multiple domain integration. Live training cannot prepare for these threats as safely and efficiently as can a synthetic environment. DST enables enhancement of skill in decision-making and cross-domain integration by allowing geographically dispersed units to train together within a shared, high-fidelity synthetic environment that mirrors real-world threat characteristics, behaviours, and speeds. In contrast, live training is often constrained by the availability of external assets, range safety limitations, costs, and the inability to accurately replicate modern threat systems, particularly those operating at hypersonic speeds, in contested electromagnetic conditions, or across tightly coupled domains.

The advantages of DST become even more evident at the collective and command levels. Nova Systems has recommended that the NZDF adopt a structured training progression comprised of five phases:

1. synthetic individual training
2. live individual training
3. synthetic collective training
4. live collective and command-level training, and concluding with
5. synthetic command and high-end collective exercises.¹⁷

The NZDF already embraces a synthetic live training cycle; however, the recommended phase of returning to a synthetic environment after live collective exercises introduces a powerful new readiness enhancer. Once command teams have demonstrated their ability to operate cohesively in live conditions, re-entering a high-fidelity synthetic environment allows forces to undergo mission readiness assessments against accurate, intelligence-informed threat representations. Commanders and their teams can validate plans and refine their decision-making processes. They can rehearse complex scenarios that cannot be safely or financially achieved through live training.

15 “Synthetic Military Simulation and Training Market: Global Edition Synthetic Military Simulation and Training Market Size, Share, Scope, Trends and Forecast. Strategic Market Insights Hub”. <https://sites.google.com/view/strategic-market-insights-hub/market-research-reports/synthetic-military-simulation-and-training-market>

16 Because significant investment is required to establish and maintain DST systems, comparison with the costs of conducting, sustaining, and supporting live training does not yield a clear financial ‘winner’. S. Maloney and T. Haines, “Issues of cost-benefit and cost-effectiveness for simulation in health professions education”. *Adv Simul* 1, 13 (2016). <https://pmc.ncbi.nlm.nih.gov/articles/PMC8936530> and Defence Science & Technology Group, op cit.

17 Mark Lewis, Jude Kushmere, and Coung Haysom, “NZDF Distributed Synthetic Training SoW: Globally Distributed Simulation Enabled Training.” Nova Systems PowerPoint, viewed by the author at the NZDF Command and Staff College, November 2025.

DST enables training secrecy

The rapid proliferation of space-based intelligence, surveillance, and reconnaissance capabilities, including optical, synthetic aperture radar, and signals intelligence constellations, has created an operational environment in which military activity is continuously observable. Contemporary satellite networks provide high-frequency revisit rates, generating an expectation that deployed forces are continuously monitored by outside forces.¹⁸ It is no longer feasible to conduct operational training in secret, because our actions, tactics, techniques, and procedures can be detected by potential adversaries, just as we can detect theirs.

DST offers a partial solution to this challenge by providing a secure environment in which New Zealand and its partners can conduct high-intensity conflict and force-integration training without exposing sensitive behaviours to persistent surveillance. DST enables training activities that would traditionally occur at sea to be conducted while remaining concealed from adversary observation. Whereas live exercises often limit participants to constructed kills or notional employment of weapons, DST environments allow full-spectrum engagements to be executed, with synthetic weapons producing realistic effects that directly influence decision-making as the battle evolves. The result is significantly higher cognitive and decision-making engagement, and consequently inculcation of a higher quality of war-fighting skills.

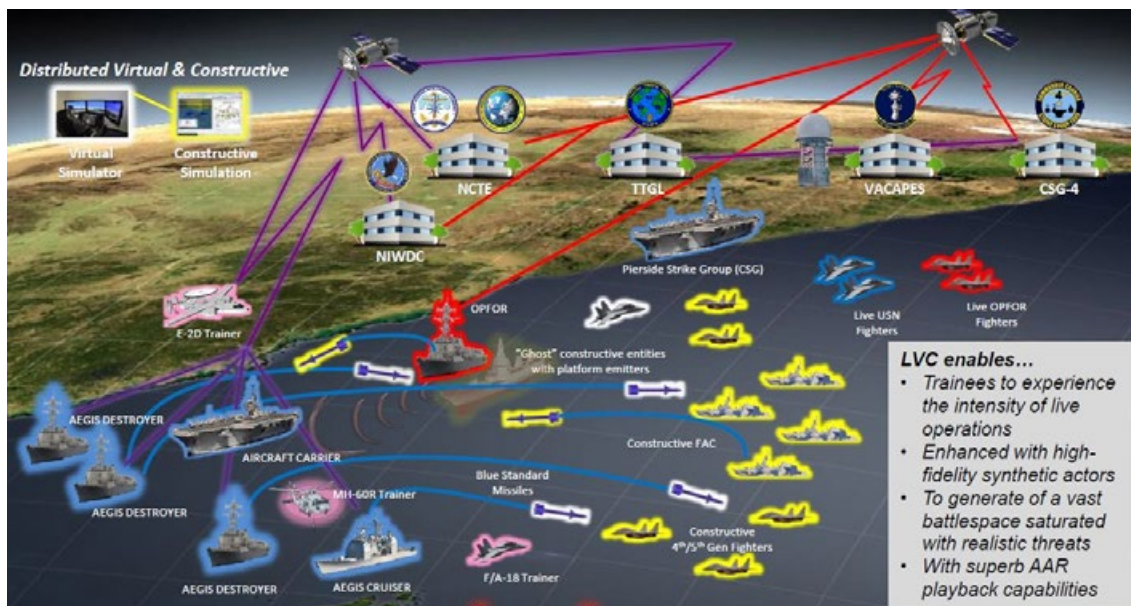


Figure 3. The US Navy's Continuous Training Environment enables training with live and synthetic systems around the globe. | US Naval Sea Systems Command/Ron Keter

However, these advantages must be balanced against the reality that DST operates within an increasingly contested cyber domain. Unlike live exercises, which can be protected through physical security measures, restricted access, and deliberate compartmentalisation, DST environments are inherently dependent on networked digital infrastructure. While access controls and system segmentation can replicate some of the security benefits of live training, DST relies on persistent connectivity to enable distributed participation, data exchange, and system synchronisation. Crucially, this connectivity frequently extends beyond sovereign or defence-owned networks, requiring data to transit the public internet and submarine communications cables (SCCs). These cables form the essential network of global data transmission and represent a well-documented strategic vulnerability.¹⁹ Malign state and state-

18 Adam G. Lenfestey, Nathan Rowan, James E. Fagan, and Corey H. Ruckdeschel, "Achieving Secrecy and Surprise in a Ubiquitous ISR Environment," *Joint Force Quarterly* 88, 10 January 2018. <https://ndupress.ndu.edu/Media/News/News-Article-View/Article/1412862/achieving-secrecy-and-surprise-in-a-ubiquitous-isr-environment/>

19 Nicolò Boschetti and Gregory Falco. "Underwater Cyber Warfare: Submarine Communications Cables Architecture and Cybersecurity Analysis." In *Proceedings of the 58th Hawaii International Conference on System*

aligned actors possess the capability to intercept and monitor data flows transiting SCCs, enabling intelligence collection and traffic analysis even when data content is encrypted. Beyond passive monitoring, adversaries may also seek to manipulate or deny information flows, and in some cases physically disrupt cable infrastructure.²⁰ In a DST context, such actions would degrade training fidelity and compromise sensitive operational data embedded within training scenarios.

There are, however, mitigating measures available. Strong cryptographic protections, secure tunnelling, codewords, data obfuscation techniques, and temporal or contextual offsets can significantly reduce the risk of unauthorised exploitation. Additional measures such as network segmentation, zero-trust architectures, and controlled gateways further limit exposure. Nevertheless, these mitigations manage rather than eliminate risk. The reliance of DST on complex, interconnected digital systems means that cyber vulnerability is an inherent risk.

This risk is underscored by Ahmad et al who identify twelve categories of cyber vulnerability associated with modern networks.²¹ Among these are vulnerabilities in command, control, communication, and information systems (C3I), including insecure role-based access control, insecure data storage, open redirects, and insecure session management. Ahmad et al propose a defence-in-depth approach integrating technical, architectural, and organisational measures, utilising the mitigating measures previously detailed.²²

DST facilitates adaptation and risk mitigation

As part of the increasingly complex operational environments we are operating in, the RNZN faces rapid technological change, multi-domain contestation, and high cognitive demands on personnel and commanders. In response, DST offers mechanisms for accelerating organisational adaptation and reducing operational risk.²³

Adaptation in military organisations refers to the capacity of individuals and units to modify behaviour, tactics, and decision processes in the face of challenges. While traditional live training methods are valuable for muscle memory and environmental acclimatisation, they are inherently limited in their ability to replicate the diversity that future forces may confront. DST environments provide controlled yet dynamic complexity, enabling trainees to engage with dangerous scenarios that are difficult, or impractical to reproduce live. DST supports deliberate practice, iterative feedback, and scenario variation at scale, all core elements of adaptive expertise development.²⁴

Sciences. HICSS, 2025. <https://doi.org/10.24251/HICSS.2025.233>. Also see: Atlantic Council. “Cyber Defense Across the Ocean Floor: The Geopolitics of Submarine Cable Security” Atlantic Council, 2021. <https://www.atlanticcouncil.org/wp-content/uploads/2021/09/Cyber-defense-across-the-ocean-floor-The-geopolitics-of-submarine-cable-security.pdf>

20 Mathieu Boulègue. “Arctic Seabed Warfare Against Data Cables: Risks and Impact for US Critical Undersea Infrastructure”. Polar Institute, Wilson Center, 30 July 2024. <https://www.wilsoncenter.org/microsite/2/node/121495?utm>

21 Hussain Ahmad, Isuru Dharmadasa, Faheem Ullah, and M. Ali Babar. “A Review on C3I Systems’ Security: Vulnerabilities, Attacks, and Countermeasures.” *ACM Computing Surveys* 55, no. 9 (2023), 1-38. <https://doi.org/10.1145/3558001>

22 Ahmad et al., *ibid*, 22-29.

23 Australian Army Research Centre, “Practice Makes Perfect? Army Simulation Wing and Mission-Specific Training.” *Australian Army Journal* 7, no. 1 (2010), 55-70. <https://researchcentre.army.gov.au/library/australian-army-journal-aaj/volume-7-number-1-autumn/practice-makes-perfect-army-simulation-wing-and-mission-specific-training>

24 Eduardo Salas, Scott I. Tannenbaum, Kurt Kraiger, and Kimberly A. Smith-Jentsch, “The Science of Training and Development in Organizations.” *Psychological Science in the Public Interest* 13, no. 2 (2012), 74-101. <https://doi.org/10.1177/1529100612436661>



Figure 4. The RNZN Combat Systems Trainer | Lockheed Martin Canada

Adaptive learning within simulation is closely aligned with the principles of experiential learning theory, which posits that knowledge acquisition is strengthened through cycles of action and reflection.²⁵ Simulators allow personnel to experience decision outcomes without real-world consequences, facilitating deeper cognitive processing of cause-effect relationships.²⁶ A review of the literature on military simulation training highlights one of its key advantages: 'enhanced learning quality'. This entails improved decision-making, situational awareness, and adaptability to changing conditions.²⁷

Furthermore, DST has the capacity to facilitate detailed, data-rich feedback and debriefing. Unlike live exercises, where environmental constraints, time pressures, and limited instrumentation can hinder comprehensive analysis, DST environments inherently capture granular performance data across cognitive, procedural, and team-based dimensions. This enables instructors and command teams to conduct precise, evidence-based debriefs, identify decision-making patterns, and tailor follow-on training interventions with greater accuracy and efficiency.²⁸ Further, controlled studies show that trainees exposed to virtual environments exhibit measurable improvements in judgmental acuity and decision-making skill. As psychologist Daniel Kahneman puts it, 'simulated cognitive stressors and scenario variability can accelerate the development of adaptive decision processes that generalise to real-world operations'.²⁹

25 Salas, *ibid.*

26 M. R. Endsley, "Toward a Theory of Situation Awareness in Dynamic Systems." *Human Factors: The Journal of the Human Factors and Ergonomics Society*, 37(1), 1995, 32-64. <https://doi.org/10.1518/001872095779049543>

27 Aristeo C. Salapa and Gerard R. Orense, "Simulation Training and Its Impact on Military Leadership Development," *International Journal of Engineering Technology Research & Management (IJETRM)*, 42-55. <https://ijetrm.com/issues/files/Dec-2025-01-1764606459-DEC05.pdf>

28 K. Weersink, A.K. Hall, and J. Rich, "Simulation versus real-world performance: a direct comparison of emergency medicine resident resuscitation entrustment scoring". *Advances in Simulation* 4, 9, 2019. <https://doi.org/10.1186/s41077-019-0099-4>

29 Daniel Kahneman, and Gary Klein. "Conditions for Intuitive Expertise: A Failure to Disagree." *American Psychologist* 64, no. 6, 2009, 515-526. <https://doi.org/10.1037/a0016755>



Figure 5. NATO members participate in Exercise Coalition Virtual Flag at CFB Halifax in 2020. | Canadian Armed Forces/Gerald Cormier

It is evident that practicing adaptation and risk mitigation in simulation training extends the cognitive and behavioural flexibility of decision-makers. Risk-centric synthetic environments ensure that this adaptability is calibrated against realistic, worst-case scenarios without risking catastrophic miscalculation or suffering real-world harm. Forces trained in this manner are better prepared not only for known threats but also for emergent, unpredictable challenges. They learn to adjust under stress, anticipate unintended consequences, and make resilient decisions in rapidly evolving contexts.³⁰

³⁰ Endsley, “Toward a Theory of Situational Awareness”, op cit.

DST is adopted by partner navies

Defence forces around the world are increasingly using DST to generate operational readiness, enhance interoperability, and support force generation. Although the maturity and scale of these capabilities vary considerably, in 2024 DST capabilities were in use in at least 24 countries. See Figure 6. Notably absent from the list is New Zealand.

Belgium	Czechia	Denmark	Estonia
France	Germany	Greece	Italy
Latvia	The Netherlands	Norway	Poland
Portugal	Spain	Sweden	Türkiye
United Kingdom	United States	Australia	Canada
Finland	Japan	South Korea	Singapore

Figure 6. Defence forces engaged in DST exercises | Author's compilation from official sources

Summary: DST is essential for the RNZN and NZDF

DST represents not merely an enhancement of existing training practices but a strategic capability essential to the RNZN and the broader NZDF. As military operations grow more complex, integrated, and time-sensitive, traditional live training alone is no longer sufficient. DST fills a critical gap by enabling high-fidelity, scalable, and adaptive mission rehearsal that live environments cannot replicate.

DST's strategic value lies in its ability to connect dispersed units and command teams within a secure, synthetic environment that mirrors real-world threats and decision timelines. It supports cross-domain integration and coalition interoperability, allowing forces to train against realistic adversaries without the constraints of range safety, asset availability, or fiscal limitations. Rather than replacing live training, DST complements it, reserving live exercises for tasks requiring physical presence while using synthetic environments to extend and validate cognitive and emotional readiness skills.

Many of the RNZN's partner navies have already embedded DST into their force generation models. The US Navy employs DST across its readiness continuum, while the Royal Canadian Navy and the Royal Australian Navy, following the lead of the Royal Navy, use it to enhance joint training and support deployed forces. These examples confirm DST's maturity and operational relevance.

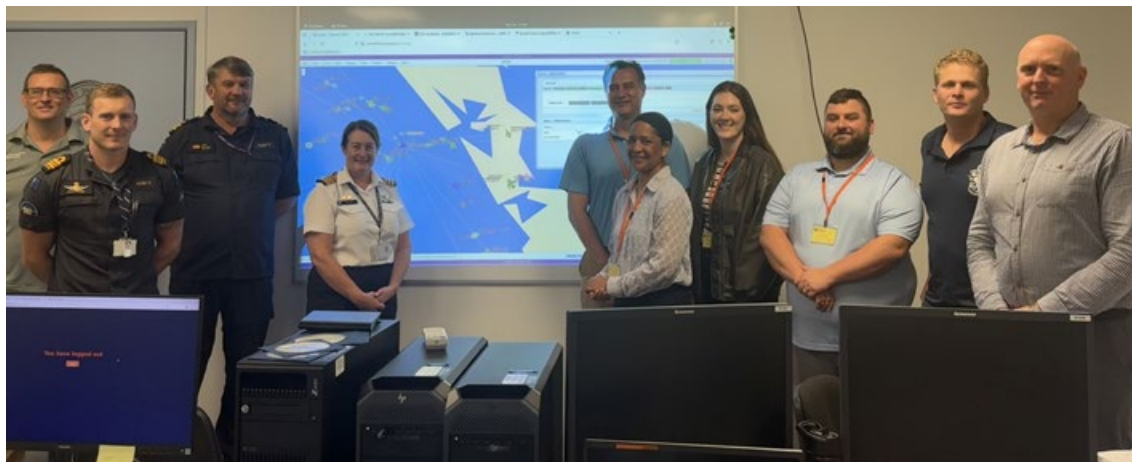


Figure 7. Captain Julie Simpkins, ACN(P&T), with RNZN and US Department of War personnel completing the Naval Training Baseline course. | NZDF

For the RNZN and the NZDF, the absence of a fully developed DST capability looms as a significant gap between collective training and operational employment. This paper suggests a way to narrow that gap: after live training return personnel to a synthetic environment to validate readiness, rehearse decision-making, and explore second and third-order effects in a safe-to-fail setting. This allows DST to transform physical training achievements into operational attitudinal confidence.

Beyond readiness, DST offers financial and strategic benefits in fiscal sustainability, asset stewardship, and risk management. It reduces reliance on live platforms, extends service life, and enables rapid adaptation to emerging threats. While DST introduces startup costs and cyber risks, these are characteristic of all operational systems and can be addressed as part of the enhancement of training and readiness, not cited as constraints preventing adoption.

Critically, DST should not be seen as a replacement for live training. As noted by experts and NATO reports, synthetic environments cannot fully replicate physical, sensory, or environmental complexities. Live training remains essential for developing confidence, adaptability, and resilience. However, the advantages of DST are its safety, scalability, and realism, all of which make it indispensable.



Figure 8. US Navy synthetic training event at the Distributed Training Center, Atlantic. | US Navy/Ministry of Defence

Conclusion

It is argued in this essay that DST is a significant contributor to the learning of combat skills, connecting individual proficiency, collective competence, and mission command effectiveness better to cope with threatening environments. Recognising DST as the missing but necessary capability in our training systems is vital to building a credible, interoperable, and resilient maritime force ready to meet the demands of twenty-first-century conflict. Its timely integration into RNZN training architectures is more than an enhancement; it is a strategic imperative.



LIEUTENANT COMMANDER OWEN PETERS, RNZN

Joining the Royal New Zealand Navy in 2014, Lieutenant Commander Owen Peters has served aboard HMNZS Manawanui, Otago, Wellington, Te Mana, Te Kaha, Hawea, and Taupo, and also the USS Preble. His sea time has included travel in the northern Pacific, Southeast Asia, the Southern Ocean and in the Atlantic aboard HMS Kent, and participation in RIMPAC, CRUCIBLE and CASTLE. Whilst ashore he has held the positions of Deputy Operations Training Officer and Executive Officer Naval Operations Support Unit. In 2022 he completed Royal Navy Principal Warfare Officers course and in 2026 he is studying for Master of Science degree through Kingston University, London. Lieutenant Commander Peters is currently the RNZN's Combat Synthetic Training Officer, managing the Remote Weapon and Combat Management System simulators, and mentoring Distributed Synthetic Training in the Navy.

IN MY OPINION: DETERRENCE REQUIRES COMBAT CAPABILITY¹

Captain A.G.A. Watts, ONZM, RNZNR

It is the hope of reasonable people that aggressors will someday be prevented from threatening the international order and thus New Zealand's vital strategic interests. Until that time, our right to peace, security, and self-determination must be protected from those who would use violence to deprive us of it, and that requires that we are able to deploy violence in our defence.

So, this opinion piece is about combat capability. It is about combat capability as a means of deterrence – making it plain to any potential aggressor that the benefits derived from any aggression would be far outweighed by the cost. I argue that the primary rationale for naval combat capability derives from the absolute need for New Zealand to make a proportionate contribution to the deterrence of aggression against any member of the Indo-Pacific community of nations to which we belong.

I contend further that New Zealand's security interests are inseparable from Australia's. Should a threat to Australian security and prosperity develop, the repercussions for our own country would be immediate and serious. I also contend that any existential threat to our borders and our way of life would first emerge as a threat to Australia, but it is possible that a threat to our own borders and those of our Pacific partners for whom we have defence responsibility might emerge simultaneously. In that event our defence capabilities would be fixed in place here, and thus unavailable for deployment to the support of our partners.

Our defence capabilities will always be overshadowed by Australia's, but they are not so slight as to be of no consequence at all. P-8A Poseidon aircraft, capable frigates, and a motorised infantry battalion might fill important gaps in Australia's northern defences, while reducing the on-station strain on Australian ships, aircraft, and personnel.

If the above characterisation of humankind's need to deter threatening adversaries is accepted, and the indivisibility of Australian and New Zealand security interests is also accepted, the shape of the New Zealand Defence Force must to a very large extent be determined by the most effective ways in which we can contribute to the deterrence of threats to Australia while at the same time protecting our own borders and resources. Our deterrent force will require comprehensive sustainment and information-domain capability, but it must have credible combat capability at its core.

I have heard it argued that New Zealand can make a sufficient contribution to collective defence by means of complementary sustainment or support capabilities. But, to what extent can we be justified in offering predominantly non-combat capability to our partners, when in the face of aggression our fundamental interests are just as much at stake as theirs? Do we expect others to do the fighting for us so that we can avoid the cost of combat capability and the potential cost of combat itself? Speaking for myself, were this thinking ever to take hold I'm not sure I could stomach pious Anzac Day speeches about the sacrifices made by our forbears.

¹ This opinion piece is offered to stimulate reflection and debate on the appropriate RNZN contribution to New Zealand's security. It reflects the author's personal views. -Editor.

Existential threats to our national life will most likely come through Australia...but threats serious enough to affect our freedoms and prosperity can emerge from other directions. . Note that threats to the borders and resources of our Pacific island partners are likely to escalate in frequency and extent as competition for fish protein and minerals intensifies, and as ambitious state actors and trans-national criminals reach further afield in search of new lodgements, shipment routes and markets.² New Zealand's multi-agency strategic coordination of maritime security has taken a commendable step forward with the establishment of the Ministry of Transport's Maritime Security Strategy.³ However, in the final analysis, enforcement requires teeth. Threats must be interdicted at range, and in the face of more sophisticated threats emerging more frequently, ships constructed to commercial standards with minimal armament are unlikely to suffice.

In my view, the need for significant combat capability supersedes all other considerations in designing our next generation fleet. Combat capability includes expeditionary reconnaissance, the ability to project and sustain New Zealand land forces, and Mine Counter Measures (MCM)– a capability which I hope will at some point receive the treatment within these pages that I believe it warrants. That does not mean that we can ignore the other important missions that the Navy performs at the lower end of the conflict spectrum, including disaster relief, and support to environmental science.⁴ There are technologies available that allow a wide range of capabilities to be accommodated aboard platforms designed primarily for combat. The sealift capability foreshadowed in New Zealand's Defence Capability Plan DCP25 provides a great deal of inherent flexibility across the entire mission spectrum; the term "force projection" now being used in naval circles instead of sealift is far more in keeping with the potential of this capability, and its joint nature.⁵

I understand where those who advocate for a prioritisation of patrol and support capabilities are coming from. Our government faces major affordability challenges when it comes to regenerating naval capability, challenges that are exacerbated by the short time frame within which existing capabilities reach the end of their economic lives.⁶ It is understandable that knowledgeable and well-intentioned people should seek more affordable means by which our country can contribute to collective maritime security. However, we must live in the world as it is, not the world as we might wish it to be. Protection of our way of life requires combat capability that makes a credible contribution to the collective deterrent effect deployed by those countries to whom we are connected by geography, historical and familial ties, and common values.

To sum up, the protection of our own borders and resources increasingly will require combat capability as opposed to merely constabulary capabilities. Our territory is unlikely to be immune from attack in the event of wider conflict, and the increasing scale and sophistication of state- and non-state threats must be met with adequate defences. Comfortable assumptions about benign regional geo-political circumstances are no longer valid, and we must equip ourselves accordingly.

2 Threats to island nations that also affect New Zealand are identified in New Zealand's National Security Strategy 2024. <https://www.dpmc.govt.nz/our-programmes/national-security/new-zealands-national-security-strategy>

3 https://www.transport.govt.nz/assets/Uploads/Report/MSS_V6_U.pdf Also see reviews of earlier iterations of the Maritime Security Strategy in this *Journal*, Vol 2 2021, pp. 118-141

4 I would argue that both expeditionary reconnaissance and MCM are also combat capabilities.

5 <https://www.defence.govt.nz/our-work/equip/defence-capability-plan/>

6 I hold strongly to the view, however, that this represents an opportunity to establish coherence across the regenerated fleet.



CAPTAIN A. G. A. WATTS, ONZM, RNZNR

Captain A. G. A. Watts, ONZM, RNZNR, joined the RNZN in 1980. He qualified as Principal Warfare Officer in 1989, and subsequently commanded HMNZ ships Pukaki(II), Wellington, Resolution and Te Mana. His most senior appointment within the naval establishment was Captain Fleet Personnel and Training, from 2009-11. After standing down to work for Opus International Consultants 2011-2014 he rejoined the RNZN as Director, Operation Neptune, the programme of celebration of the Navy's 75th anniversary. He then served as Lead, Future Surface Combatant in Capability Branch, Headquarters NZDF. He transferred to the Naval Reserve in 2020 and joined the NZDF's Southern Ocean Patrol Vessel Integrated Project Team. Captain Watts is currently employed by Austal Ltd.

PART 3: **STRATEGIC PERSPECTIVES**



CHINA AND ANTARCTICA¹

Rear Admiral Garin Golding, RNZN

Rear Admiral Garin Golding assesses China's recent initiatives and long-term aims in the Antarctic. There, he observes, Beijing is playing a longer game than in the Arctic, pursuing presence and status in order to gain access to resources, enhance military preparedness, and influence the geopolitical balance of power of the continent, and ultimately of the globe, as the future unfolds. He concludes that Antarctica is increasingly likely to be an arena for great power rivalry, posing significant security challenges to Antarctic Treaty members and to the Western-led international community. – Ed.

Introduction

China has progressed remarkably since 1979, not only economically but also militarily and diplomatically. Its emergence as a global leader has been admired by many and feared by some. China's leaders have ambitious plans to restore the country to its Middle Kingdom status and in doing so to redress the 'century of humiliation'. China under Deng Xiaoping raised hundreds of millions of Chinese out of poverty and inspired them to pursue their 'China dream', to be led by the Chinese Communist Party. Over the last decade, President Xi Jinping has set out ambitious strategic goals, such as 'Made in China 2025', and seems determined to transform China into a 'developed and advanced nation' by 2049.² It is anticipated that at some point China will also attempt by military action to take control of Taiwan.

China's strategy is grand in the sense of both its timescale and ambition. Grand strategy, as defined by Hal Brands, is a 'purposeful and coherent set of ideals about what a nation seeks to accomplish in the world, and how it should go about doing so.'³ For a grand strategy to be successful, it needs to reflect a clear understanding of the international system, the operating environment, and the national interests and objectives it is seeking to achieve, and China appears to fulfil these criteria.⁴ As led by President Xi since 2013, China's leaders have increasingly employed all instruments of national power in an integrated manner to achieve the paramount outcome: China as a prosperous superpower at the helm of a new international order.⁵

This essay focusses on how China's Antarctic policies fit into China's grand strategy. Beijing's approach in Antarctica, which is focused on building presence and status as a polar power, reflects a longer-term outlook that its initiatives in the Arctic, which are more immediately short-term and visible. China's increasingly assertive and revisionist grand strategy, and by

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- 1 This essay complements Rear Admiral Golding's essay "The Rise of China: Security Implications for the Polar Regions" published in Volume Three of this *Journal* (October 2022), 86-105. <https://www.nzdf.mil.nz/assets/Uploads/DocumentLibrary/Professional-Journal-of-the-Royal-New-Zealand-Navy-2022-Vol-3-online.pdf> Both essays are abridged chapters of his MA dissertation for the United Kingdom's Royal College of Defence Studies. Editorial assistance is acknowledged with thanks. – Ed.
 - 2 President Xi Jinping's address to the Communist Party of China's 19th National Congress, cited in Centre for Strategic and International Studies, 26 October 2017. <https://www.csis.org/analysis/xi-jinpings-19th-party-congress-speech-heralds-greater-assertiveness-chinese-foreign>.
 - 3 Hal Brands, *What Good is Grand Strategy*, Cornell: Cornell University Press, 2014, 3. Also see Alastair Johnston, *Cultural Realism: Strategic Culture and Grand Strategy in Chinese History*. Princeton New Jersey: Princeton University Press, 1995.
 - 4 Brands, 3.
 - 5 Andrew Scobell, "China's Real Strategic Culture: A Great Wall of the Imagination", *Contemporary Security Policy*, Vol.35, No.2, 2014, 211-226.

extension its Arctic policies, are likely to be applied to the Antarctic region as great power competition intensifies. The clandestine militarisation of Antarctica, and China's aspirations to exploit natural resources abroad to fuel its domestic industrial growth, are expected to pose significant security challenges to the West. These in turn challenge the future environmental viability of the continent, whether it remains as a science and research sanctuary, or if the principles and norms the Antarctic Treaty will be irreversibly eroded.

Comparison to the Arctic

The Arctic and Antarctic strategic theatres provide insights into how China is adapting its strategic approach to new regions of influence.⁶ In both of these theatres, China has two common goals, to exploit the Arctic and Antarctic natural resources and to gain status as a polar great power. China's leaders have recognised that these two strategic theatres have different challenges and has adjusted their strategic approaches accordingly. Governance of much of the Arctic falls under the sovereign jurisdiction and influence of the eight Arctic littoral states meeting in the Arctic Council, of which China is not a member. Accordingly, China has redefined itself assertively first as a 'Near Arctic State' and more recently as a 'Polar Stakeholder'.⁷ China's approach has been to position itself to take full advantage of the melting of Arctic Sea ice through foreign direct investment in key Arctic Circle nations via the Belt and Road Initiative, thus enhancing its economic leverage bilaterally and multilaterally. It has deliberately undertaken to influence the narrative and to influence international organizations' agendas to promote China's interests in development of global commons areas of the Arctic and the establishment of a transpolar trade route. Given the dominance of Arctic Council states in Arctic affairs, China has attempted to increase its own status and influence in Arctic affairs through careful cultivation of bilateral relationships underpinned by the BRI. China has also taken advantage of the precedent that the Arctic, unlike the Antarctic, has a history of resource exploitation and that region, therefore, has a greater tolerance for development. With this in mind, China is poised to take advantage of its foreign investments and to use its increased influence and status to access new resource areas and transportation routes as the Arctic icecap melts further. With nations already manoeuvring to take advantage of the Arctic's inexorable warming, attention then turns to the Antarctic, which stands as the last remaining precious but vulnerable global commons on the planet.

Whilst China continues to learn valuable lessons from its Arctic experiences, the differences between the two polar regions require different approaches. Unlike the Arctic which is an ocean surrounded by land, the Antarctic is a continent encircled by a notoriously dangerous ocean, and furthermore is more distant from population centres. The legal and governance structures are also completely different as the Arctic is largely under the jurisdiction of five littoral states whereas Antarctica is classified as a Global Commons and is subject to the multilateral Antarctic Treaty System (ATS), to which China acceded in 1983, gaining Consultative Party status in 1985. The ATS extends these differences further by embedding advocacy for environmental protection, as well as demilitarising and denuclearising Antarctica. Unlike the many indigenous people and population centres within the Arctic circle, there are no permanent residents on Antarctica. These differences, therefore, 'make it essential to exercise extreme care when seeking to transfer experience from one polar region to the other.'⁸ It appears that China understands these differences and has adapted its approach accordingly.

6 H.R McMaster, "How China Sees the World And how we should see China," The Atlantic, 18 April, 2020. <https://www.theatlantic.com/magazine/archive/2020/05/mcmaster-china-strategy/609088/>.

7 Camilla T. N. Sorensen, The Polar Regions as New Strategic Frontiers for China, 25 January 2024. <https://strategicspace.nbr.org/the-polar-regions-as-new-strategic-frontiers-for-china/>

8 Francesca Cava, David Monsma, and Oran Young, "Workshop on Arctic Governance: Drawing Lessons from the Antarctic Experience," Antarctic Treaty Summit, 2009. <https://www.atsummit50.org/media/book-37.pdf>

China's approach to Antarctica is focused on building status and strategic presence.⁹ Of all the Antarctic nations, China has the largest budget and is the 'fastest growing presence' among the ATS signatories.¹⁰ In 2011, China's intentions were foreshadowed by Chen Lianzeng, Vice Minister of the State Oceanic Administration, when he stated that '...the overall goal of China's polar 5-year plan was to increase China's status and influence.'¹¹ Unlike the Arctic, where China's footprint is minimal with just one base, China has five bases in Antarctica, more than any other ATS member. This expanding footprint has many observers worried. Analysts predict that Beijing will attempt to use its enlarged footprint to lobby for an increased level of influence and leadership. In sum, the Antarctic continent is a long-term investment for China, which will rely on strategic patience and opportunism to realise maximum return of investment at minimum risk as it pursues hegemony in other parts of the globe.

Research stations

China's expanding footprint is carefully designed. China's research stations are strategically located in each of territorial claims except for those of France and Norway. China established the Great Wall Station within the United Kingdom's claimed area (which also includes overlapping claims from Chile and Argentina) in 1985. It set up its Zhongshan Station in 1989, its Taishan Station in 2014. Its Kulan Station was established in 2014 within Australian's claimed area. The latest station, opened in February 2024, is strategically located at Terra Nova Bay in the Ross Sea region which is within New Zealand's territorial claim and near the United States McMurdo Station¹² Terra Nova Bay is where the key nations of the US, Germany, Italy and South Korea have established their research stations and it is also near to the French territorial claim. Of interest, also, is not just where China's bases are located, but where they are not. They have not located a research station in the only unclaimed area of Antarctica, but most significantly they have not built a base in Norway's area. Norway is the



Figure 1. China's Antarctic research stations. | The Economist

- 9 Feiger, Leah and Wilson, Mara. "The Countries Taking Advantage of Antarctica During the Pandemic," *The Atlantic*, 15 May, 2020. <https://www.theatlantic.com/politics/archive/2020/05/antarctica-great-power-competition-australia-united-states-britain-russia-china-arctic/611674/>.
- 10 David Fishman, "China's Advance Into the Antarctic," *Lawfare*, 27 October, 2019. <https://www.lawfareblog.com/chinas-advance-antarctic>.
- 11 Quoted by Anne-Marie Brady, "Evaluating China as an Antarctic State", *China and Antarctica*, Washington: Wilson Center, May 13, 2014. <https://www.wilsoncenter.org/event/china-and-antarctica>.
- 12 The United States has no claim and recognises none of the existing claims.

only Arctic nation with a territorial claim in Antarctica. This is important because China has invested significantly in building up its bilateral relationship with Norway as a key component of its broader Arctic strategy. Based on current projections, the Arctic is likely to offer China more near-term prosperity opportunities than Antarctica and therefore China does not wish to risk the progress they have made with Norway and in broader Arctic affairs by encroaching in Norway's Antarctic programme.

China's quasi-military initiatives in Antarctica

In Antarctica, China is playing the long game, focused on enhancing its presence and status. Its polar programme has undertaken considerable recent investment with new bases and airfields under construction and a domestic polar-class shipbuilding industry established. Extrapolation of China's grand strategy elsewhere indicates two core security concerns that apply to Antarctica. Firstly, China's expanding Antarctic footprint has the potential to mirror the systematic, progressive and pre-emptive tactics adopted in its militarisation of islets in the South China Sea.¹³ China's base locations on the continent are strategic in nature and could yield geopolitical benefits if militarised. The Chinese doctrine of civil-military fusion provides guidance, and as South China Sea initiatives illustrate, if China deems a foothold to be of strategic importance, it will implement its active-defence concept to protect it whether the action undertaken is considered internationally lawful or not. China could deploy similar tactics in Antarctica, using diplomacy and disinformation to delay any immediate counteraction while consolidating its position on the ground. Any international military action against China would be controversial and costly, and any criticism of China's actions would risk harsh economic consequences, as Australia has recently endured. The Western community's security challenge, therefore, is to be alert to Chinese militarisation tactics in Antarctica and to react to questionable actions early before the position becomes irreversible.

In addition to expanding its footprint, China's enhancement of its polar capability is rapid and significant. In 2018, China commenced construction of a permanent airport on Antarctica. This will improve logistical support for China's Antarctic initiatives and increase flexibility and self-reliance. Furthermore, China's first domestically built polar research vessel *Xue Long 2* conducted its maiden voyage to the Antarctic in October 2019¹⁴ It was joined by China's other research vessel *Xue Long 1*, and the two polar vessels commenced dual deployments in Antarctic seas. *Xue Long 2* visited New Zealand in March 2025.



Figure 2. Chinese icebreaker *Xue Long 2* visited New Zealand in March 2025.
| Bernard Spragg / Wikimedia

13 Michael Clarke, "China's Application of the 'Three Warfares' in the South China Sea and Xinjiang," Foreign Policy Research Institute, Spring 2019, 187.

14 "Year in review: China's major scientific and infrastructure achievements," China Daily, 25 December, 2019.
http://english.scio.gov.cn/chinaprojects/2019-12/25/content_75547208.htm

China operates three further icebreaker ships in the Arctic Sea region. By comparison, Russia deploys 57 icebreakers but the US Coast Guard deploys only two. The ability of China's shipbuilding industry to build polar-class vessels is a key milestone for China, enabling them to produce on a greater scale if required. Also completed in 2019 was the deployment of the BeiDou Navigation Satellite System, China's organic space-based navigation network.¹⁵ This network is a dual-purpose commercial and military capability and is a critical enabler for Chinese military operations, such as monitoring and guidance of satellites and intercontinental missiles, particularly needed if war with the West were to erupt. Of growing concern amongst Antarctic observers is the increased likelihood China will militarise its polar capabilities under the guise of a commercial enterprise, given the assertion of its military-civil fusion doctrine 'which mandated Chinese civilian technologies could be repurposed for military use if needed.'¹⁶

The future militarisation of Antarctica is likely to be a natural progression of China's capability enhancement programme. Whilst militarisation of Antarctica is illegal, and any attempts to do so would attract condemnation from the international community, as China has experienced in the South China Sea, this will not necessarily prevent China from doing so. Identifying military applications of commercial technology can be difficult, presenting scope for ambiguity and deliberate obfuscation. There are many examples of technology or capabilities, such as 'drones, remote submersible systems, satellite technologies' that China is currently using in Antarctica that could be easily modified from a science focus to a military application.¹⁷

A respected Antarctic scholar, Canterbury University Professor Anne-Marie Brady, has identified a number of areas where China could gain military advantages from its Antarctic programme. Brady has noted that an advanced geomagnetic, ionosphere and auroras research program is being undertaken at Zhongshan and Kunlun research stations. Critically, Brady observes that

Geomagnetics research is used by militaries to help determine local geomagnetic field characteristics in order to detect anomalies in the natural background that might be caused by a significant metallic object, such as a submerged submarine. China (along with Russia and the US) is researching high-frequency active auroras in Antarctica, investigating potential defence-related uses of the ionosphere. Electromagnetic pulses can be used to upset, jam or even destroy enemy electronics.¹⁸

Additionally, Brady points out, China's astronomical research programme at its strategically important Dome A site has 'direct military applications.'¹⁹ Since 2013, China has been attempting to gain approval, through a series of Antarctic Treaty Consultative Meetings, for a proposal to declare dome A (near their Kulan Station) as a 'Chinese Antarctic specially managed area'. If achieved, this would insulate China's research from outsiders, so is opposed due to the strategic importance of the Dome A location. As Brady asserts, '[i]nfrared telescopes can be used to search for enemy satellites, drones and launched missiles, and to identify whether they have been shot down when targeted. China's use of this technology during conflict would greatly enhance its defensive capabilities in an air-sea battle in its near seas.'²⁰ Other Treaty partners are increasingly aware that once a foothold of key strategic importance is established, China will protect it using whatever means necessary, whether it is legal or not.

15 Tracy Cozzens, "New BeiDou white paper touts system's successes," *GPS World*, 23 May, 2025. <https://www.gpsworld.com/new-beidou-white-paper-touts-systems-successes/>

16 Daniel Teng, "Australia Must Keep 'Eyes Wide Open' on China's Antarctic Claim," *The EPOCH Times*, 21 May, 2020. https://www.theepochtimes.com/australia-must-keep-eyes-wide-open-on-chinas-antarctic-claim_3336198.html

17 Ibid.

18 Anne-Marie Brady, *China's Expanding Antarctic Interests: Implications for Australia*, Canberra: Australian Strategic Policy Institute Special Report 2200-6648, August 2017, 16. <https://www.aspi.org.au/report/chinas-expanding-interests-antarctica>

19 Ibid, 11.

20 Ibid, 16.

The environmental challenge

The second security challenge is environmental. China has an insatiable appetite for natural resources and will relentlessly pursue global resource exploitation. Unlike the Arctic, there is greater reluctance among the majority of Antarctic Treaty members to exploit natural resources or conduct any activity that would likely damage the vulnerable environment and ecosystem. However, China and Russia have both objected to proposals to establish long-term environmental protection areas, signalling a clear intent to exploit Antarctic natural resources and develop the region for economic gain. Their enhancement of bases and ostensible scientific research projects are being used to ascertain the locations and quantities of natural resources. The challenge to the Western community, therefore, is to protect the Antarctic continent's unique resource conservation value and to deter attempts by China and other revisionist governments to assert short-term national economic gains over long-term global environmental protection.

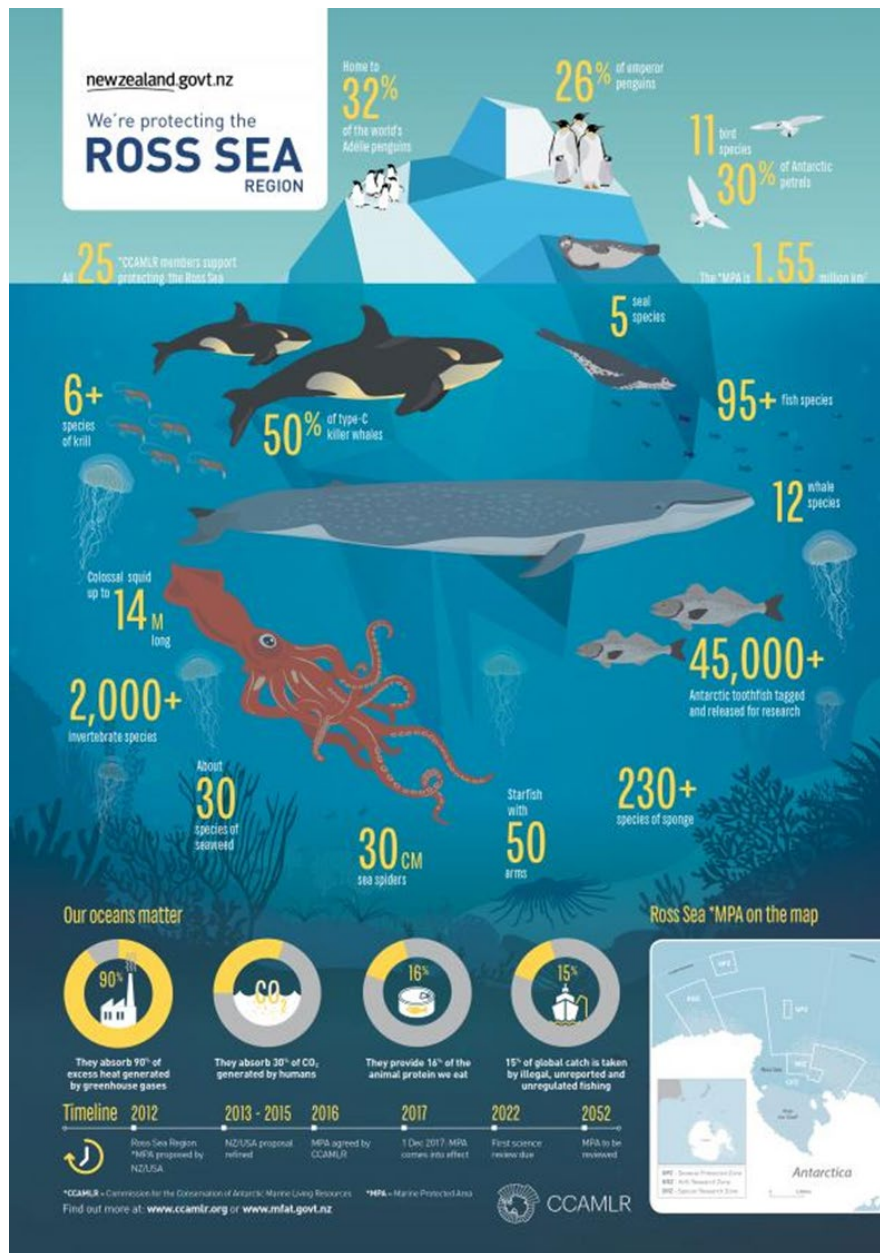


Figure 3. Significance of the Ross Sea Marine Protected Area. | MFAT

Important to both these challenges will be how Antarctica is governed. A clash of strategic visions and aspirations relating to the 1991 Protocols on Environmental Protection in Antarctica (the Madrid Protocol) is likely to erupt and be robustly debated in the lead-up to the renegotiation of the Protocol in 2048. From now until 2048, China is expected to intensify its assertive behaviour to counter limits on its future exploitation of Antarctic natural resources, using all the levers of its national power to control the narrative. China will attempt not only to manipulate public opinion but also to influence organisations such as the Asian Forum for Polar Science (AFoPS), arguing, disingenuously in the view of critics, that exploitation of Antarctic resources will be beneficial for all humankind. The next decade will be critical to see if the current Westphalian rules-based order will be replaced by a less-liberal one reflecting Chinese characteristics. Given China's insatiable appetite to exploit global natural resources, the fate of Antarctica as a science and research sanctuary is poised on the fulcrum of China's resource-driven grand strategy on the one side and the will and capacity of the West to protect the environment and conduct sustainable resource management on the other.

At some stage in the future, China will cast aside its scientific cloak to emerge as more assertive in exploiting the Antarctic. China has been forthright about its objectives in Antarctica; Article 32 of the 2015 Chinese National Security Law outlines the government's intention to participate:

*in the peaceful exploration and use of . . . international seabed areas and polar regions, increasing capacity for safe passage, scientific investigation, development and exploitation; strengthening international cooperation, and preserving the security of our nation's activities and assets in . . . seabed areas and polar regions, and other interests.*²¹

China has identified the polar regions as 'treasure troves of rich resources' to 'be developed peacefully, harmoniously and sustainably [for] the common destiny of all mankind.'²² China's assessment is correct as there is an abundance of sought after natural resources within the continent. It is estimated that Antarctica holds 45 billion barrels of oil and 115 trillion cubic feet of natural gas,²³ significant quantities of iron in the Prince Charles Mountains and coal in the Transantarctic mountains, and '70 per cent of the world's freshwater lies trapped in a layer of ice and Antarctica's icebergs, a promising supply of water for arid countries.'²⁴ Unlike the Arctic, where exploiting natural resources in and around that region has been routinised by Arctic littoral nations, the ATS member nations as a collective are mostly opposed to similar activities being carried out in Antarctica. As a result, China's intention to undertake future exploitation of Antarctica is likely to be challenged robustly.

According to the Antarctic Treaty, the continent is designated as 'a natural reserve, devoted to peace and science'. However, some ambiguity does exist within the Protocols on Environmental Protection over just what exactly is being protected.²⁵ There have been many attempts over the years to secure permanent protection for Antarctica, the first in 1975, when New Zealand proposed a concept of Antarctica being a protected World Park. The most recent proposal was from Australia who sought to establish a one million square kilometre maritime protection area for wildlife protection off the coast of East Antarctica. China and Russia continue to act as disrupters, opposing the latest Australian proposal, the eighth time such a bid was rejected by both nations.²⁶ New Zealand and the United States in 2012 gained approval for the Ross Sea Marine Protected Area but not without prolonged opposition from Russia and others. See Figure 5. This contestation is likely to continue and likely to become a defining point of

21 Elizabeth Wishnick, "China's Interests and Goals in the Arctic: Implications for the United States", Strategic Studies Institute, US Army War College, 2017, 25. <https://press.armywarcollege.edu/monographs/295/>

22 Yang Jian and Zheng Yingqin, "Governing the new frontiers - China's perspective," World Economic Forum, 21 March, 2018. <https://www.weforum.org/agenda/2018/03/governing-the-new-frontiers-china-s-perspective/>.

23 Young Kim, "The Real Cold War: Antarctica's Environmental Future", Harvard International Review, Vol. 16, No. 3, Summer 1994, 57.

24 Ibid, 56.

25 Klaus Dodds, *The Antarctic: A Very Short Introduction*, Oxford: Oxford University Press, 2012, 126.

26 Teng, "Australia Must Keep 'Eyes Wide Open'".

contention when the terms of the Madrid Protocol need to be revisited in 2048. As that time approaches, China will view Antarctica as a long-term investment, where its status, national power and influence will all be important factors in achieving China's interests in Antarctica.

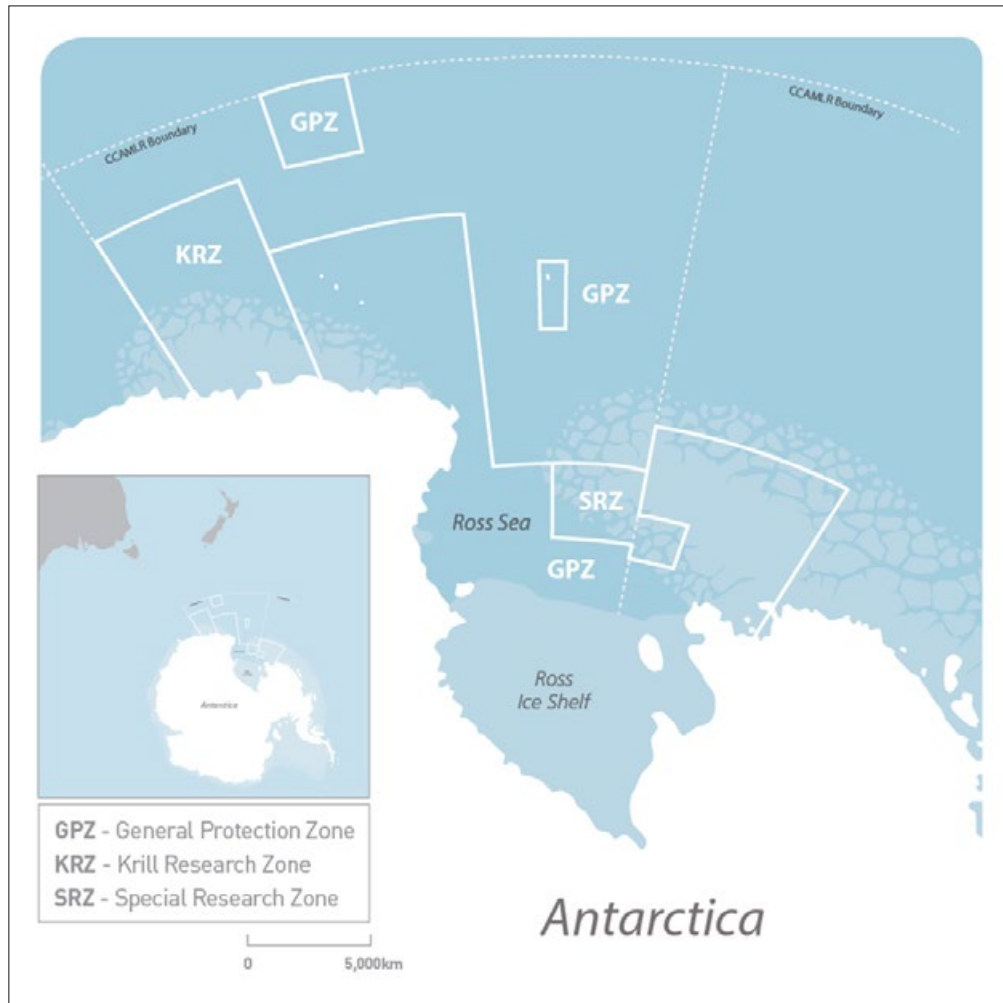


Figure 4. The Ross Sea Marine Protected Area, jointly proposed by New Zealand and the United States in 2012, and in force from 2017. | MFAT

Until the Madrid Protocol is reviewed, China will continue to lay the groundwork for future claims and disingenuously build international support for the notion that all countries should develop and exploit Antarctica, ostensibly for the common destiny for all of humankind.²⁷ For China, success in Antarctica will be reliant on their grand strategy being successful, in particular championing the prioritisation of economic prosperity over liberal values, entailing the exploitation of the Antarctic as well as the Arctic, the heretofore less-tapped sources of energy, minerals, and proteins. The clash over Antarctic exploitation is likely to unfold over China's fishing intentions, especially relating to krill. Antarctic krill is a critical food-chain element of the marine ecosystem, with penguins, seals, whales, finfish and squid all relying on krill as their main food source.²⁸ Antarctic krill are under threat from climate change because habitat is melting around them, and krill numbers are on the decline.²⁹ Despite this, China is planning to increase its krill harvesting activities in Antarctica. China is currently building what it claims to be 'the largest krill ship in the world for Antarctic fishing,' with several more

27 Stephen Smith, "Community of common destiny: China's 'new assertiveness' and the changing Asian order," *International Journal*, Vol. 73, No. 3 (2018), 449-463.

28 Christopher C. Joyner, "Potential Challenges to the Antarctic Treaty," *Antarctic Treaty Summit*, 2009, 101. <http://www.atsummit50.org/media/book-15.pdf>

29 Andrea Thompson, "Krill Are Disappearing from Antarctic waters," *Climate Central*, 29 August, 2016. <https://www.scientificamerican.com/article/krill-are-disappearing-from-antarctic-waters/>.

already under construction.³⁰ China will employ soft and sharp power tactics and leverage its economic influence to support and protect its fishing interests and to assist Beijing to withstand the expected backlash from the international community. It is likely to also reignite the geopolitical debate concerning the necessary trade-off required between economic prosperity and climate change adaptation measures if progress is to be made on halting the degradation of ecosystems under pressure in Antarctica.

The Antarctic Treaty community are right to be sceptical and concerned regarding China's casual approach to environmental matters. China maximises its status and leadership to project itself a nation which is leading environmental protection. Deeper analysis highlights that there is a long way to go before China can be trusted as an advocate for climate change leadership. China's BRI has invested heavily in energy-sector infrastructure relying on fossil fuels.³¹ A recent working paper on these investments concluded that Beijing made little progress in moving to non-renewable energy sources. It observed that '93 percent of energy-sector investments by the SRF [Silk Road Fund] was ...in fossil fuels, and 95 percent of cross-border energy investments by Chinese state-owned enterprises (SOEs) were in fossil fuels as well.'³² Additionally, analysis by Professor Elizabeth Economy reveals that China has adopted clandestine measures to prioritise rapid economic development at the expense of environmental protection, using Chinese investors to offer dubious investment incentives or to bribe local officials 'to ignore environmental and safety standards.'³³ The contestation over the values of the rules-based international system will continue to play out in respect of future global commons exploitation, not least in Antarctica where Treaty nations, including New Zealand and Australia, will come under greater international scrutiny and domestic pressures.

Conclusions and implications for the West

China's challenges to United States strategy and attempts to disrupt the US-led alliance network are likely to be projected into the Antarctic context. The members of the Five Eyes intelligence-sharing community will likely come under greater pressure as the US, Australia, the United Kingdom and New Zealand are all influential founder members of the Antarctic Treaty System.

Since 1923 New Zealand has maintained a right of sovereignty over the Ross Dependency, succeeding part of the United Kingdom's claims in the Antarctic. The Ross Dependency includes the Ross Ice Shelf, the Balleny Islands, Scott Island and other adjacent islands. New Zealand became a charter member of the Antarctic Treaty in 1959, and is active in other international agreements that make up the Antarctic Treaty System, including the Protocol on Environmental Protection to the Antarctic Treaty (Madrid Protocol, 1991), the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR, 1982), and the establishment of a Marine Protected Area in the Ross Sea region (2017). The lead agency, the Ministry of Foreign Affairs and Trade, works closely with relevant government agencies and with Antarctica New Zealand, the Crown Entity that manages Scott Base.

Figure 5. New Zealand's engagement with the Antarctic. | Abridged from MFAT

³⁰ Teng, "Australia Must Keep 'Eyes Wide Open'".

³¹ "What is China's Belt and Road Initiative?," *The Economist*, 15 May, 2017.
<https://www.economist.com/the-economist-explains/2017/05/14/what-is-chinas-belt-and-road-initiative>

³² World Resources Institute. "Moving the green belt and road initiative: From words to actions".
<https://www.bu.edu/gdp/files/2018/11/GDP-and-WRI-BRI-MovingtheGreenbelt.pdf>

³³ Cited in Mark Rosen and Cara Thuringer, "Unconstrained Foreign Direct Investment: An Emerging Challenge to Arctic Security", *CNA*, 2017, 34.

China could leverage its economic predominance by making market access conditional on acquiescence. For example, Australia could again be a target for reprisal should it oppose China's activities. Australia and China recently signed a lucrative deal for Australia to provide fuel for China's Antarctic programme, and China uses Australia as a staging base for their expeditions. China may seize opportunities to undermine the unity of the Antarctic Treaty community, for example by urging Argentina to claim an extended continental shelf that would extend to the sub-Antarctic region, reminding members how Russia used the continental shelf play in the Arctic to claim jurisdiction of the North Pole.³⁴

It is now clear that China is playing a long game in Antarctica. Beijing is fully aware that in 2048, the 1991 Madrid Protocol on Environmental Protection will be up for review, and analysts believe that it is 'just a matter of time' before China or other resource-hungry nations will be proposing amendments to the protocol to allow for the exploitation of natural resources.³⁵ Achieving consensus on this controversial change will not be easy, for China will need to assemble a majority of member states for any such motion to be successful, and most are inclined to extend the current ban on exploitation. In addition to relying on Russian support, China is expected to call upon the Asian Forum for Polar Sciences (AFoPS) to endorse its Antarctic resource exploitation objectives. Although the AFoPS's members may represent nearly half of the world's population, their influence in Antarctic affairs is considerably less than the Westward-leaning polar communities, including that of New Zealand.³⁶ But as its polar status and presence grow, China will look to correct this imbalance and will likely seek not only AFoPS support but also the acquiescence of other international fora in projecting its self-serving narrative that the exploitation of Antarctic resources will enhance the common destiny of all humankind. That the Antarctic will be an arena for great power rivalry is not a matter of if, but when, and the 'maintenance of Antarctica as a natural and scientific sanctuary will be a test of the next generation's character.'³⁷

34 Martin Dinatale, 'The Government will establish by law the demarcation of the continental shelf and will launch the new map of Argentina,' Infobae, 24 February, 2020. <https://www.infobae.com/politica/2020/02/24/el-gobierno-fijara-por-ley-la-demarcacion-de-la-plataforma-continental-y-lanzaran-el-nuevo-mapa-de-la-argentina/?outputType=amp-type>

35 Anne-Marie Brady, *China as a Polar Great Power*, Cambridge: Cambridge University Press, 2017, 185.

36 Kim, "The development of the AFoPS".

37 Kim, "The Real Cold War", 77.



REAR ADMIRAL (RADM) GARIN GOLDING

Rear Admiral (RADM) Garin Golding joined the Royal New Zealand Navy in 1988. After completing midshipman training and serving as a Navigating Officer, he then specialised in diving, which led to his posting as commanding officer of HMNZS Manawanui. Subsequently he rose to senior Navy and Defence roles as Lead Maritime Planner Joint Forces New Zealand, Inspector General of the Navy, Commander Deployable Joint Inter-Agency Task Force, Acting Chief of Navy (Strategy and Engagement), and Maritime Component Commander. His educational achievements include graduation from the NZDF Command and Staff College and the United Kingdom's Royal College of Defence Studies. He holds post-graduate diplomas in Applied Management and Business, a Master's degree in Strategic Studies (Merit) and a Master's degree with distinction from King's College, London. He is a recipient of two NZ Chief of Navy Commendations and the US Navy and Marine Corps Achievement Medal. RADM Golding was appointed Chief of Navy in August 2024.

CHINA'S CHALLENGES TO INDOPACOM¹

Captain John McQueen, RNZN

INDOPACOM's current deterrence strategy in the South China Sea and East China Sea is less effective than optimum, warns Captain John McQueen. The gray zone or hybrid warfare activities of the Peoples Republic of China are undermining the free and safe use of the maritime domain and weakening the international rules-based order. Captain McQueen writes as a former skipper of HMNZS Te Mana who has conducted South China Sea transits to assert the rule of law in contested maritime areas. Despite these transits, and RNZN and RNZAF monitoring of sanctions against North Korea in support of similar initiatives by like-minded governments, a deterrence gap still exists, and a large-scale multinational approach is now needed. Thus, Captain McQueen recommends that INDOPACOM enhance its capability for flexible deterrence by assembling a new multinational Joint Maritime Operations Task Group for the Indo-Pacific region modelled on the Combined Maritime Forces task groups currently operating effectively in the US Fifth Fleet theatre of the Middle East. – Ed.

Introduction

The western Indo-Pacific expanse encompassing the South China Sea (SCS) and East China Sea (ECS) is witness to increasing competition for influence.² This region has seen the global commons challenged through the emergence of gray zone operations and illicit activities that currently sit below the threshold to trigger conflict, often called hybrid warfare.³ These security threats challenge the posture of deterrence that has underpinned the post-World War Two international rules-based order (IRBO). China, through its incremental advances, persistently attempts to undermine global interests and to reshape Indo-Pacific values and institutions to serve its own interests. Specifically, the People's Republic of China (PRC) has pursued its strategic and operational objectives through a campaign of 'lawfare' activities in the maritime domain that stand in stark opposition to accepted international laws and norms. Other notable threats to maritime security within this contested area include repeated breaches by state and non-state actors of the United Nations sanctions against North Korea, and illegal, unreported, and unregulated (IUU) fishing and smuggling activities that threaten the economic security of island nations within the region. These illicit initiatives undermine the maritime domain's free and safe use, ultimately weakening the international rules-based system.⁴

1 This is an abridged version of an essay Captain McQueen wrote while enrolled at the US Naval War College, Newport, in 2024. It reflects solely the author's personal views. – Ed.

2 Bonny Lin et al., *Regional Responses to U.S.-China Competition in the Indo-Pacific: Study Overview and Conclusions*. Santa Monica, Calif: RAND Corporation, 2020, viii. https://www.rand.org/pubs/research_reports/RR4412.html

3 US Department of Defense, Chief of Naval Operations: Navigation Plan, 2022, 4. <https://www.navy.mil/Press-Office/Press-Releases/display-pressreleases/Article/3105576/cno-releases-navigation-plan-2022/>

4 US Department of Defense, op cit, 4.

In response, the 2022 US National Defense Strategy signalled an approach encompassing integrated deterrence, strengthened by partnerships, to ensure a greater level of future success of US strategic objectives.⁵ It envisages that enhanced alliances, partnerships and multilateral

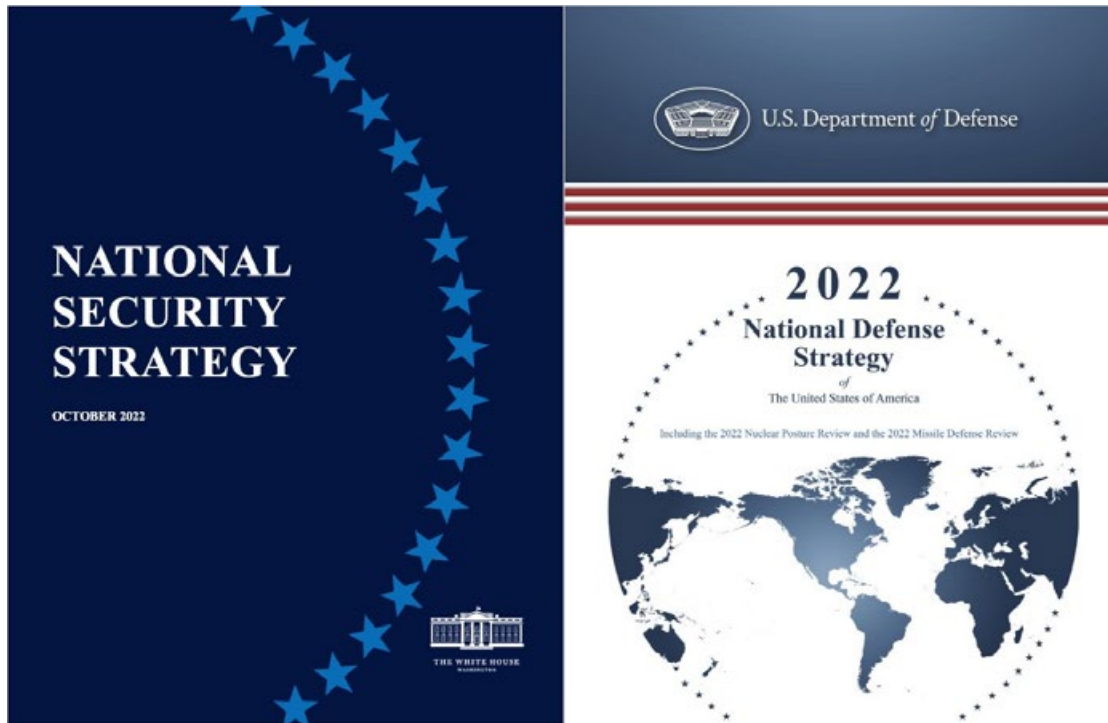


Figure 1. US National Security Strategy and National Defence Strategy 2022 | US Department of Defence

collaborations will be principal US policy tools. However, some policymakers and analysts assert that they continue to work inefficiently and with limited effectiveness.⁶ These issues challenge INDOPACOM to respond with more effective measures to counter these threats to ensure the successful operational implementation of the National Defense Strategy. The unique circumstances within the SCS and ECS provide the necessary conditions for establishing a large multinational maritime security construct to provide the INDOPACOM commander with a flexible deterrent option (FDO). In consideration of these factors, this essay will first identify contemporary security challenges within the SCS and ECS in the context of the US strategic objectives of maintaining the IRBO. Second, it will examine the current security mechanisms in place and, finding them less than effective, will offer an alternative maritime security construct. Finally, it will consider how INDOPACOM is best placed to utilize such a security construct to respond to these challenges.

The China security challenge

China's claim to the SCS has challenged the free use of the maritime commons and changed this international waterway into an arena of strategic competition. Great power competition has been evident in China's expansive territorial claims within the SCS region and dismissal of the 2013 ruling of the Hague Arbitral Tribunal denying those maritime claims.⁷ Although it is not the only state that makes territorial claims to the SCS; sovereignty disputes clash

5 US Department of Defense, 2022 National Defense Strategy of The United States of America, 27 October 2022, 2. <https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.pdf>

6 Thomas Wilkins, "U.S.-Japan-Australia Trilateralism: The Inner Core of Regional Order Building and Deterrence in the Indo-Pacific," *Asia Policy* 19, no. 2 (April 2024): 159-85, 160.

7 U.S.-China Strategic Competition in South and East China Seas: Background and Issues for Congress. Washington: Congressional Research Service, 4 August 2021, 7-8.

between a number of nations, including China, Philippines, Vietnam, Taiwan, Japan, Malaysia, and Brunei.



Figure 2. China's maritime claims (red) conflict with UNCLOS boundaries (blue). | Wikimedia

It is universally acknowledged that the PRC is the most assertive of these claimants through enacting its 'three warfares' concept.⁸ This troika of the Chinese way of war employs psychological warfare and media manipulation alongside lawfare. China's aim is to achieve military objectives without war by attracting international alignment and support while carefully managing political tensions arising from its military and paramilitary actions.⁹ According to Commander Timothy Boyle USN,¹⁰ the PRC's ubiquitous actions send a deterrence message to other actors in an attempt to legitimize supposed historic customary claims to exclusive possession of artificial islands within China's unilaterally proclaimed nine dash line.¹¹ Consequently, the PRC has increased its physical presence both on land and at sea. The use of the three warfares, including lawfare, are likely to persist as the PRC's means of pursuing its strategic aims in the SCS.

8 Morgan Martin, "China's Three Information Warfares," *Proceedings*, March 2021, <https://www.usni.org/magazines/proceedings/2021/march/chinas-three-information-warfares>.

9 Martin, cited above.

10 Commander Boyle was formerly the Chief of National Security Law at INDOPACOM.

11 Timothy Boyle, "U.S. Indo-Pacific Command Charts a Course for Countering China's Legal Warfare" Lieber Institute, West Point, 24 August 2024. <https://lieber.westpoint.edu/us-indo-pacific-command-charts-course-countering-chinas-legal-warfare/>; Also see U.S.-China Strategic Competition in South and East China Seas, op cit.

Lawfare

Lawfare is defined as a tool to manipulate and distort traditional law frameworks as a supplement to military warfare.¹² Within the SCS, the US and associated like-minded nations avoid taking definitive positions on complex and competing sovereignty claims. However, they are united on the principle that these disputes should be resolved through diplomatic instruments in a manner consistent with international laws and conventions. But the PRC challenges this position through persistent intrusions, construction of militarized operating bases in disputed artificial islands and penetration of sea and air patrols into neighbouring EEZs, particularly those of Japan, Taiwan, Vietnam, and Philippines. To illustrate, as of 2024, China has dredged up and garrisoned twenty outposts within the Spratly Islands group and a further seven within the Paracels, this acquiring an estimated 3,200 acres of new land.¹³ Moreover, the PRC continues to securitize the SCS region by employment of military and para-military forces such as its PLA(Navy), Coastguard and Maritime Militia assets, and its regimented fishing fleets, with aggressive claims and actions to reinforce its maritime presence.

It is evident that the PRC is increasingly pursuing a strategy that aims to intimidate adjacent nations through dangerous at-sea confrontations that prevent the free and safe use of the maritime spaces of the SCS.¹⁴ For example, the last two decades have seen numerous examples of PRC harassment of other nations' aircraft and vessels. Through the use of paramilitary forces, actions have included vessels ramming Vietnamese fishing vessels, the disruption of Malaysian oil exploration activities, and harassment of Filipino military planes over the civilian radio spectrum.¹⁵ Most recently, tensions have reached new heights near the Sabina Shoal, where a Philippines ship was rammed and holed, only 86 miles west of the Philippines coast.¹⁶

USAF Major General Charles Dunlap observed that the PRC repetitively argues 'that one's own side [China] is obeying the law, criticizing the other side for violating the law, and making arguments for one's own side in cases where there are also violations of the law.'¹⁷

Critical security analysts also claim that the PRC has consistently undertaken a "talk and take" strategy,¹⁸ dragging out negotiations on the development of a code of conduct



Figure 3. China Coast Guard ship shadows a Philippine Coast Guard ship inside Philippine EEZ | Philippine Coast Guard



Figure 4. Major General Charles Dunlap, USAF | US Air Force

12 Stephen R. Schiffman, "Great Power Use of Lawfare: Is the Joint Force Prepared?," JFQ 107 (2022).

13 Asia Maritime Transparency Initiative, "China Island Tracker," Asia Maritime Transparency Initiative, 2024, <https://amti.csis.org/island-tracker/china/>.

14 U.S.-China Strategic Competition in South and East China Seas, op cit, 9-10.

15 Neill Alexander, "South China Sea: What's China's Plan for Its 'Great Wall of Sand,'" BBC News, 11 July 2018. <https://www.bbc.com/news/world-asia-53344449>.

16 Simon Tisdall, "Xi Jinping's 'Gunboat Diplomacy' Risks Driving His Bullied Neighbours into Enemy Hands," The Guardian, 21 September 2024.

17 Major General Charles Dunlap Jr and US Air Force, "Lawfare 101: A Primer," Military Review 8, <https://sites.duke.edu/lawfare>.

18 U.S.-China Strategic Competition in South and East China Seas, op cit, 66.

for the use of the SCS while simultaneously taking action to occupy or control contested areas. These actions often remain militarily unchallenged as the West powers wish to avoid armed conflict. But without a robust legal or constabulary response by the West, China is encouraged, and international institutions, conventions, and norms are further eroded. It is evident that the differing Western diplomatic viewpoints provide an opportunity for China to reinforce the legitimacy of its claims, and to overlay them with a superficially plausible patina of legality.

Additionally, other important maritime security challenges by China converge to undermine SCS security. These include the avoidance of U.N. sanctions of the DPRK, in which clandestine ship-to-ship transfers and smuggling operations by state-sponsored actors multiply opportunities to evade laws and norms.¹⁹ As of 2016, the International Maritime Organization reported that North Korea is currently operating upwards of 28 tankers that engage in the illegal transfer of fuels, and at least 33 cargo ships that can transport coal through the ECS.²⁰ Limited progress is being made through Western governments reporting to the Pacific Maritime Security Exchange to expose the extent of this lawbreaking. Several nations, inclusive of the U.S., European Union nations, Canada, Australia and New Zealand are sharing information on sanctions-busting merchant ships' illegal traffic into North Korea.



Figure 5. HMNZS Aotearoa and RNZAF P-8A Poseidon on Operation WHIO patrol to interdict North Korean sanctions violations | NZDF

Nevertheless, research indicates that the current actions are not effective, with numerous vessels still entering the country. Analyst Robert Huish asserted that in 2016 alone 70 vessels were not interdicted, the majority of vessels being flagged to China.²¹ Without a concerted interdiction operation, this and other malign activities are likely to continue. Evidently a security gap exists. This suggests that INDOPACOM and its international partners must step up and devise more robust policies to provide more effective security measures.

19 Robert Huish, "The Failure of Maritime Sanctions Enforcement against North Korea," *Asia Policy*, no. 23 (January 2017), 131-52. <https://login.usnwc.idm.oclc.org/login?url=https%3A%2F%2Fwww.proquest.com%2Fscholarly-journals%2Ffailure-maritime-sanctions-enforcement-against%2Fdocview%2F2178520278%2Fse-2%3Faccountid%3D322>.

20 Raul Pedrozo, "DPRK Maritime Sanctions Enforcement," *International Law Studies* 96 (2020), 103. <https://www.armscontrol.org/factsheets/dprkchron>

21 Huish, op cit. Also see "UN Sees China Behind North Korea Embargo Breach - Report," *Dow Jones Institutional News*, 22 June 2012. <https://login.usnwc.idm.oclc.org/login?url=https%3A%2F%2Fwww.proquest.com%2Fwire-feeds%2Fun-sees-china-behind-north-korea-embargo-breach%2Fdocview%2F2120538490%2Fse-2%3Faccountid%3D322>.

Towards an alternative security construct

Increased security cooperation activities through an internationally recognized multinational security framework within the INDOPACOM area of operations would enable an improved counter-narrative and an antidote to PRC actions. Reacting to the threats outlined, the 2022 US National Defence Strategy emphasized long-term strategic competition with China and prescribed 'campaigning to gain military advantage, [and to] enhance deterrence and address gray zone challenges'.²² It asserted that the US would construct a resilient security structure prioritizing interoperability, and work to facilitate coalitions of willing partners. A promising model is the US 5th Fleet Combined Maritime Forces (CMF) security coalition in the Middle East region.²³ This collective partnering on a wide scale within the maritime domain has been achieving a high degree of success since 2003. This U.S.-led joint multinational approach expanded to become the world's largest maritime security partnership, growing to 46 nations with the addition of Sweden in 2024.²⁴ With a strong pool of national expertise to draw from, it is not surprising that this institution has continued to strengthen. The CMF model, though its enforcement of international law and conventions, can reinforce the rule of law in the face of China's lawfare and other hybrid challenges in the contested environment of the SCS.

How does it work? In response to contemporary threats, the CMF construct utilizes a joint interagency and interservice methodology, including the US Coastguard. CMF units remain under the ultimate national command of their respective government authorities even while tasked operationally by delegated commanders in the pursuit of collective coalition objectives. As such, the operating model allows governments and their naval assets a degree of national discretion in suppressing smuggling activities, narcotics trafficking, and piracy, and enforcement of U.N. resolutions and sanctions, for example on Somalia and Yemen.²⁵ It now operates five Combined Task Forces (CTFs) to counter distinct maritime security issues, with command delegated to a lead nation on a rotating basis.²⁶ The unique nature of CMF has allowed it to evolve relatively quickly. For instance, it has recently transformed its operations by establishing the Operation Prosperity Guardian Taskforce, a supporting operation in the protection of commercial ships against the Iranian-sponsored terrorist Houthi militia operating against shipping in the Red Sea.



Figure 6. CTF 153: USS Fitzgerald (DDG 62), USS Gonzalez (DDG 66), and RN frigate HMS Montrose (F 236) deployed in support of Combined Task Force 153 in the Gulf of Aden, 2022 | US Navy | DVIDS

22 US Department of Defense, 2022 National Defense Strategy of The United States of America. Washington DC. <https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.pdf>

23 "Combined Maritime Forces Expands to 45 Nations with Addition of Sweden." Combined Maritime Forces, 1 August 2024. <https://combinedmaritimeforces.com/2024/08/01/combined-maritime-forces-expands-to-45-nations-with-addition-of-sweden/>.

24 Ibid.

25 Matthew R Macleod and William M Wardrop, "Operational Analysis at Combined Maritime Forces," 2015.

26 "Pakistan Assumes Command of Combined Maritime Forces. Combined Task Force 150," US Fed News Service, Including US State News, 23 July 2024.. <https://login.usnwc.idm.oclc.org/login?url=https%3A%2F%2Fwww.proquest.com%2Fwire-feeds%2Fpakistan-assumes-command-combined-maritime-forces%2Fdocview%2F3083647146%2Fse-2%3Faccountid%3D322>.

The effect of this rotational form of leadership is successful in building trust and interoperability and is a worthy model for assembling and deploying a coalition of the willing. Furthermore, the nature of this collective capability emphasizes the global importance of maritime security and underscores the virtue of collaborative naval operations in managing modern-day security issues.

Refocusing US initiatives in the SCS and ECS

Assertion of the UN Law of the Sea and freedom of navigation operations (FONOPs) entailing transiting contested seas have been INDOPACOM's practical, but so far limited, responses to the PRC's and other nations' expansive sovereignty claims within the SCS and ECS. FONOPs have been deployed sporadically since 2012 by the US and a dozen other governments.²⁷ A notable example was USS Dewey's 2015 transit through the Mischief Reef in the vicinity of the Spratly Islands. Specifically, it asserted its right of innocent passage, passing within 12 nautical miles of an artificial islet that the PRC built up from a reef. However, while this FONOP was seen an important milestone to challenging China's sovereignty claims, commentators suggest that it misses the point by simply citing conventional norms. A more robust push-back was the transit of the SCS and Taiwan Strait by the British aircraft carrier HMS Queen Elizabeth II in 2021, with a US Marine Corps F-35 squadron embarked, and escorted by US Navy and allied warships.²⁸ Further, in September 2024, New Zealand's HMNZS Aotearoa and Australia's HMAS Sydney also transited the Taiwan Strait, openly asserting their right of innocent passage through an international waterway.²⁹



Figure 7. A Cheng Kung-class frigate of the Republic of China Navy is observed by crew of HMNZS Aotearoa while on patrol | NZDF

These types of FONOP transits send a clear message denying the legitimacy of China's claims of exclusive jurisdiction beyond its territorial waters. They assert the primacy of the U.N. Convention on the Law of the Sea (UNCLOS).³⁰

However, FONOPs and related naval and air maneuvers are episodic and sometimes uncoordinated among Western states. While it could be said that any friendly warship transit through contested waters is a useful manifestation of respect for international law, each remains an isolated act, far short of other deterrence action such as interdiction or sea denial operations.

Without a common narrative and follow-through they can be discounted by Beijing as temporary, reactive and weak. As such, FONOPs and related transits remain a military-diplomatic tool of limited effectiveness. This has led international lawyers Peter Dutton and Isaac Kardon to argue for better coordination of Western warship activities in contested international waters. They recommend:

27 U.S.-China Strategic Competition in South and East China Seas, op cit.

28 John F. Bradford, "US Perspectives and Expectations Regarding the UK's Tilt to the Indo-Pacific," *The RUSI Journal* 167, no. 6-7, 10 November 2022, 24-32, 24. <https://doi.org/10.1080/03071847.2022.2158628>.

29 "NZ Naval Vessel Sailing through Taiwan Strait 'routine Movement' - Defence Minister" RNZ News, accessed 27 September, 2024. <https://www.rnz.co.nz/news/political/529229/nz-naval-vessel-sailing-through-taiwan-strait-routine-movement-defence-minister>.

30 Peter Dutton and Issac Kardon, "Forget the FONOPs – Just Fly, Sail and Operate Wherever International Law Allows" *Lawfare*, 10 June 2017. <https://www.lawfaremedia.org/article/forget-fonops-%E2%80%94-just-fly-sail-and-operate-wherever-international-law-allows>.

[regular] exercising with other navies, maintaining a reassuring presence, gathering intelligence, protecting sea lines of communication, deterring conflict, and standing ready to intervene in times of crisis.³¹

Having considered the limits of FONOPs and transits by military ships, this author concludes that there is a need for scope, concentration and continuity that only a multi-national coalition can achieve. A Western coalition can also use lawfare below the threshold of war to reassert international norms of freedom on the high seas to counter China's illicit maritime claims.

Formation of a multinational task force

The US has long conducted deterrence operations, and it has done so with the support of its allies through mini-lateral mechanisms. Mini-laterals are explained by analysts Tapore Azarn and Brendon Taylor as 'small, issue based informal and un-institutionalized forums and bilateral partnerships employed as a way coordinating international policy action'.³² As an example, Professor Thomas Wilkins cites the U.S.-Japan-Australia Trilateral Dialogue as a model of successful coordination efforts for allied nations facing up to strategic competition in the INDOPACOM area of operations.³³ Other examples include the Quad arrangements and more recently coordination through the AUKUS alliance. Each signals a significant expansion of the capacity to respond collectively, for instance to underwater threats in the region. Each provides a mechanism to reduce the cost burden by sharing costs with partners. In his recent address to the US Senate Armed Forces Committee, Chief of Naval Operations Admiral John Richardson USN highlighted a number of successes in improving the integrated joint operating model through expanding willing partnerships. However, he warned that more must be done.³⁴



Figure 8.
Admiral John Richardson USN,
Chief of Naval Operations 2015-
2019 | US Navy

This is supported by the RAN Commodore (ret) Sam Bateman who persistently asserted that a naval presence must be continuous. Ships must be on station, operational, and capable of combat whether conducting FONOPs, exercises, or other operations to ensure that the maritime commons remain open according to international laws and conventions.³⁵ This leads to the conclusion that INDOPACOM is advised to move beyond the current mini-lateral approach and adopt a more multinational approach to maximise its deterrent effect.

Distributed maritime operations

Accordingly, a promising strategic concept for the employment of US maritime assets is the strategy of distributed maritime operations. This was foreshadowed in 2022 by a document issued by the Office of the Chief of Naval Operations recommending naval asset distribution dispersal over a wide area to ensure efficiency in sensor and weapon systems coordination.³⁶

³¹ Ibid.

³² Tapore Azarn and Brendon Taylor, "Mini Laterals and Deterrence: A Critical New Nexus," *Asia Policy* 17, no. 4 (2022), 2.

³³ Wilkins, "U.S.-Japan-Australia Trilateralism", op cit, 161.

³⁴ John Aquilino, "Statement of Admiral John C Aquilino , US Navy, Commander, US INDO-PACIFIC COMMAND" (INDOPACOM, 21 March 2024), 29. https://www.armed-services.senate.gov/imo/media/doc/aquilino_statement.pdf.

³⁵ Sam Bateman, "What Freedom of Navigation Is the US Navy Exercising?," *War on the Rocks*, 26 May 2017. <https://warontherocks.com/2017/05/what-freedom-of-navigation-is-u-s-navy-exercising/>. Also see Bateman's several Lowy Institute analyses and recommendations before his untimely passing in 2020 at <https://www.lowyinstitute.org/the-interpreter/us-fonops-game-again-south-china-sea>

³⁶ Joslyn Fleming et al., "Fighting DMO, Pt. 1: Defining Distributed Maritime Operations and the Future of Naval Warfare." Washington DC: Congressional Research Service Reports 55, no. 1 (2022). Also see Harry Hallam,

This idea advocates moving away from traditional concentration of force by using large task forces to one of a dispersed force linked by advanced cyber capabilities.³⁷ Interestingly, this is akin to how the combined forces have been operating in the Middle East, albeit at the lowest end of deterrence operations. Moreover, this concept has deep roots, with the 1000 ship Navy concept being first proposed in 2006, by the then CNO, Admiral Michael Mullen, to tackle internationally recognized maritime security issues throughout the globe.³⁸ Subsequently, in her launch of a CNO's Guidance, Admiral Lisa Frannetti in 2023 lent further weight to the importance of this aspect of extended operational partnerships to strengthen a deterrence strategy by stating 'we will design and drive interoperability with our Allies and Partners to deliver combined lethality'.³⁹

One issue to be addressed is how to maximise accurate and secure information exchange so as to ensure a shared common picture of the threat environment among dispersed assets and diverse partners. To deter effectively, widely scattered platforms must be guided by a common operating picture that provides units and partners accurate and situational awareness in real time, but also furthers understanding of capabilities and limitations. This is a familiar challenge but on a wider scale: how to improve interoperability amongst all units and nations participating in the security coalition. This cooperation could achieve better economies of scale, particularly to the advantage of small defense forces such as New Zealand's, but also enhance INDOPACOM's ability to compete with adversaries by incorporating more forces.

A rationale for maintaining the status quo

Despite a growing emphasis in US strategic policy to further partnerships for the conduct deterrence operations, some analysts believe that the US should be focused on preparing for high-end deterrence. In a 2021 study, the Center for a New American Security (CNAS) reported on table-top exercises of deterrence through to conflict with China that concluded that the projected US military force structure out to the 2030s would be more effectual to counter Chinese actions in a decisive battle than a lower-end day-to-day deterrence campaign.⁴⁰ It further emphasised that reactive deterrence as currently exercised was not likely to be successful against China's persistent incremental aggression.⁴¹ The CNAS conclusions were based on the notion that a high-end strategy leverages America's relative technological advantage over the PRC.

In another study of regional responses to U.S.-China rivalry in the Indo-Pacific, the RAND Corporation concluded that 'bilateral cooperation with ASEAN nations is the most direct and assured way of maintaining or increasing US influence in the region'.⁴² and that this policy of cooperation should remain the priority in Southeast Asia but also in other theatres. The RAND study raised questions about the vulnerabilities of partner nations' military forces and volatility of their political processes, and pointed out risks of unexpected lost access. This cautionary argument highlights that the US should not require partner support for every decision, but only seek support on critical issues. Such a strategy of self-reliance would allow INDOPACOM to deploy a known set of American assets with much more certainty and reduce reliance on allies and partners.

"Distributed Maritime Operations Logistics, Industry and American Strategy." *Military Strategy Magazine*, Vol 10, Issue 2, Spring 2025. <https://www.militarystrategymagazine.com/read/volume-10-issue-2/44/>

37 Fleming et al, op cit.

38 Bryan McGrath, "1,000-Ship Navy and Maritime Strategy," *Proceedings* 133, no. 1247 (January 2007).

39 US Department of Defense, Chief of Naval Operations: Navigation Plan, op cit, 14.

40 Stacie Pettyjohn, Becca Wasser, and Jennie Matuschak, "Risky Business: Future Strategy and Force Options for the Defense Department." Washington DC: Center for a New American Security, July 2021. <https://www.cnas.org/publications/reports/risky-business-future-strategy-and-force-options-for-the-defense-department>

41 Ibid.

42 Lin et al, op cit.

Shared national interests and engaged partners

To sum up: the US remains committed to deterrence across the spectrum of competition. This is an important commitment in keeping the Indo-Pacific open and free for use by all nations in accordance with the IRBO principles. In a recent address at the US Naval War College on the Chinese way of war, Professor Ian Easton noted that PRC leaders feel vulnerable to global opinion when Western-aligned nations collaborate collectively on issues, inferring that multinational organizations can be successful in resisting China's influence, and that more effort should be made to exert pressure by these multilateral means.⁴³ Additionally, a RAND study discussing the prioritization of tactics to counter China's gray-zone activities recommends that a promising avenue is to harmonise US interests and objectives with those of allies and partners so as to harness other nations' perspectives and gain their voluntary support.⁴⁴

Moreover, a 2021 US tri-service maritime strategy document asserts the employment of an integrated maritime command incorporating the Navy, Marine Corps and Coastguard.⁴⁵ This perspective exemplifies a joint approach that recognizes the growing complexity of the maritime domain and the need of military actions to complement diplomatic pressure initiatives. This initiative has the potential to garner assistance to the US from like-minded nations on issue-based problems, to share the burden of security initiatives, and to rally concerted international action to counter specific maritime threats.

Conclusion

Growing competition over a range of issues in the SCS and ECS region threatens Western maritime security. Sovereignty disputes and illegal pre-emptions of international maritime space, along with the malign behaviors that accompany them, undermine the IRBO and threaten the future use of the maritime commons. While some of these issues are linked to strategic competition against the PRC, other issues such as organized crime could be managed through lawful mechanisms...but only if well enforced. INDOPACOM, as the forward-deployed military instrument of US deterrence strategy, is challenged through front-line proximity but is constrained by lack of physical assets sufficient to manage these issues alone.

In response, this essay proposes an option: that INDOPACOM assemble a large multinational maritime task group analogous to the Middle East CMF security construct. This initiative would facilitate a cohesive strategy to prioritize and manage good order at sea and mitigate internationally-recognized common threats. There is a pressing need for greater situational awareness and for a continuous naval presence to detect malign activities, thus providing the ability to react quickly and appropriately to constrain them short of war. This initiative could build and legitimize both capacity and capability of partner nations and securitize the maritime space for low-end deterrence. The initiative would provide commonality of purpose amongst allies and partners and enhance opportunities to influence neutral nations with a vested interest in the security of the region. In doing so the US and the like-minded international community could further enhance their collective military, economic, and diplomatic powers to anticipate and manage future security challenges in the maritime space.

43 Ian Easton, "The Chinese Way of War: Inside a Taiwan Invasion Scenario" US Naval War College, 9 October, 2024, lecture attended by the author.

44 Bonnie Lin, et al, "A New Framework for Understanding and Countering China's Gray Zone Tactics," RAND, 2022. https://www.rand.org/content/dam/rand/pubs/research_briefs/RBA500/RBA594-1/RAND_RBA594-1.pdf

45 Kenneth K. Braithwaite, "Prevailing with Integrated All-Domain Naval Power Advantage at Sea." Washington DC: Department of the Navy, December 2020. <https://apps.dtic.mil/sti/trecms/pdf/AD1118532.pdf>



CAPTAIN JOHN MCQUEEN

Captain John McQueen joined the Royal New Zealand Navy in 2000. After serving as Bridge Watch Keeping Officer, Navigating Officer, Operation Officer and Executive Officer on HMNZS Resolution and HMNZS Canterbury, he was assigned command, in rapid succession, of HMNZS Kiwi, HMNZS Kahu, and HMNZS Pukaki. He then achieved command of HMNZS Te Mana in 2023 and HMNZS Manawanui in 2021–2022.

As the Fleet Operations Officer at HQ JFNZ (2013–2014) he advised the Commander Joint Forces on the naval contribution to joint operations. He was then appointed to Capability Branch, HQNZDF, as the Naval Combat Capability Lead where, alongside the Ministry of Defence, he oversaw the Navy's user requirements for new capability projects. He also supervised operational testing and evaluation of the Frigate Systems Upgrade and managed the inaugural firings of the Sea Captor Missile System.

Abroad, Captain McQueen has served as Operations Officer to the Royal Australian Navy-led Combined Task Force 150 (CTF 150) in Bahrain, for which he was awarded the Australian Active Service Medal. In 2020 he served as New Zealand Senior National Officer and Chief Plans within the Combined Maritime Force (CMF), based in Bahrain.

A graduate of the Royal Navy's Principal Warfare Officer course, Captain McQueen subsequently completed the NZDF Command and Staff College advanced course, the latter leading to his gaining a Master's Degree in International Security (with distinction) in 2017. In 2025 he completed the Naval Command Course at the US Naval War College and in the same year achieved a Master's Degree in Business Administration at Salve Regina University.

Captain McQueen was promoted to his present rank in August 2025. His current posting is Base Commander Naval Defence Areas (Auckland).

HOW SINGAPORE HEDGES AGAINST US-CHINA RIVALRY¹

ME5 Lee Jing, Singapore Armed Forces²

Singapore's traditional strategy of hedging towards US-China rivalry is facing structural challenges, observes ME5 Lee Jing. He warns that while Singapore's policies such as non-alignment, co-engagement, bilateral defence diplomacy, economic diversification, legal framing and narrative neutrality remain essential, their effectiveness is weakening. ME5 Lee Jing identifies risks arising especially from escalation in the Taiwan Strait, disputes in the South China Sea, and the potential fragmentation of ASEAN. He concludes that non-alignment and hedging will remain Singapore's principal strategies, but that they must be adapted flexibly to meet rising geopolitical challenges, principally the growing US-China confrontation. –Ed.

Introduction

Singapore is one of the world's most stable and prosperous countries.³ Its success is attributed not only to its trading and entrepreneurial skills but also to its security despite being a small country situated amidst much larger neighbours. That security has been achieved by energetic, alert and adaptive diplomatic, economic, and communication policies. For example, trade dependency has led Singapore to become a diplomatic champion of regional cooperation since a fragmented political order could undermine Singapore's economy and domestic stability.



Figure 1. Singapore, a stable and prosperous city-state | Wikimedia Commons

Singapore neither declares formal neutrality nor enters alliances. Instead, it practices hedging so as to achieve mutually beneficial partnerships with many countries, principally the United States (US) and China, while minimising risks of entanglement with or antagonising the one or the other.⁴ This hedging approach combines non-alignment, co-engagement, defence diplomacy, and multilateral norm-building to preserve Singapore's strategic autonomy.⁵ By

- ¹ This is an abridged version of an essay ME5 Lee Jing wrote while studying at the NZDF Command and Staff College in 2025. The opinions expressed in this essay are solely those of the author and do not necessarily represent the policies of the Singapore Armed Forces or the Ministry of Defence of Singapore.
- ² ME5 Lee Jing's rank in the Military Expert branch of the Singapore Armed Forces is equivalent to lieutenant commander or major. –Ed.
- ³ Tommy Koh (ed), *Fifty Secrets of Singapore's Success*. Singapore: Straits Times Press, 2020.
- ⁴ Hedging refers to the simultaneous pursuit of engagement and insurance, building relationships with both major powers while preparing for possible negative outcomes. In Singapore's foreign policy discussions, this behaviour is often described as co-engagement or issue-based alignment, reflecting its pragmatic practice of cooperating with different partners on specific issues without joining specific blocs. For a recent assessment see John R. Short, *Hedging and Conflict in the South China Sea*. Routledge, 2025.
- ⁵ Dexian Cai, "Hedging for Maximum Flexibility: Singapore's Pragmatic Approach to Security Relations with the US and China." *Pointer* 39 (2013).
<https://saftimi.spydus.com.sg/cgi-bin/spydus.exe/ENQ/WPAC/BIBENQ?SETLVL=&BRN=129690>

framing its foreign policy around the international rules-based order rather than bloc affiliation, Singapore positions itself as a principled actor. Singapore's leaders have repeatedly stressed that 'small states especially must not allow the world to regress to one where might is right',⁶ thus signalling that international norms are vital for small states and that their erosion will undermine Singapore's security and prosperity.

Hedging as co-engagement

Singapore's hedging is evident in its calibrated co-engagement with both the US and China. Singapore conducts bilateral and multilateral military exercises with both powers,⁷ and it participates in the US-backed Indo-Pacific Economic Framework

(IPEF) while engaging also in selected BRI projects.⁸ This co-engagement preserves Singapore's agency by keeping channels open to all sides, credibility by demonstrating principles-based consistency, and flexibility by avoiding commitments that preclude future options.⁹ However, since its two main partners – the US and China – have begun to demand clearer signals of alignment, Singapore's stance midway between them has become more difficult to sustain. According to NUS Professor Ja Ian Chong, Singapore's historically non-confrontational approach now risks upsetting both great powers, rather than reassuring them.¹⁰ Increasingly, strategic ambiguity is being interpreted by critics in Washington and Beijing not as principled non-alignment, but as opportunistic hedging bordering on free riding.

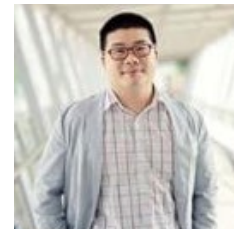


Figure 2.
Professor Ja Ian Chong
| National University of
Singapore

Strategic value of non-alignment

Singapore's posture of non-alignment is a deliberate strategy that has afforded it access to security partnerships, technological cooperation, trade access, and diplomatic trust in dealing with both great powers.¹¹ In the past, this flexibility and strategic and economic hedging have reduced the risks of dependence and vulnerability to coercion.¹² These overlapping diplomatic and economic engagements also strengthen Singapore's bargaining leverage in bilateral and multilateral settings while avoiding the antagonism of both great powers.¹³ But Singapore's Prime Minister Lawrence Wong has warned of 'more and more attempts to weaponise economic interdependencies'.¹⁴ Trade and technology ties, once regarded as stabilising factors, are now increasingly viewed as potential levers for coercion.

6 Singapore Ministry of Foreign Affairs, "Minister for Foreign Affairs Dr Vivian Balakrishnan's National Statement at the General Debate of the 77th Session of the United Nations General Assembly in New York, 24 September 2022" (Government of Singapore, 2022), <https://www.mfa.gov.sg/Newsroom/Press-Statements-Transcripts-and-Photos/2022/09/20220925-UNGA-National-Statement>.

7 And with numerous others, for example in the Five Power Defence Arrangements with Britain, Australia, New Zealand and Malaysia.

8 Terence Lee, "The Domestic Determinants of Hedging in Singapore's Foreign Policy," *Contemporary Southeast Asia* 46, no. 1 (2024). <https://doi.org/10.1355/cs46-1d>.

9 Lee, *ibid*.

10 Ja Ian Chong, "Great Power Competition in Small States: The Case of Singapore." *Asian perspective* 49, no. 1 (2025), 21-51. <https://doi.org/10.1353/anp.2025.a953084> Also see Ma Bo, *Managing China-Singapore Relations Amid US-China Rivalry*. Singapore: ISEAS Publishing, 2023. <https://doi.org/10.1355/9789815203073>.

11 Chong, *ibid*.

12 Simona A. Grano, David Wei Feng Huang, and David Wei Feng Huang. *China-US Competition: Impact on Small and Middle Powers' Strategic Choices*. Springer Nature, 2023. <https://doi.org/10.1007/978-3-031-15389-1>.

13 Yuen Foong Khong, "Singapore and the Great Powers." In *Singapore and the Great Powers*. https://doi.org/10.1142/9789814689342_0013.

14 Ang Hwee Min, "More attempts by countries to 'weaponise economic interdependencies': PM Wong," 25 June 2025. <https://www.channelnewsasia.com/singapore/singapore-pm-lawrence-wong-china-economy-countries-weaponise-interdependencies-5202901>

A non-aligned posture also raises Singapore's regional and international stature. By consistently framing its diplomacy around international law, economic openness and multilateralism, Singapore has cultivated its reputation as a principled actor.¹⁵ This allows it not only to influence ASEAN's agenda but also to serve as a convenor of regional and international forums and to shape institutional norms.¹⁶

In summary, non-alignment provides strategic autonomy, access and influence across multiple domains. However, the United States and China are growing less tolerant of strategic ambiguity as their competition intensifies, and Singapore's position is becoming more tenuous.¹⁷ Hence, maintaining non-alignment will require more deliberate, innovative and finely-balanced policy choices than those that have previously sufficed.

Challenges to non-alignment: Three scenarios

So far, Singapore's current hedging policy has enabled it to engage with both the US and China without overtly aligning with either. However, three geopolitical developments present new challenges to the non-aligned posture. The following three scenarios outline how protracted regional instability and inexorable structural changes might compel Singapore to reconsider its non-aligned stance.

Scenario 1: Escalation in the Taiwan Strait.

A future crisis could be triggered by political developments in the Republic of China on Taiwan that China views as crossing its red lines, such as a move toward formal independence or top-level US-Taiwan political exchanges signalling full Taiwan sovereignty. In line with precedents, China could escalate with large-scale amphibious military exercises, missile overflights, increased air and naval intrusions beyond the median line, and simulated blockades.¹⁸ Concurrently, China could intensify cyber and information operations to shape international narratives. The US, citing the Taiwan Relations Act and its interest in maintaining regional stability, may respond with greater naval presence, additional Taiwan Strait transits, and coordinated economic sanctions with partners. Exaggerated military and political signalling from both sides would short-circuit crisis management and raise the risk of miscalculations, possibly creating an environment where Singapore faces pressure to abandon its non-aligned position. In a conflict Singapore would likely be asked by the US (and other regional partners) for logistical support, expanded intelligence sharing, and supportive public messaging. As one analyst observed, in a crisis 'the Southeast Asian states need a Singaporean airlift to have a chance of evacuating their people'.¹⁹

15 Lee Hsien Loong, "The Endangered Asian Century: America, China, and the Perils of Confrontation," *Foreign Affairs*, Vol 99, no. 4 (2020).

16 Felix Heiduk, *Dancing with elephants: Asia and the Sino-American rivalry*, in *Dancing with elephants: Asia and the Sino-American rivalry* (Routledge, 2022). <https://doi.org/10.4324/97810031068>

17 Grano, op cit.

18 A major PRC live-fire 'exercise' took place in the Taiwan Strait in the last week of 2025.

19 Greg Torode et al., "Simulated Chinese blockade of Taiwan reveals Singapore as lifeline," <https://www.reuters.com/world/china/simulated-chinese-blockade-taiwan-reveals-singapore-lifeline-2025-08-08/>.

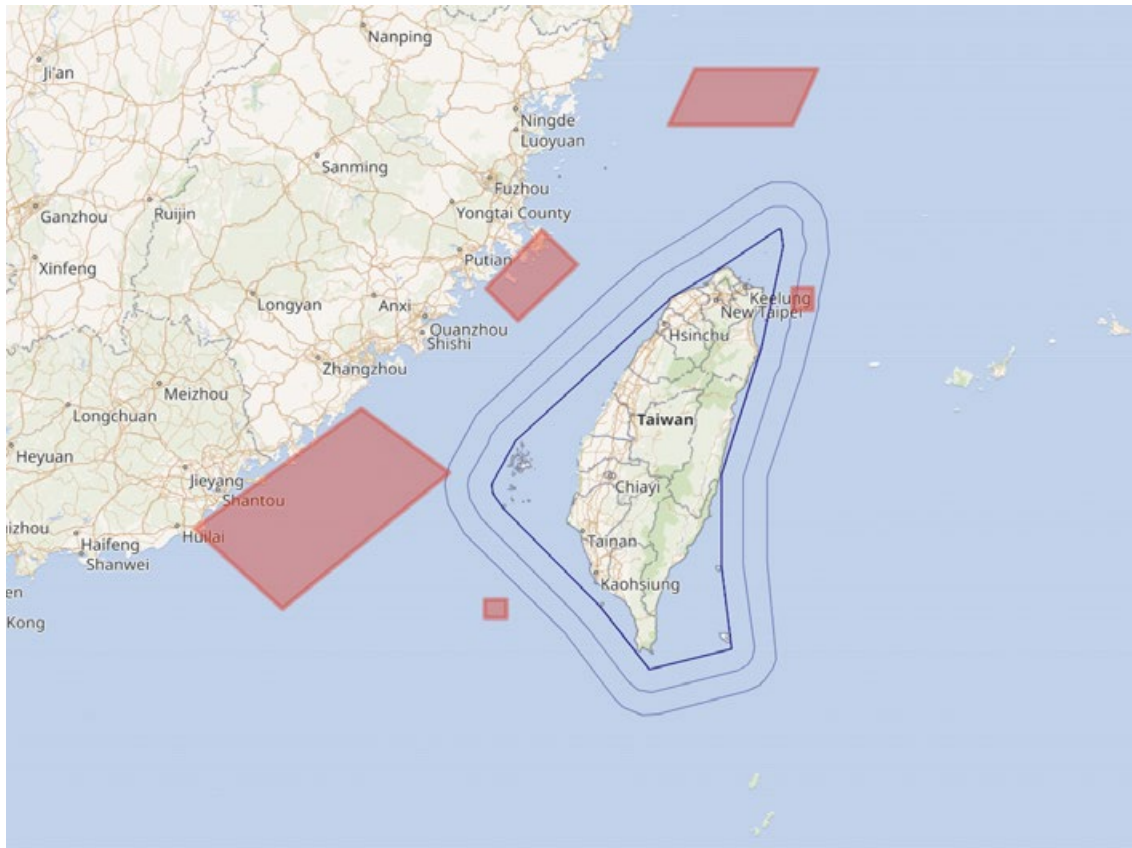


Figure 3. A PRC live-fire exercise in the Taiwan Strait | Wikipedia

A Taiwan Strait crisis could lead the US to request additional logistical support or increased access to Singapore’s facilities such as accommodating additional U.S. naval deployments or granting overflights.²⁰ Although Singapore has traditionally hosted a rotational US military presence under a non-aligned policy, expanding its support during a crisis would risk Chinese interpretation of that presence as active involvement in a U.S.-led containment effort. This could invite diplomatic and economic retaliation from China.

China could also leverage ethnic and cultural ties to assert Singapore’s ‘natural’ alignment with Chinese perspectives²¹ while describing engagement with US-led security initiatives as inconsistent with the Chinese heritage of ethnic-Chinese Singaporeans. Conversely, the US might view inaction as tacit acceptance of PRC actions. These competing narratives could erode the credibility of Singapore’s non-alignment narrative and inflame domestic and regional racial tensions.²²

Singapore’s reliance on trade increases its vulnerability to potential disruptions from a Taiwan Strait crisis. Escalating tensions could threaten sea lines of communication, leading to higher shipping costs and volatility in regional markets.²³ Any perceived political



Figure 4. US Navy warships in Singapore | Wikimedia Commons

²⁰ Ian Storey, *The United States and ASEAN-China Relations: All Quiet on the Southeast Asian Front*. US Army War College Press, 2007. <https://press.armywarcollege.edu/monographs/665>

²¹ Chong, “Diverging Paths? Singapore-China Relations and the East Asian Maritime Domain.”

²² Terence Lee, “The Domestic Determinants of Hedging in Singapore’s Foreign Policy.” *Contemporary Southeast Asia* 46, no. 1 (2024): 77-102. <https://doi.org/10.1355/cs46-1d>

²³ Lee Hsien Loong, “The Endangered Asian Century” op cit.

tilt could result in targeted economic retaliation against Singapore, manifested by tightened regulatory scrutiny, reduced market access or restrictions on key imports and exports. Beyond immediate shocks, such a crisis could also accelerate structural shifts already underway in global supply chains. The US and its partners have been actively seeking to reduce dependence on Taiwan's semiconductor sector, exemplified by the establishment of new Taiwan Semiconductor Manufacturing Company (TSMC) facilities in Arizona.²⁴ While these moves are intended to hedge against disruption, they redistribute investment and erode Taiwan's irreplaceability in global production networks. This disadvantages trade-dependent economies like Singapore, both by increasing competition for high-value investment and diminishing its role as a transshipment node.

Scenario 2: Contestation in the South China Sea.

Although Singapore is not a claimant to any South China Sea (SCS) territory, it is strategically and economically exposed to maritime disputes due to its reliance on open sea lines of communication. Conflict in the SCS would disrupt its seaborne trade-dependent economy.

Singapore's leaders have supported initiatives such as the ASEAN-China Code of Conduct (COC) negotiations, underscoring a preference for maintaining order over bloc politics. Singapore has focused on three policy initiatives: 1) the safety of sea lines of communication, 2) its legal and normative positions, and 3) the use of ASEAN channels for crisis management. This stance has allowed it to engage with both the US and China but requires increasingly nuanced communication as both powers interpret regional actions through the lens of their broader rivalry.

Escalation could be triggered if China sought to enforce its nine-dash line through coercive measures against a Southeast Asian claimant, such as imposing a Coast Guard blockade to deny resupply, massing its maritime militia in contested waters, or imposing exclusion zones.²⁵ Claimant states might respond with increased patrols, high-profile publicising of incidents, and intensified legal narrative campaigns to internationalise the dispute. Washington, citing alliance commitments and the doctrine of Freedom of Navigation, could expand joint patrols, deploy additional assets, and increase security assistance to its partners. These actions would deepen existing divisions within ASEAN, as some members push back against China while others accommodate, straining regional crisis management channels and elevating the risk of accidental clashes escalating into broader confrontation. In a scenario like this, Singapore would need to consider options such as enhancing maritime domain awareness and incident reporting, adjusting strategic communications to include references to international law and navigation rights, and facilitating coordination on search and rescue and evacuation planning. These actions would have to be calibrated carefully to manage risk and fulfil obligations without indicating coalition alignment.



Figure 5. China's claims in the South China Sea | Wikimedia Commons

24 International Institute for Strategic Studies. Asia-Pacific Regional Security Assessment 2024. <https://doi.org/10.4324/9781003530060>.

25 See a summary of issues by John R. Short, *Hedging and Conflict in the South China Sea*. Routledge, 2025.

Pressures on Singapore such as US requests for expanded military access, Chinese threats of economic retaliation, and disinformation campaigns within Singapore's multi-ethnic society are likely to mirror those in a potential Taiwan crisis. China has demonstrated its willingness to exploit economic levers against Singapore when political sensitivities are affronted. Singapore's Terrex armoured vehicles were detained in Hong Kong in 2016 after training exercises in Taiwan, shortly after Singapore expressed support for an Arbitral Tribunal ruling against China's nine-dash line. This incident highlighted how trade and logistics can be leveraged to exert pressure and subject Singapore to punitive measures short of open confrontation. In relation to the SCS, such pressures could be influenced by factors including ASEAN fracturing, maritime trade vulnerabilities, and erosion of legal norms.

Scenario 3: ASEAN polarisation and erosion of centrality.

ASEAN has served as a cornerstone of Singapore's regional diplomacy, providing a unified regional voice and an institutional platform to amplify its influence.²⁶ ASEAN also provides Singapore with legitimacy, multilateral crisis management mechanisms and a buffer against direct confrontation with major powers.²⁷ However, ASEAN's effectiveness faces mounting challenges due to the escalating rivalry between the US and China.

Differences in geopolitical alignment among ASEAN members have progressively weakened consensus. Cambodia's blocking of joint communiqués criticising China in 2012 demonstrated China's influence on intra-ASEAN dynamics. The absence of a joint ASEAN statement following the 2016 Arbitral Tribunal ruling against China's SCS claims²⁸ reflected diverging willingness among members to call out China. Similar differences have appeared during discussions after Myanmar's 2021 coup, over the extent of the junta's involvement in ASEAN meetings as member states.²⁹

A Taiwan crisis could also amplify intra-ASEAN divisions. Member states prioritising economic relations with China may adopt non-confrontational positions, contradicting those members aligning more closely with US security interests.³⁰ The resulting fragmentation would weaken ASEAN's consensus-based decision making. By extension, Singapore's foreign policy would be impacted due to its reliance on ASEAN for regional diplomacy,³¹ leaving it more isolated in ASEAN-led frameworks and reducing its ability to shape collective responses on broader security issues.

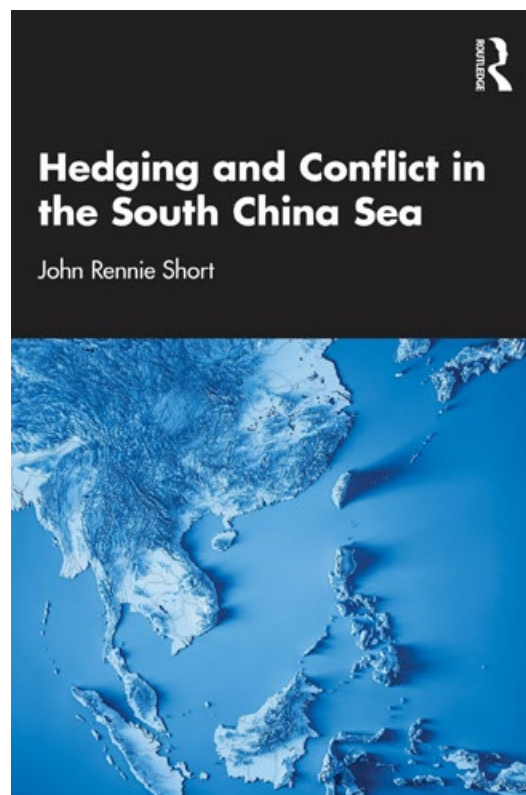


Figure 6. Hedging and Conflict in the South China Sea by John Rennie Short | Routledge, 2025

26 Alice Ba and Felix Heiduk, "Major power competition and Southeast Asia: Institutional strategies and resources," in Major power competition and Southeast Asia: Institutional strategies and resources (Routledge, 2022), <https://doi.org/10.4324/9781003106814-8>.

27 Ba and Heiduk, *ibid*.

28 Jaime Naval, "ASEAN's elusive code of conduct for the South China Sea," accessed 26 Aug 2025, <https://eastasiaforum.org/2024/11/21/aseans-elusive-code-of-conduct-for-the-south-china-sea/>.

29 IISS, Asia-Pacific Regional Security Assessment 2024, *op cit*.

30 Cai, "Hedging for Maximum Flexibility", *op cit*.

31 Tan See Seng, "Riding the Chinese Dragon: Singapore's Pragmatic Relationship with China." in *Riding the Chinese Dragon: Singapore's Pragmatic Relationship with China*. Tokyo: The National Institute for Defense Studies, 2009.



Figure 7. Singapore and ASEAN | Wikipedia

The gradual erosion of ASEAN unity carries unfavourable strategic consequences for Singapore. Without ASEAN centrality, Singapore’s diplomatic reach, cover and leverage are reduced.³² As the US-China strategic rivalry increasingly permeates Southeast Asia, and governments bypass ASEAN by turning to minilateral or bilateral arrangements such as the Quad, AUKUS, and NATO’s IP4, intra-ASEAN divisions widen and risk eroding one of Singapore’s primary sources of regional strategic resilience, leaving it more exposed to direct pressures from great powers.

The progressive weakening of ASEAN centrality would impact Singapore negatively in four ways.

- **First**, a decline in consensus within ASEAN-led institutions reduces Singapore’s ability to address great power rivalry through regional frameworks. China’s influence on Laos, Cambodia and Myanmar through economic, diplomatic, and political instruments demonstrates inhibits joint statements and regional responses.
- **Second**, increasing polarisation within ASEAN affects the economic stability on which Singapore’s trade and prosperity depend. Consequently, Singapore’s scope of economic diversification efforts is narrowed and perceptions of its hedging strategy are increasingly contested.
- **Third**, diminishing intra-ASEAN cohesion narrows Singapore’s narrative space. If ASEAN loses its credibility as a regional platform, major powers can insert tendentious narratives to fill the gap. China might frame Singapore’s participation in US-led initiatives as undermining regional solidarity, whereas the US could interpret any reluctance by Singapore as implicit acceptance of Chinese influence. Left unchecked, these narratives may intensify domestic discussions and challenge the legitimacy of Singapore’s foreign policy choices. This issue is further exacerbated by Singapore’s multiracial social make-up which increases its susceptibility to divisive identity-based narratives.

³² Cai, “Hedging for Maximum Flexibility”, op cit.

- **Fourth**, the gradual decline in ASEAN's relevance reduces Singapore's diplomatic options. This hinders the credibility of rules-based initiatives, including COC negotiations and ASEAN-led forums, and the weakening of the ASEAN buffer limits Singapore's ability to avoid binary choices amid the intensifying U.S.-China rivalry.³³

In summary, although each scenario follows a distinct trajectory, collectively they call into question the durability of Singapore's strategic flexibility. Abrupt crises may restrict policy options, protracted disputes may undermine impartiality and gradual institutional decline may weaken diplomatic buffers. Collectively, these scenarios highlight Singapore's diminishing scope for manoeuvre amid escalating geopolitical rivalry.

Adaptive hedging: policy recommendations

Hedging continues to be Singapore's best strategy of engaging with both the US and China while developing multiple policy options without formal alignment. Hedging preserves autonomy when ambiguity persists, trade and diplomatic frameworks overlap, and multilateral institutions retain legitimacy. However, as great power rivalry intensifies and the tolerance for ambiguity decreases in Washington and Beijing, Singapore's policies previously seen as balanced are increasingly viewed as biased or evasive.³⁴ This geopolitical clash obliges Singapore to adapt old policies, and explore new ones. Below five policy recommendations are offered to suggest how Singapore can adapt its hedging strategy to changing conditions.

A first recommendation concerns US operational access in the event of conflict in Taiwan or the SCS. Washington's requests for logistics, transit or information sharing would likely become alignment tests for both the US and China. To maintain non-alignment, Singapore could divert geopolitical demands into transparent legal and administrative routines by setting bureaucratic criteria for facility use, grant time-bound permissions and confine activities to safety, evacuation, and humanitarian objectives.

Second, in response to threats imposed by armed conflicts in its region, Singapore's trade, finance and supply chain connections can be leveraged through actions such as targeted inspections, informal import delays, and the re-routing of high-value investments. In situations where exposure is significant, diversification alone may not provide full protection, and more severe measures may need to be contemplated; but resulting decisions should prioritise those measures that are necessary, reversible and non-exclusive.

Third, ASEAN fracturing can be addressed by initiating or participating in functional minilateral arrangements that align with ASEAN objectives, thereby shoring up ASEAN indirectly. These arrangements could address policy areas where consensus is limited, such as maritime security, digital governance, and crisis management. Under such circumstances, cooperation among like-minded states could help sustain ASEAN's relevance while preserving its unity and utility. An alternative is to move beyond the ASEAN framework to re-emphasise diplomatic engagement with multilateral institutions and legal frameworks.³⁵ Singapore could channel diplomatic efforts into the East Asia Summit (EAS) and initiate minilateral or bilateral issue-specific negotiations on disaster response, maritime safety, and supply chain resilience.

Fourth, a standard should be set for legal and normative signalling. When incidents normalise deviations from international law, ambiguity no longer offers reassurance. In these situations, Singapore can shift from general calls for restraint to explicitly referencing law, incident prevention protocols, and communication norms while avoiding language that suggest alignment.

³³ Ian Storey and Zhengyi Lin. *The South China Sea Dispute: Navigating Diplomatic and Strategic Tensions*. Singapore: ISEAS Yusof Ishak Institute, 2016.

³⁴ Bo, *Managing China-Singapore Relations amid US-China Rivalry*, op cit.

³⁵ Godfrey Baldacchino and Anders Wivel, eds., *Handbook on the Politics of Small States*. Cheltenham, Glos, UK: Edward Elgar Publishing, 2020.

Fifth, a threshold can be set above which disinformation pressure and subversion of domestic cohesion will not be tolerated. Identity-based messaging by external actors can make non-alignment appear disloyal, and would limit the range of policy options available to Singapore by increasing the risk of domestic backlash. This risk could be mitigated by consistent messaging based on upholding public goods and law, transparent cooperation criteria, and early engagement with domestic stakeholders.

Conclusion

Singapore's traditional strategy of hedging, which involves selective engagement with larger powers while preserving strategic autonomy, has facilitated stability and access across a range of contingencies. However, this approach is threatened by the deterioration of geopolitical conditions on which it rests, as exemplified in the three crisis scenarios sketched above. The likelihood of US-China conflict over Taiwan and the South China Sea, and ASEAN's inability to serve Singapore's interests, appear to be growing. Economic supply chains are increasingly politicised, and the enforcement of institutional safeguards such as international law and multilateral forums is less consistent. As a result, the mechanisms that previously supported Singapore's ability to hedge by means of non-alignment and co-engagement, and to avoid choosing sides, now offer less protection and instead may increase the risks of inaction.

However, despite intensifying US-China rivalry and erosion of international institutions and norms, Singapore retains significant agency. The attributes that once contributed to Singapore's effective hedging, namely institutional expertise, policy calibration and strategic messaging, if revitalised and adapted, can still be applied to issue-specific forms of engagement with great powers. Nonetheless, future options will be limited by increasing demands for alignment, reduced tolerance for ambiguity, and the erosion of structural safeguards. In an era when ambiguity once bought time, it may now require explicit decisions. Not choosing sides is a choice, and this choice is getting harder for Singapore to sustain.



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WILL AUKUS ENHANCE AUSTRALIA'S SECURITY? AN ASSESSMENT¹

Mr Rob Laurs, MFAT

Mainstream Australian leaders and security analysts believe that the trination AUKUS submarine project will significantly enhance Australia's security. But, Mr Rob Laurs points out, sceptics including former prime ministers and respected scholars have forwarded trenchant critiques of the joint endeavour. These include provocation of China, upsetting regional partners, over-reliance on an unpredictable United States, and the risks – political, cost, technical and operational – of SSN innovation, production, and deployment, any of which would reduce, not improve, Australia's security. Mr Laurs succinctly summarises the arguments for AUKUS pro and con, based on information available in June 2025, and invites readers to assess the outcome as political developments unfold. –Ed.

Introduction

The trilateral submarine development project between Australia, the UK, and the US (AUKUS) has been described as the most ambitious project ever attempted by the Commonwealth Government of Australia.² To its proponents, AUKUS represents a transformative national endeavour that will safeguard Australia into the middle of the 21st century, and an essential countermeasure to China's challenge of the Indo-Pacific's regional order.³ To sceptics, it represents a herculean undertaking fraught with financial, political, and strategic risk.

AUKUS in a nutshell

AUKUS aims to equip the Australian Defence Force (ADF) with eight nuclear-powered, conventionally-armed, Virginia-class submarines, known as SSN AUKUS, from the early 2040s.⁴ The US and the UK will collaborate to transfer nuclear propulsion technology to Australia, provide an interim submarine presence



Figure 1. Australia-United Kingdom-United States trilateral security partnership | Wikipedia

- 1 This is an abridged edition of an essay written by Mr Laurs during his study at the NZDF Command and Staff College in 2025, which won the inaugural Chief of Defence Force Essay Prize in 2025. The views herein are his alone and do not constitute official government policy. -Ed.
- 2 Readers seeking a New Zealand perspective may consult an essay by Wing Commander Sally Faulks RAAF, "AUKUS and the Trans-Tasman Relationship", published in this Journal, Vol Five 2025, 9-23.
- 3 Luke Gosling, "Deterring at a Distance: The Strategic Logic of AUKUS," Lowy Institute, 24 June, 2024, <https://www.lowyinstitute.org/publications/deterring-distance-strategic-logic-aukus> 26.
- 4 Ship Submersible Nuclear (SSN) is the vessel classification.

in Australian waters, and help construct this new class of hunter-killer submarines. The three countries will also pool expertise and jointly develop next-generation military capabilities.

On both sides of Canberra’s political aisle, nuclear-propelled submarines are deemed to be the ‘optimal deterrence machines’, best calibrated to defend the island continent’s maritime approaches and sea lines of communication against any future military threat.⁵ The SSNs, which boast greater stealth, speed, and endurance than conventional boats, form the centrepiece of Australia’s strategy of ‘deterrence by denial’.⁶ This approach is designed to impose risks on an aggressor distant from Australian territory. It would also empower Australia to play a more significant role in the Indo-Pacific’s security order. AUKUS signals a commitment to maintaining a favourable regional balance of power, and materially binds Australia to the US, its great power protector, at a time of intensifying US-China competition.⁷

On 15 September 2021, Australian Prime Minister Scott Morrison and his counterparts, US President Joe Biden, and UK Prime Minister Boris Johnson, unveiled a path-breaking tripartite security partnership “... to protect shared values and promote security and prosperity in the Indo-Pacific region”. The agreement has two principal lines of effort. Pillar One will entail the US and UK facilitating Australia’s acquisition of nuclear-propelled attack submarines. Pillar Two will expand three-way cooperation on advanced military technologies, including hypersonic missiles, artificial intelligence (AI), quantum computing, cyber and electronic warfare, and undersea capabilities; while also encouraging innovation and information sharing. From an Australian perspective, AUKUS presents the ADF with the best opportunity to modernise its military and acquire the cutting-edge weapons systems necessary for future warfighting and which can interoperate with its most trusted partners.

Figure 2. The AUKUS Agreement summarised | Summary by author

The China challenge, strategic anxiety, and ‘fear of abandonment’

For Australia, a middle power and maritime trading nation dependent on open sea lanes, China’s military assertiveness in the Indo-Pacific region causes acute strategic anxiety. Australian worries have grown as China has sought to establish a security advantage in the South China Sea and the Pacific Island region. In April 2022, during the Morrison Government’s tenure (2018-22), the Solomon Islands signed a security agreement with China that reportedly granted the Chinese naval access to the island nation’s ports. Canberra’s nightmare scenario remains the prospect of a People’s Liberation Army Navy (PLA-N) base in the South Pacific, which could compromise the ADF’s freedoms of operation, blockade critical energy, trade, and supply routes, and potentially project force against Australia’s east coast.⁹

⁵ Gosling, “Deterring at a Distance”, 4.

⁶ Robert Rushby, “Deterrence by Denial”, n.d., 2025, Sea Power Centre Australia - Royal Australian Navy, <https://seapower.navy.gov.au/deterrence-denial>

⁷ Penny Wong, “National Press Club Address, Australian interests in a regional balance of power”, 17 April, 2023, <https://www.foreignminister.gov.au/minister/penny-wong/speech/national-press-club-address-australian-interests-regional-balance-power>

⁸ Scott Morrison and Marise Payne, “Joint media statement: Australia to pursue nuclear-powered submarines through new trilateral enhanced security partnership”, 16 September, 2021, <https://www.minister.defence.gov.au/statements/2021-09-16/joint-media-statement-australia-pursue-nuclear-powered-submarines-through-new-trilateral-enhanced-security-partnership>

⁹ Malcolm Davis, “Australia Must Prepare for the Possibility of a Chinese Base in Solomon Islands,” The Strategist, 30 March 2022, <https://www.aspistrategist.org.au/australia-must-prepare-for-the-possibility-of-a-chinese-base-in-solomon-islands/>.

Although physical invasion is highly unlikely, Australians have living memory of being attacked by an expansionist Asian power. During World War II, Imperial Japan repeatedly bombed its northern coastline, notably Darwin, and conducted submarine raids along the eastern seaboard. Britain's retreat from Asia after the fall of Singapore in 1942 left Australia feeling exposed, and it immediately turned to the US for protection. As Allan Gyngell, the late doyen of Australian foreign policy thinking, has noted, these experiences inform Australia's strategic psyche, and induced a 'fear of abandonment' by its prevailing Anglophone security guarantor.¹⁰ Through AUKUS, Australia is aligning with both its former and current security patrons and engaging them in its priority region, the Indo-Pacific.

Australian angst is anchored in its strategic geography as much as its culture. Australia is a sparsely populated and vast landmass uneasily proximate to historically less stable and culturally different neighbours in both Southeast Asia and Melanesia. In academic Manqing Cheng's view, this sense of dislocation explains why AUKUS is such an appealing prospect for Canberra, because "Australia's body is in Asia, but its soul is in Britain and the US".¹¹

Along with mounting concerns over China's regional security gains and broader intentions, Australia has also recently suffered from Chinese coercive statecraft. Despite being its most significant export destination, the Morrison Government clashed with China's 'wolf warrior' diplomats over several contentious issues, including Canberra's ban on Huawei 5G technology, and calls for a WHO enquiry into the Chinese origins of COVID-19. In response, Beijing subjected Canberra to a sustained economic coercion campaign (2020-2022) that reportedly shaved almost 1 per cent off Australia's GDP.¹²

Arguably, Australia's key lesson from both this episode and the pandemic's disruption of global supply chains was the need to reinforce national resilience and to onshore its sovereign capabilities to insulate itself against external – principally China-related – threats during a time of global upheaval. These initiatives are now being institutionalised, including in the 2024 National Defence Strategy's concept of 'whole-of-nation' defence, of which AUKUS is the cornerstone. Accelerating Australia's AUKUS shipbuilding capacity, which will revitalise local industry, has been prioritised by political leadership. Central to both ventures is cultivating even tighter bonds with Australia's foremost ally, the US, including through another minilateral regional security forum, the Quad.



Figure 3. President Xi Jinping | Wikimedia Commons

AUKUS makes Australia more secure. The mainstream case

Viewed solely through the lens of deterrence and capability, AUKUS appears to enhance Australia's security. Australia is 'girt by sea', a three-ocean nation with the world's third-largest exclusive economic zone (EEZ) that covers 10% of the earth's surface. Given the immensity of this maritime expanse, submarines have always featured as a critical component of the RAN's fleet mix. However, the track record of both delivery and operation of submarines has been patchy, with past deals aborted with both Japan and, more controversially, with France. Canberra's military strategy has now been reconfigured to substantively extend its forward

¹⁰ Allan Gyngell, *Fear of Abandonment*, La Trobe University Press, 2021.

¹¹ Manqing Cheng. "AUKUS: The Changing Dynamic and Its Regional Implications". *European Journal of Development Studies* 2 (1):1-7 2022. <https://doi.org/10.24018/ejdevelop.2022.2.1.63>, 2.

¹² Naoise McDonagh, "Hidden Lessons from China's Coercion Campaign Against Australia", *Australian Institute of International Affairs*, 28 February, 2024, <https://www.internationalaffairs.org.au/australianoutlook/hidden-lessons-from-chinas-coercion-campaign-against-australia/>

defence. By acquiring SSNs, investing in other long-range strike capabilities, and deepening linkages with the US and UK, Australia aims to deter prospective Chinese threats far away from the Australian mainland. According to former ASPI Executive Director Dr Peter Jennings, “AUKUS is the best thing ... to give Xi pause to his international risk-taking”¹³

Australia’s attraction to SSNs as a principal asset to deter coercion is compelling. Nuclear-powered submarines have been hailed as the ocean’s ‘apex predator’. They hold an appreciable advantage over diesel-electric alternatives, due to their faster speed, greater endurance, and ability to carry larger payloads while remaining virtually undetected. As an asymmetric weapon, with almost limitless range and considerable firepower, nuclear-propelled subs will reduce Australia’s immediate vulnerabilities close to its shores. For example, their Tomahawk missiles can hit long-distance targets 1500km away. SSNs can operate farther from home, thereby pushing Australia’s defensive perimeter out into the contested maritime zones of the Indo-Pacific. As Australian Labor Party MP Luke Gosling puts it: ‘... the defence of Bondi ... begin[s] in the archipelagos to Australia’s north and islands to its east’¹⁴ This, in turn, creates a powerful deterrent effect as any would-be adversary will have to factor the possible presence of an RAN attack submarine lurking in its zone of operations. As security analyst Ross Babbage has pointed out, ‘AUKUS ... will force any major power considering an assault across the Western Pacific to re-think their plans’¹⁵



Figure 4. Dr Peter Jennings AO PSM

In addition to their anti-access, area denial (A2/AD) utility, which would narrow the ‘air-sea gap’ to Australia’s north and guard critical sea lanes, the SSNs also contribute to rebalancing the Indo-Pacific’s undersea power equation. As Manqing Cheng has observed, ‘... once Australia has possessed nuclear submarines, Australia’s weakness of being far-flung and isolated will instantly upgrade to an indispensable strategic strength’¹⁶ While, Australia’s eight new boats will not meaningfully shift the quantitative submarine balance in the region, when integrated into an allied force and patrolling distinct areas of operation, these vessels could become qualitatively impactful in a conflict, for example, through supporting US blockades, disrupting PLA-N deployments, or providing flank security.

Most significantly for Australia’s security, the upgraded submarine fleet would augment American sea power in the Indo-Pacific and increase Australia’s strategic value to either a US war effort or a phase of prolonged competition with China, which now boasts the world’s largest navy. For Australian strategists, AUKUS will substantively enhance the ADF’s lethality and convert the island continent into an essential base of operations for the US. By becoming a key node within the US’ wider Indo-Pacific strategy, Australia hopes to maintain a favourable regional military balance that safeguards its future prosperity and security.

When combined with the widespread prepositioning of US military resources in Australian territory, which is only set to increase as the Virginia class subs are handed over, AUKUS increasingly resembles an insurance policy. Australia’s AUKUS investments essentially ‘entrap’ the US into conflating its broader military interests in the Indo-Pacific with the concomitant need to defend its forward base in Australia. As veteran analyst Dr Ross Babbage has

13 Peter Jennings, “AUKUS sets a better direction for Australia’s defence”, *The Strategist*, 17 September, 2021, <https://www.aspistrategist.org.au/aukus-sets-a-better-direction-for-australias-defence/>.

14 Gosling, “Deterring at Distance”, 11.

15 Ross Babbage, “Deterrence and Alliance Power: why AUKUS submarines matter and how they can be delivered”, Lowy Institute, 29 July, 2024, <https://www.lowyinstitute.org/publications/deterrence-alliance-power-why-aukus-submarines-matter-how-they-can-be-delivered>

16 Cheng, “AUKUS: The Changing Dynamic”, 3.

concluded, ‘Because of AUKUS, the prospect of Australia needing to stand alone in the face of coercion or military attacks ... is now almost inconceivable.’¹⁷

Upon announcing AUKUS in 2021, Prime Minister Morrison referenced the deal’s additional benefits, including ensuring that the three partners retain a ‘technological edge’ by jointly developing Pillar Two technologies.¹⁸ Security consultant Kenneth Payne has concluded that future conflicts will hinge on the ‘distinction ... between the best algorithm and the rest’.¹⁹ Given the evolving nature of warfighting and the exponential advances of emerging security threats such as cyber, autonomous, and AI-enabled systems, high-end technical collaboration with AUKUS partners will be integral to future-proofing Australia’s national security. Although public announcements on these initiatives have been light on detail, it remains a realistic possibility that Pillar Two could prove at least as consequential as the SSNs and offer new capabilities to not only the ADF but also the wider security and scientific communities.

AUKUS makes Australia less secure. The sceptics’ case

Serious questions have been raised over whether AUKUS undermines Canberra’s sovereignty and exposes Australia to a range of risks and dependencies that may diminish its security. These include a potential forfeiture of Australia’s strategic autonomy to the US in the event of conflict, increasing Australia’s prominence as a target of China in a regional crisis, adverse Southeast Asian and the Pacific Island reactions to alleged nuclear proliferation and arms-racing, and concerns over Australia’s ability to afford and safely manage nuclear technology.

AUKUS detractors include two former Prime Ministers, Paul Keating and Malcolm Turnbull, who argue that Canberra risks ceding its sovereignty to Washington. Other prominent critics include the late Professor Allan Gyngell and academic Dr Hugh White, who have both expressed doubts over the US’ reliability as an ally and over the durability of American commitments to Asian security. To other AUKUS naysayers, the deal creates new risks and dependencies at a significant

cost (both in dollar terms and opportunity) and introduces considerable uncertainties. These range from antagonising China, Australia’s most valuable trading partner, and destabilising regional relationships with Southeast Asia and the Pacific Islands, to concerns over nuclear proliferation and safety. Further risks include inadvertent entanglement in any future American military interventions in Asia, and the spectre of great power war with China over Taiwan.

China’s initial reaction to AUKUS was predictably combative. Following news of the agreement, official Chinese spokespeople dismissed AUKUS it as an ‘Anglo-Saxon clique’ reflecting an ‘obsolete Cold War zero-sum mentality’.²⁰ At the time, China’s Acting Ambassador Wang Xining branded Australia ‘a sabre wielder’, not a ‘peace defender’.²¹ Since taking office, the



Figure 5. Former Prime Ministers Paul Keating and Malcolm Turnbull | Wikimedia Commons

¹⁷ Babbage, “Deterrence and Alliance Power”.

¹⁸ Morrison and Payne, “Joint Statement”.

¹⁹ Kenneth Payne, “Artificial Intelligence: A Revolution in Strategic Affairs?” *Survival* 60 (5): 7-32, 2018, doi:10.1080/00396338.2018.1518374

²⁰ Ministry of Foreign Affairs, “China Foreign Ministry’s Spokesperson’s Remarks”, 23 October, 2021, http://au.china-embassy.gov.cn/eng/zagx_0/sgxw/202308/t20230824_11131842.htm

²¹ Daniel Hurst, “‘Naughty Guy’: Top Chinese Diplomat Accuses Australia of ‘Sabre Wielding’ With Nuclear Submarine Deal,” *The Guardian*, 18 November 2021, <https://www.theguardian.com/world/2021/nov/19/naughty-guy-top-chinese-diplomat-accuses-australia-of-sabre-wielding-with-nuclear-submarine-deal>.

Albanese Government has worked assiduously to rehabilitate the bilateral relationship with Beijing from its Morrison Administration-era nadir.

In the event of military confrontation over Taiwan or escalation in the South China Sea that draws the US into conflict with China, Australia (as a US staging post) would likely be perceived by China as a second- or third-order threat. The high-value US military assets on Australian soil (especially Pine Gap), along with ADF bases, could become targets. Former Prime Minister Paul Keating mocked Australia's proposed eight SSNs as a 'battlefield non-factor' against China's might, akin to 'throwing toothpicks at a mountain'.²² And while Canberra's role in any conflict scenario will be subordinated to Beijing's overriding focus on countering Washington, AUKUS has created a security dilemma that positions Australia in opposition to China. Should the bilateral relationship deteriorate again, China could seek to reimpose even more stringent restrictions on Australian exports or find other ways to undermine its national security, for example, through offensive cyber or 'grey-zone' operations.

Just as AUKUS may notionally place Australia in Chinese crosshairs, its military reliance on the US creates its own vulnerabilities in ways that may impinge on Australian sovereignty. The Biden Administration's top Indo-Pacific official Kurt Campbell reportedly said AUKUS got the Aussies 'off the fence', locking in Canberra's support 'for the next forty years'.²³ For AUKUS opponents, this is disturbing evidence that Canberra's defence and foreign policy choices may be constrained or countermanded by Washington. Australia will remain dependent on ongoing American generosity throughout the AUKUS timeline from training through to delivery. As the Lowy Institute's Sam Roggeveen concludes, '[AUKUS] ties Australia more closely than ever before to America's military strategy for the region and makes it harder for Australia to back away if it doesn't like the direction that the United States is taking'.²⁴

Despite denials from Australia, this implied dependency could include pre-committing RAN submarines to any US-led combat operations such as a potential conflict over Taiwan. This line of thinking maintains that Washington would exercise a veto over Canberra's security policy, thereby 'sleepwalking' Australia into a US war with China.²⁵ At a practical level, doubts also linger over whether the US is willing to give its Virginia-class submarines over for exclusive Australian use if it needs them as tensions with China mount and American submarine-building capacity idles along, producing only 1.2 boats per year.²⁶



Figure 6. USN Virginia class submarine | US Navy

Other voices, including Keating, Turnbull, and Gyngell, have queried the wisdom of siding so entirely with Washington at a time of alarming US domestic political turmoil, particularly as the second Trump Administration pursues 'America First' isolationism and admonishes its allies. Dependence on AUKUS is a 'massive bet' given US political whims. Even Washington's 'staying power in Asia' and long-term commitment to contesting China's regional rise are in question.²⁷ ANU's Professor Hugh White has suggested that as American power fades, Australia should

22 Gosling, "Deterring at a Distance", 10.

23 Hugh White, "Fatal Shores: AUKUS is a grave mistake", Australian Foreign Affairs, Issue 20, February 2024, 6-50, 42.

24 Sam Roggeveen, "Sleepwalk to war: Correspondence", Quarterly Essay, 87: 96-100, 2022.

25 Hugh White. "Sleepwalk to War: Australia's Unthinking Alliance with the US", Quarterly Essay, June 2022, <https://www.quarterlyessay.com.au/essay/2022/06/sleepwalk-to-war>

26 Gosling, "Deterring at a Distance", 8.

27 Paul Keating, "Morrison is making an enemy of China - and Labor is helping him." Sydney Morning Herald, 23 September 2021, <https://www.smh.com.au/world/asia/morrison-is-making-an-enemy-of-china-and-labor-is-helping-him-20210921-p58tek.html>

prepare for the reality of a region ‘which is no longer dominated by our mates, but by Asian great powers’.²⁸ By this logic, mortgaging Australia’s future defence needs on an unreliable and self-serving US undermines Australian security and, in White’s view, urgent consideration should be given to abandoning AUKUS.

AUKUS has also created regional unease with some Southeast Asian and Pacific Island nations expressing anxiety over militarisation, nuclear safety and proliferation, and arms-racing. As the Lowy Institute’s Susannah Patton observes, ‘... AUKUS was largely met with wariness or opposition in Southeast Asia’.²⁹ For example, Indonesia (Australia’s most important partner within ASEAN) released a Foreign Ministry statement outlining that it was ‘deeply concerned over the continuing arms race and power projection in the region’, and implored Australia to remain committed ‘towards regional peace, stability and security’.³⁰ Several Pacific leaders also responded negatively to AUKUS, triggering sensitivities over the region’s painful legacy of nuclear testing and raising the unwelcome possibility of Australian nuclear submarines traversing the South Pacific’s nuclear-free zone.

Australia has repeatedly stressed that it will remain compliant with both its nuclear non-proliferation obligations under international law and will be a responsible steward of nuclear technology, including nuclear waste disposal. Domestically, Australia has also reiterated its confidence that it can safely import nuclear technology without the support of a civilian nuclear industry. However, due to Australia’s inexperience in managing nuclear power, numerous concerns persist over safety, training, and environmental issues.

Will AUKUS happen?

Whether AUKUS theoretically makes Australia safer or invites more risk should be relegated below an even more pertinent question: will AUKUS actually happen? It undoubtedly constitutes a ‘high-stakes gamble’, fraught with myriad unknown variables.³¹ As with any major defence procurement project, it is highly likely to encounter time, cost, construction, and workforce pressures. Given the novelty, complexity and scale of AUKUS’ ambition and its inherent reliance on the sustained political will and engagement of industrial bases across three democracies over multiple election cycles, the prospect of delays, variations in design, workarounds and cost blow-outs are amplified.

Furthermore, technological advances (for example, subsurface sensing abilities that can more readily detect SSNs), political fluctuations, and international events could also foreseeably deflect AUKUS from its planned trajectory. For instance, the National Defence Strategy in 2024



Figure 7. Professor Hugh White | Australian National University

28 Hugh White, “Fatal Shores”, 50.

29 Susannah Patton, “Widening the Gap: How South-East Asia views AUKUS”, Australian Foreign Affairs, Issue 20: February 2024, 51-68. 56.

30 Ibid, 55.

31 Andrew Davies, “Sunk Costs: Our high-stakes gamble on nuclear-powered submarines”, Australian Foreign Affairs, Issue 20: February 2024, 87-100. 87.

narrowed Australia's strategic warning time for possible regional conflict to only 10 years.³² President Xi Jinping has reportedly ordered the PLA to be battle-ready to reclaim Taiwan by 2027 (at least a decade before Australia acquires its first AUKUS SSN).³³

In academic Elizabeth Buchanan's view, the vagaries of US and Australian domestic politics over the lengthy time horizon for delivery mean that 'the SSN-AUKUS probably won't materialise', and the current belief that the SSNs will become operational as planned appears to be heroically optimistic.³⁴

The opportunity cost of spending (at least) AUD368 million of taxpayer dollars on advanced submarines yet to be blueprinted, built in domestic shipyards yet to be constructed, and crewed by highly-specialised nuclear submariners yet to be trained, has left multiple commentators sceptical. Hugh White has called out Canberra's 'strategic illusions'.³⁵ As an alternative, White advocates deploying a complementary mix of underwater drones and land- and air-based systems to erect a defensive shield. He proposes that a 24-strong flotilla of conventionally-powered submarines would be both more attainable and provide more persistent deterrence 'on station' than the eight mooted SSNs.³⁶

Roggeveen, like White, takes a similarly contrarian view. He assumes that the US will eventually disengage from Asia and concede regional dominance to China, so Australia will need to provide for its own security. Roggeveen claims the China threat is overblown and AUKUS is a needless provocation, asserting that 'Australia's biggest strategic asset is distance ... [yet AUKUS] is effectively an attempt to compress that distance when we should be exploiting it'.³⁷ He prescribes adopting an 'echidna strategy', focussed on making Australia's homeland defences impregnable in a 'spiky but unthreatening' way, and strengthening regional partnerships.³⁸ Moreover, Gosling, although an AUKUS champion, has calculated that, for the same price as AUKUS, Australia could instead buy 'fifty B-21s, seventy *Hunter*-class frigates, a thousand more F-35s' or reallocate spending on domestic priorities.³⁹

As Australia embarks on AUKUS, it is worth reviewing Gyngell's critical assessment that '... there has been no formal articulation of the reasons for [AUKUS] ... other than sales patter from successive governments'.⁴⁰ This alleged lack of explanation means Australia is plotting its course without a thorough examination of all other possibilities or broader consideration of AUKUS' unintended consequences.

Conclusion

AUKUS represents an era-defining shift in Australia's defence posture. In Canberra's response to its concerns over the region's turbulent geopolitical landscape exacerbated by the US-China rivalry, Australia has, in effect, nailed its colours firmly to the American mast. AUKUS decisively consolidates Australia's security alignment with both the US, its ANZUS ally, and with the UK, and all three countries regard cooperation as a vital counterweight to China's efforts to alter the Indo-Pacific's balance of power.

32 Australian Government, 2024 National Defence Strategy. Canberra, 2024, 5.

33 Demetri Sevastopulo and Kathrin Hille, "China Improves Ability to Launch Sudden Attack on Taiwan, Officials Say," *Financial Times*, 26 May 2025, <https://www.ft.com/content/c82eb38e-87cb-4468-b013-0f7fce0fc54b>.

34 Elizabeth Buchanan, "Pit Stop Power: How to use our Geography", *Australian Foreign Affairs*, Issue 20: February 2024, 69-86, 82.

35 White, "Fatal Shores", 43.

36 *Ibid*, 23.

37 Sam Roggeveen, "Spiky Questions Remain for AUKUS Proponents," *Lowy Institute*, 19 March, 2024, <https://www.lowyinstitute.org/publications/spiky-questions-remain-aukus-proponents>.

38 Gareth Evans, "A Compelling Voice for Rethinking Australia's National Security," *Lowy Institute*, 29 August, 2023. <https://www.lowyinstitute.org/the-interpreter/compelling-voice-rethinking-australia-s-national-security>.

39 Gosling, "Deterring at a Distance". 24.

40 Jonathan Pearlman, "Editor's note: Dead in the Water", *Australian Foreign Affairs*, Issue 20: February 2024, 3-5, 3.

The AUKUS decision is necessarily a strategic trade-off by Australia. Despite potentially increasing both Australia's risk exposure to Chinese threats and encumbering its sovereign decision-making, AUKUS provides Australia with the means to significantly boost its hard power and comprehensively strengthen its national security. Canberra has implicitly accepted these costs in exchange for tighter Anglo-American security integration and game-changing combat capabilities, notably, nuclear-powered submarines, as well as enhanced access to leading-edge military technologies. If successful, AUKUS will enable the ADF to leap ahead in its military modernisation, arming Australia with the ability to deter China's regional advances and defend its trade-critical sea lines of communication and maritime approaches.

Nevertheless, AUKUS will test Australia's national capacity on multiple levels over the coming decades. The strategic intentions of the US and China will impact the project profoundly. Australia's AUKUS 'bet' is inescapably premised on America's continued presence in Asia to balance a rising and potentially hostile China. But if the erratic policies of the Trump 2.0 Presidency are any indication, Washington's post-WWII commitments beyond its borders are no longer guaranteed. If AUKUS falters, Australia, as both the ultimate beneficiary and price-taking junior partner, could find itself burdened with sunk costs and a less-than-credible deterrent. Readers seeking a definitive resolution of Australia's national security debate are advised to suspend judgement on AUKUS coming to fruition as envisaged, especially under such geopolitically fluid circumstances.

Postscript

Since June 2025, multiple developments have confirmed that the AUKUS pact remains both strategically viable and politically intact, following months of uncertainty while the Trump Administration undertook a formal review. Despite this, Canberra's generational ambition is challenged by severe industrial capacity constraints impacting all three partners – and serious concerns over the US's ongoing reliability and unilateral strategic direction.

In October 2025, senior US officials publicly reaffirmed President Trump's support for AUKUS, indicating that the agreement would proceed "full steam ahead" following consultations with Prime Minister Albanese.⁴¹ This messaging dispelled doubts about the White House's commitment to the deal. Various bilateral and trilateral Ministerial engagements have also reiterated that three-way submarine cooperation is fundamental to robust deterrence.^{42 43 44} In December,



Figure 8. Anthony Albanese, Prime Minister of Australia | Wikipedia

- 41 Brad Ryan, "Pentagon's AUKUS Review Finds Areas to Put Nuclear Submarine Pact on 'strongest Possible Footing,'" ABC News, 5 December 2025, <https://www.abc.net.au/news/2025-12-05/aukus-review-pentagon-donald-trump-administration/105588512>.
- 42 Penny Wong, "Joint Fact Sheet on Australia-U.S. Ministerial Consultations (AUSMIN) 2025." Media release, 9 December 2025. <https://www.foreignminister.gov.au/minister/penny-wong/media-release/joint-fact-sheet-australia-us-ministerial-consultations-ausmin-2025>.
- 43 Australian Government, Department of Defence, "AUKUS Defence Ministers' Meeting - Joint Statement," Minister for Defence, 11 December 2025. <https://www.minister.defence.gov.au/statements/2025-12-11/aukus-defence-ministers-meeting-joint-statement>.
- 44 Richard Marles, "Joint Statement on the Australia-United Kingdom Nuclear-Powered Submarine

it was reported that the Pentagon's review process had endorsed the AUKUS submarine pathway.

That same month, the US released its 2025 National Security Strategy, which prioritised reasserting American primacy over the Western Hemisphere (an 'Americas First' reset), alongside preserving open sea lanes in the Indo-Pacific. This Strategy named Australia as a key regional ally, amid broader US expectations that capable partners bear greater responsibility for collective security. Australia will release an updated National Defence Strategy later this year, which is expected to refine its strategy of 'deterrence by denial' and provide further details on AUKUS progress.

Despite these political signals, numerous doubts persist over the feasibility of shipbuilding timelines and the potential for both schedule slippage and capability gaps. Both the UK and the US face substantial workforce, supply chain and productivity challenges, which could hinder their ability to meet Australian demand without compromising their own fleets' needs. According to one analysis, American shipyards need to almost double their annual output of attack subs to remain on track to hand over the Virginias to Australia.⁴⁵

In addition, Washington's willingness to fully relinquish control of even a handful of its undersea assets is still stirring debate in US policy circles. For example, a US Congressional Research report, published in January 2026, floated an alternative "military division of labour" with Australia bluntly reconfigured as a subordinate and auxiliary platform for American power projection.⁴⁶ The report suggests that instead of supplying Australia with subs, they could instead be retained under US Navy command, operating out of ADF bases in a conflict scenario. In this telling, Australia's military spending would consequently be diverted into non-submarine alternatives including long-range strike and counter-strike weapons. While one possible off-ramp, the research also contemplates delivering attack submarines to the RAN as agreed, praising AUKUS collaboration as a necessary, force-multiplying response to China's military buildup.

Outwardly, Canberra remains fully invested in its bedrock alliance with Washington, which will mark its 75th anniversary this year. However, Australia's alliance management skills will be sorely tested. A newly irresponsible US is actively dismantling the rules-based order and using both coercion and economic leverage to extract relative gains from others, including close friends. While Australia has few options but to stay the course with AUKUS as its primary vehicle for enhancing forward defence and credible deterrence, the project's delivery now rests uncomfortably on a partnership with an unapologetically revisionist great power. As Australia's 'Plan A', AUKUS remains indispensable to Canberra's strategy – but it will unfold in far choppier and more uncertain waters.

Partnership and Collaboration Treaty." Media statement, 26 July 2025. <https://www.minister.defence.gov.au/statements/2025-07-26/joint-statement-australia-united-kingdom-nuclear-powered-submarine-partnership-collaboration-treaty>

45 Mallory Shelbourne, "Trump Backs Selling Submarines to Australia Under AUKUS Agreement," USNI News, 20 October 2025. <https://news.usni.org/2025/10/20/trump-backs-selling-submarines-to-australia-under-aukus-agreement>

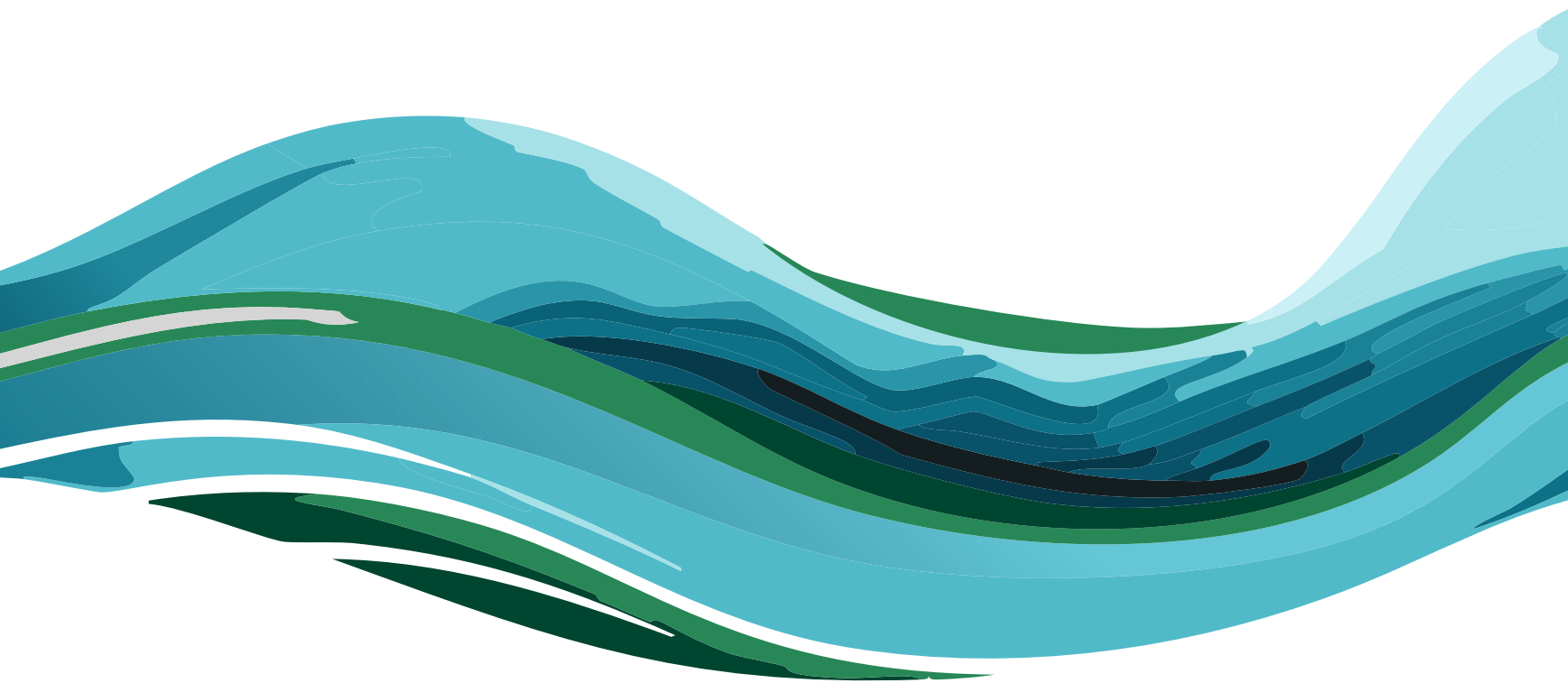
46 Ronald O'Rourke, Navy Virginia-Class Submarine Program and AUKUS Submarine (Pillar 1) Project: Background and Issues for Congress, RL32418. Washington, DC: Congressional Research Service, Library of Congress, 2026.



MR ROB LAURS, MFAT

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PART 4: LESSONS



THE RUSSO-UKRAINE WAR: LESSONS FOR INDO-PACIFIC SECURITY¹

Commander Allissa Auld, RAN

Despite significant differences, the Russo-Ukraine War has implications for security preparedness in the Indo-Pacific, notes Commander Allissa Auld. In light of Ukraine's adaptations as assessed in a PMESII-PT national power framework, she recommends development by Indo-Pacific partners of 'virtual depth' through agile SLOCs, resilient industry, hardened infrastructure, and societal preparedness; adoption of lawfare and insurance diplomacy as coercive tools; and strengthening of industrial and informational resilience. New Zealand and Australia are counselled to prioritise networks, foster a mission command culture, adopt uncrewed systems, and build adaptive industrial capacity to enable sustained operations in a contested Indo-Pacific battlespace. -Ed.

Introduction

This essay explores lessons from the Russo-Ukrainian War that might be adapted to enhance maritime security in the Indo-Pacific. The original essay assessed comparisons using ten variables.² Each was evaluated using the PMESII-PT framework to quantify similarities of power factors between the European and Indo-Pacific theatres. Originating in U.S. joint planning, the PMESII-PT scheme systematically dissects state and non-state power across eight interrelated dimensions: political governance and alliances, force posture, economic resilience, societal cohesion, information control, infrastructure and logistics, geography, and temporal endurance.^{3,4} See Figure 1. This abridged version of my essay selectively summarises my qualitative findings and consolidates them in the PMESII-PT framework. This illuminates not only the power factors differentiating the two regions but also the potential for adaptation of lessons transcending the differences.⁵

1 This is an abridged version of an essay Commander Auld wrote while studying at the NZDF Command and Staff College in 2025. Opinions expressed herein are her own. -Ed.

2 Termed 'threads', these variables include: distributed ISR and kill-chain compression; attributable autonomy and rapid iteration; mission-command resilience; electromagnetic and cyber integration; industrial tempo as combat power; A2/AD asymmetry; information and strategic communication as weapons; lawfare and economic coercion; geography and societal resilience; and the re-emergence of attrition warfare.

3 Joint Chiefs of Staff, *Joint Publication 5-0: Joint Planning*, II-7-II-9, 2020. https://irp.fas.org/doddir/dod/jp5_0.pdf

4 Peter Spilý, "Insight into Contemporary Operational Environment," *Security Dimensions: International & National Studies* 11(11) (2014), 132-40.

5 Readers wishing to view the methodology and quantitative findings in the original essay are invited to contact the author directly at allissa.qbm2h@aleeas.com -Ed.

- Political governance, law, and alliances
- Military force posture
- Economic resilience
- Social cohesion
- Information control
- Infrastructure and logistics capacity
- Physical and geographic influences
- Temporal endurance

Figure 1. The PMESII-PT factors of national power summarised.⁶

While the Russo-Ukrainian War offers a rich empirical case study in contemporary warfare, its lessons are not universally portable. The Black Sea campaign unfolded within a compact, legally bounded, and institutionally dense environment that differs fundamentally from the Indo-Pacific's vast, fragmented, and legally plural maritime system. Accordingly, lessons from Ukraine should be understood not as templates to be replicated, but as mechanisms whose effects depend on environmental factors. Where political cohesion, ISR density, legal access, and industrial depth can be deliberately constructed, similar outcomes may be achievable; where they cannot, those same mechanisms may invert or fail. The value of the Ukrainian case, therefore, lies not in imitation but in disciplined adaptation. The lasting lesson that the Russo-Ukrainian War teaches our region is that modern warfare favours those who can connect, adapt, and endure faster than the enemy.

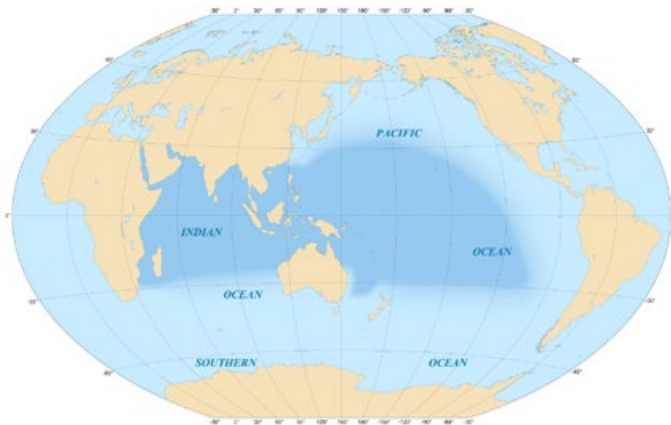


Figure 2. The Indo-Pacific Region | Eric Gaba /Wikimedia Commons user: Sting



Figure 3. The Black Sea | Wikipedia

⁶ For explication of the PMESII-PT framework the reader may consult Joint Chiefs of Staff, *Joint Publication 5-0: Joint Planning* (Joint Chiefs of Staff, 2020). https://irp.fas.org/doddir/dod/jp5_0.pdf and Milan Vego, *Operational Art: Theory and Practice*. Routledge, 2025. <https://doi.org/10.4324/9781003333685>.

Russo-Ukraine and Indo-Pacific theatres compared

The Russo-Ukraine war has unfolded in several phases (2014, 2022, 2026), at several geographic points of collision (Crimea, Kiev, the Donbass, in the Black Sea, and inside Russia) and across all military domains (land, air, maritime, space, cyber-space).



Figure 4. Russian invasion of Ukraine 2014 | Wikipedia

This essay does not attempt to summarize this complex war; it is still raging, and may yield yet more lessons for Indo-Pacific security. Readers wishing to review the war in its many facets are referred to the copious literature available on line, a selection of which, useful to this author, appears in this footnote.⁷ Rather, this essay adapts the PMESII-PT framework of national power to analyse the power environment of the European and Indo-Pacific theatres, to compare them, and to draw relevant lessons.

7 Seth G. Jones, "Russia's Ill-Fated Invasion of Ukraine: Lessons in Modern Warfare," *CSIS Briefs*, June 2022. <https://www.csis.org/analysis/russias-ill-fated-invasion-ukraine-lessons-modern-warfare>. Aurel Popa and Sorin Learschi, *Russia's Strategic Naval Collapse (2022-2025) in the Context of the War in Ukraine*. Maritime Security Forum Study, 2025, chapter 2. <https://www.forumsecuritatemaritime.ro/russias-strategic-naval-collapse-2022-2025-in-the-context-of-the-war-in-ukraine-2/>. Edward Black and Sidharth Kaushal, "Black Sea Significance to European Security," 3 October 2025. <https://www.rusi.org>. Marcus Willett, "The Cyber Dimension of the Russia-Ukraine War," *Survival*. London: IISS, 64, no. 5 (2022): 11-24. <https://doi.org/10.1080/00396338.2022.2126193>. Huw Dylan and Thomas J. Maguire, "Secret Intelligence and Public Diplomacy in the Ukraine War," *Survival*. London: IISS, 64, no. 4 (2022): 2-19. <https://doi.org/10.1080/00396338.2022.2103257>. Adam Kowalski, *Disinformation and Russia's War of Aggression against Ukraine: Threats and Governance Responses*, OECD Policy Responses on the Impacts of the War in Ukraine, OECD Policy Responses on the Impacts of the War in Ukraine (2022), <https://doi.org/10.1787/37186bde-en>. Liam Collins and John Spencer, "Urban Warfare Project Case Study #12: Battle of Kyiv - Modern War Institute," Modern War Institute, 21 February 2025. <https://mwi.westpoint.edu/urban-warfare-project-case-study-12-battle-of-kyiv/>. Oleksandra Molloy, *Occasional Paper No 29 - Drones in Modern Warfare: Lessons from the War in Ukraine*. Australian Army Research Centre, 2024. <https://doi.org/10.61451/267513>.

A PMESII-PT assessment

Political governance, law and alliances

The political environment differs sharply between Eastern Europe and the Indo-Pacific. In the Black Sea, the Montreux Convention grants Türkiye discretionary control of the Dardanelles Straits. This enables wartime closure to belligerent warships, creating a legally bounded maritime Black Sea theatre after February 2022 that constrained Russia's escalation and reinforcement options.⁸

The Indo-Pacific, by contrast, operates under the United Nations Convention on the Law of the Sea (UNCLOS), whose baseline freedoms such as navigation, overflight, and Economic Exclusion Zone (EEZ) access are more diffuse and contested.⁹ Without a gatekeeper regime like the Montreux Convention, constraints emerge through competing interpretations of military activities in the archipelago and EEZ. This legal pluralism heightens the importance of coalition alignment and narrative framing. The US, though not a signatory, treats UNCLOS as customary law and generally complies with it. In contrast, the People's Republic of China (PRC), as a ratifying party, is legally bound by UNCLOS but ignores it in the South China Sea.¹⁰ In the absence of geographically decisive chokepoints, lawfare in the Indo-Pacific functions as a mechanism of access control – shaping basing rights, insurance risk, port availability, and coalition legitimacy in ways that directly condition operational freedom of action.

Geopolitically, Europe's dense institutional order contrasts with the Indo-Pacific's plural, consensus-based architecture. ASEAN emphasises inclusivity and non-alignment over enforcement, unlike Europe's closer defence integration.^{11,12} As a result, regional stability depends less on collective deterrence and more on shared interpretations of the Rules-Based International Order (R BIO).¹³ Lawfare (using legal and administrative instruments for strategic effect) has become a dominant tool for coercion through legitimacy claims, economic leverage, and bureaucratic control.¹⁴

Authoritarian centralisation also shapes coercive dynamics. Both Russia and China rely on elite cohesion and centralised authority for regime stability, whereas Ukraine's democratic pluralism enables distributed legitimacy and decision-making consistent with Western norms.¹⁵ The Chinese Communist Party (CCP) maintains an extensive paramilitary and maritime enforcement network that fuses internal security with external projection, underscoring the regime's intent to safeguard continuity through coercive reach.¹⁶

Military force posture

The military environments of Eastern Europe and the Indo-Pacific impose distinct operational logics. The Black Sea is a compact, enclosed littoral space with short, exposed SLOCs and a single chokepoint at the Turkish Straits. Distance and time compress: coastal batteries and

8 Glen Segell, "Maritime Passage, the Montreux Convention (1936) and the Conflict between Russia and Ukraine," *International Journal of Maritime History*. London: IJMH, 35, no. 4 (2023), 643-58. <https://doi.org/10.1177/08438714231205086>.

9 "UNCLOS: United Nations Convention on the Law of the Sea," 1982. <https://www.unclos.org/>.

10 Bureau of Oceans and International Environmental and Scientific Affairs, *People's Republic of China: Maritime Claims in the South China Sea*, no. 150, Limits in the Seas (United States Department of State, 2022), 5-11.

11 ASEAN, "ASEAN Outlook on the Indo-Pacific," 22 June 2019, 1-5. https://www.asean.org/wp-content/uploads/2019/06/ASEAN-Outlook-on-the-Indo-Pacific_FINAL_22062019.pdf.

12 NATO, "The North Atlantic Treaty," 4 April 1949. https://www.nato.int/cps/en/natohq/official_texts_17120.htm.

13 Julinda Beqiraj et al., "The Rules-Based International Order: Catalyst or Hurdle for International Law?," *British Institute of International and Comparative Law*, 31 March 2024, 7-9. <https://www.biicl.org/publications/the-rules-based-international-order-catalyst-or-hurdle-for-international-law>.

14 Jill I. Goldenziel, "Law as a Battlefield: The U.S., China, and the Global Escalation of Lawfare," *Cornell Law Review* 106, no. 5 (2021), 1092-93.

15 Timothy Frye, *Weak Strongman: The Limits of Power in Putin's Russia* (Princeton University Press, 2021), chapter 4. <https://doi.org/10.1515/9780691216980>.

16 Ryan Martinson, "China Maritime Report No. 2: The Arming of China's Maritime Frontier," *CMSI China Maritime Reports*, 1 June 2017, 1-18. <https://digital-commons.usnwc.edu/cmsi-maritime-reports/2>.

sensors cover most approaches, and sea control can be contested with limited force density. The Indo-Pacific, by contrast, spans vast oceans and multiple chokepoints (Malacca, Lombok, Luzon, Sunda), favouring platforms with speed, range and endurance. Therefore, logistics, not force concentration, is decisive, requiring distributed sustainment and forward basing.¹⁷

A2/AD systems reflect this divergence. In the Black Sea, coastal missiles, SAMs, and mines create near-total denial across a confined basin; in the Indo-Pacific, similar effects require dispersed networks across archipelagos and SLOCs. What is decisive in a small sea demands far greater redundancy and depth in a continental oceanic system.¹⁸

ISR and kill-chain dynamics also differ. Europe's dense military-commercial ISR enables short sensor-to-shooter loops; in the Indo-Pacific, fragmentation across vast ranges introduces latency.¹⁹ This elevates persistent sensing, over-the-horizon ISR, and coalition data fusion to compress decision cycles. When ISR is sparse, systems must rely on autonomy, endurance, and precise cueing.²⁰

Interestingly, C2 philosophy remains similar across the two theatres. The flexible, mission command-focused C2 of Ukraine is preferred by Western militaries, in particular Australia and New Zealand, whereas the rigid C2 of Russia is similar to China.²¹

Economic resilience

Economic geography determines both the centre of gravity and vulnerability of a maritime theatre. The Black Sea economy concentrates around a few critical ports (Odesa, Novorossiysk, Constanța, and Varna) linked to continental energy and transport networks. Infrastructure is dense but regionally bounded: limited undersea cables, short-haul sea lanes, and pipelines such as TurkStream. Damage to a single node, as shown by the Nord Stream and TurkStream sabotage incidents (2022–23), causes sharp regional effects yet remains geographically containable because resilience is available through European land corridors.²²

The Indo-Pacific, by contrast, forms the global maritime artery – over 60 % of world trade by value transits its routes.²³ Port density stretches from Singapore and Shanghai through Busan and Manila to Australia's east coast. Beneath these routes lies the densest network of submarine cables on earth, handling 95 % of intercontinental data, with clusters in the South China Sea, Luzon Strait, and Indian Ocean rim vulnerable to disruption.^{24, 25} Regional energy dependence compounds risk, with seaborne trade being critical to most state energy supplies, in particular for Australia and New Zealand.

17 Milan Vego, *Operational Art: Theory and Practice* (Taylor & Francis Group, 2025), chapter 3. <http://ebookcentral.proquest.com/lib/vuw/detail.action?docID=31752524>.

18 Alessio Patalano and Dan Hallett. "The Strategic Significance of the Maritime Theatre in the Russia-Ukraine War." *The RUSI Journal* (London) 170, no. 3 (2025), 12–26. <https://doi.org/10.1080/03071847.2025.2491887>. Also see Alessio Patalano, "The Maritime War in Ukraine: The Limits of Russian Sea Control?" The Hague Centre for Strategic Studies, December 2024. <https://hcss.nl/report/the-maritime-war-in-ukraine-the-limits-of-russian-sea-control/>.

19 RAND, *New Directions for Projecting Land Power in the Indo-Pacific: Contexts, Constraints, and Concepts*. RAND Corporation, 2022, 39–48. <https://doi.org/10.7249/RR1672-1>.

20 Mark Hvizda, Bryan A. Frederick, Alisa Laufer, Alexandra T. Evans, Kristen Gunness, and David A. Ochmanek. *Dispersed, Disguised, and Degradable The Implications of the Fighting in Ukraine for Future U.S.-Involved Conflicts*. RAND Corporation, 2025, 10–11.

21 M. Taylor Fravel, *Active Defense: China's Military Strategy since 1949*. Princeton University Press, 2019, 27–30. <https://doi.org/10.2307/j.ctv941tzj>.

22 Nina Chestney, "Exposed Europe Steps up Energy Defences after Nord Stream 'Sabotage,'" *Energy*, Reuters, 30 September 2022. <https://www.reuters.com/business/energy/exposed-europe-steps-up-energy-defences-after-nord-stream-sabotage-2022-09-30/>.

23 NATO, *Regional Perspectives Report on the Indo-Pacific*, Strategic Foresight Analysis (2023), 11. <https://www.act.nato.int/wp-content/uploads/2023/05/regional-perspectives-2022-07-v2-2.pdf>.

24 Brendon J. Cannon, "Undersea Cable Security in the Indo-Pacific: Enhancing the Quad's Collaborative Approach," *Marine Policy* 171 (January 2025), 106415. <https://doi.org/10.1016/j.marpol.2024.106415>.

25 Samuel Bashfield, "Seabed Warfare in a New Era of Geotech Conflicts," *Orfonline.Org*, 17 March 2025. <https://www.orfonline.org/expert-speak/seabed-warfare-in-a-new-era-of-geotech-conflicts>.

Further, Black Sea economies operate within EU-aligned regulatory regimes that temper coercion through transparency and sanctions.²⁶ The Indo-Pacific blends state-capitalist and liberal-market models with China’s industrial policy and the Belt and Road Initiative, contrasting with Japan’s and Australia’s market systems, creating uneven capacity for economic statecraft.^{27,28} This makes resilience and trade diversification central to strategic autonomy.



Figure 5. Submarine cables | Wikipedia

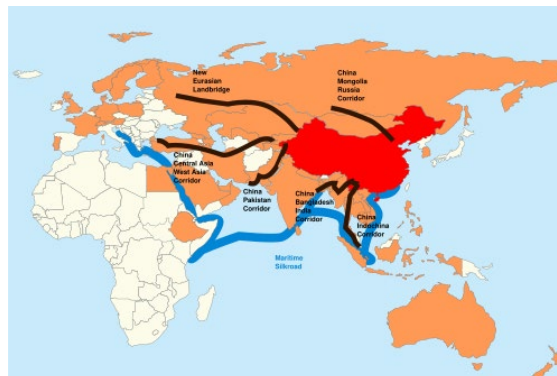


Figure 6. China’s Belt and Road Initiative | Wikipedia

Social cohesion

The social foundations of the Russo-Ukrainian and Indo-Pacific theatres differ as markedly as their geography. In Eastern Europe, dense urbanisation and cultural closeness shaped a conflict rooted in political identity. Ukraine’s social cohesion strengthened under invasion: national identity, digital mobilisation, and civic literacy fostered unity and maintained morale among a population of over 36 million. This ‘whole-of-society’ defence transformed volunteers, diaspora networks, and private industry into an extension of the national logistics system.²⁹ Conversely, Russian social control, anchored in managed media, coercive patriotism, and limited tolerance for protest, secured domestic stability, but constrained feedback and innovation. The absence of transparent social dialogue revealed the fragility of authoritarian cohesion under attrition.³⁰

The Indo-Pacific’s social landscape is diverse and scattered, with over half of humanity across over forty states with different governance traditions. Geography and distance weaken shared threat perceptions. In much of Southeast Asia and the Pacific, climate insecurity and economic concerns overshadow traditional defence issues, making collective security efforts more complicated.³¹ In China, regime legitimacy depends on economic success and nationalist achievement; setbacks abroad threaten social unrest among an ageing population,

26 European Commission, “The European Union’s Strategic Approach to the Black Sea Region,” Joint Communication to the European Parliament and the Council, 28 May 2025.

27 Richard McGregor, “Chinese Coercion, Australian Resilience,” Lowy Institute, October 2022, 4-5. <https://www.lowyinstitute.org/publications/chinese-coercion-australian-resilience>.

28 Przemyslaw Kowalski and Clarisse Legendre, *Raw Materials Critical for the Green Transition*, OECD Trade and Policy Paper no. 269 (OECD, 2023), 16-19. https://www.oecd.org/en/publications/raw-materials-critical-for-the-green-transition_c6bb598b-en.html.

29 Olga Onuch and Henry E. Hale, *The Zelensky Effect*, New Perspectives on Eastern Europe & Eurasia (Hurst & Company, 1st ed., 2022), 256-58. <https://doi.org/10.1093/oso/9780197684511.001.0001>.

30 Samuel A. Greene and Graeme B. Robertson, *Putin v. the People: The Perilous Politics of a Divided Russia*. Yale University Press, 2019, 75-82. <https://doi.org/10.12987/9780300245059>.

31 Pacific Islands Forum, “2050 Strategy for the Blue Pacific Continent,” Pacific Islands Forum, 2022, 10. <https://forumsec.org/2050>.

encouraging government-led patriotism that may increase escalation risks.^{32, 33, 34, 35} Pacific Island societies, meanwhile, face serious climate threats that external powers exploit through aid and information campaigns.^{36, 37} In this environment, social capital (the trust between citizens and government) has become a key area of strategic competition as important as military strength.

Information control. In the Russo-Ukraine War, a dense blend of commercial ISR (Maxar/BlackSky), civilian sensing (smartphones, social media), and government sharing created unusually high transparency: open-source satellite analytics and geolocated video regularly compressed attribution timelines and shortened sensor-to-shooter (and truth-to-public) cycles.^{38, 39} Europe's institutional integration and common standards made data diffusion comparatively rapid across partners. By contrast, the Indo-Pacific is a vast, discontinuous theatre: persistent coverage requires space-based constellations, technological infrastructure, and long-range platforms, and data regimes are fragmented across many states with differing security classifications and sharing norms. Notably, China's growing reconnaissance enterprise, consisting of Yaogan/Gaofen satellite constellations and, notably, Yaogan-41 in geostationary orbit, aims to sustain near-continuous wide-area ISR over key maritime approaches and chokepoints, tightening its state C2 cycles without relying on multinational fusion.⁴⁰

Infrastructure and logistics capacity

In Eastern Europe, networks are contiguous, intermodal, and redundant: dense rail, road, and energy grids sustain Ukraine's war effort by enabling rapid rerouting and cross-border resupply.^{41, 42} Synchronisation with Europe's power grid and multi-modal transport corridors compress recovery times after strikes, though they also expand the target surface for precision fires on transformer nodes and rail junctions.⁴³ The 2022 Nord Stream sabotage demonstrated continental resilience, as discussed earlier.

In contrast, Indo-Pacific systems are fragmented, maritime, and exposed. Archipelagic states depend on imported fuels and undersea cables concentrated at a few landings vulnerable

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- 32 Julio S. Solis Arce, "China's Crony Capitalism: The Dynamics of Regime Decay," *Foro Internacional* (Mexico City) 56, no. 4 (2016), 9-12.
- 33 Maria Repnikova, *Media Politics in China: Improvising Power under Authoritarianism*. Cambridge University Press, 1st ed. 2017, 1-8. <https://doi.org/10.1017/9781108164474>.
- 34 Daria Impiombato and Nis Grunberg, *When Giving Birth Is a National Duty: Beijing's Struggle to Reverse Demographic Decline*, Cina Horizons - Dealing with a Resurgent China. Mercator Institute for Chinese Studies (MERCIS), 2025, 4. <https://merics.org/en/report/when-giving-birth-national-duty-beijings-struggle-reverse-demographic-decline>.
- 35 Freedom House, "China: Freedom on the Net 2024 Country Report," Freedom House, 2024. <https://freedomhouse.org/country/china/freedom-net/2024>.
- 36 Joanne Wallis, *Pacific Power? Australia's Strategy in the Pacific Islands*. Melbourne University Publishing, 2017), chapter 2. <https://doi.org/10.2307/jj.5993277>
- 37 Denghua Zhang, "China's Security Interest in the Pacific Region: Chinese and Pacific Perceptions," in *Security Cooperation in the Pacific Islands*. James Batley et al, eds. Routledge, 2025. <https://doi.org/10.4324/9781003613190-13>.
- 38 Marisa Torrieri, "How Satellite Imagery Magnified Ukraine to the World," *Satellite Today*, 24 October 2022. <https://interactive.satellitetoday.com/via/november-2022/how-satellite-imagery-magnified-ukraine-to-the-world>.
- 39 Bellingcat, "Russia's Ghost Ships and the Evolution of a Grain Smuggling Operation." 21 August 2023. <https://www.bellingcat.com/news/2023/08/21/russias-ghost-ships-and-the-evolution-of-a-grain-smuggling-operation/>
- 40 Clayton Swope, No Place to Hide: A Look into China's Geosynchronous Surveillance Capabilities, 19 January 2024. <https://www.csis.org/analysis/no-place-hide-look-chinas-geosynchronous-surveillance-capabilities>.
- 41 European Commission, Directorate General for Communication. *EU-Ukraine Solidarity Lanes*, 1-5.
- 42 Simon Aebi et al., *Critical Infrastructure Resilience in Ukraine: Energy, Transportation, and Communication*, with Andrin Hauri. ETH Zurich, 2024, 9-23. <https://doi.org/10.3929/ETHZ-B-000662463>.
- 43 Alessandro Gili, "Rebuilding Connections: Ukraine's Transport Infrastructure and the Road to EU Integration," *ISPI*, 11 June 2025. <https://www.ispionline.it/en/publication/rebuilding-connections-ukraines-transport-infrastructure-and-the-road-to-eu-integration-210910>.

to sabotage, seismic activity, and cyber intrusion.^{44,45} Notably, projects such as Volt Typhoon illustrate the scale of Chinese (and similarly Russian) offensive cyber capabilities targeting Western critical infrastructure.^{46,47,48} Sea transport dominates regional connectivity, yet deep-water ports and fuel storage remain few, producing logistical chokepoints and predictable approach corridors

Smaller partners rely on dual-use civilian facilities with limited wartime endurance, and China's infrastructure statecraft amplifies this asymmetry.⁴⁹ Through the Belt and Road Initiative's dual-use ports and corridors (Gwadar, Hambantota, Djibouti) Beijing fuses economic leverage with latent military access (see Figure 6).

When considering industrial sustainment, Western coalitions possess broader logistical networks but lack comparable centralised industrial output: by 2024, Chinese yards produced more tonnage in one year than the entire U.S. commercial fleet since 1945.⁵⁰ Further, "for every 359 large container ships China builds, the United States builds one," illustrating an order-of-magnitude disparity in replacement and repair capacity.⁵¹

Physical and geographic influences

The physical environment imposes unchangeable constraints on campaign design, defining what can be moved, sustained, and recovered. Technology can mitigate but not remove these limits. The Russo-Ukrainian and Indo-Pacific theatres diverge not only geographically but physically: the first compact and continental; the second vast, maritime, and climatically volatile.^{52,53,54}

Eastern Europe offers a bounded, accessible battlespace. The Black Sea's enclosed basin, temperate climate, and short logistics corridors enable predictable mobility and high-density support. Rivers, roads, and railways link industrial hubs with minimal weather disruption, while its stable hydrography reduces uncertainty in littoral and amphibious operations. Effects are measured in kilometres and hours.

By contrast, the Indo-Pacific is a region of distances rather than borders; an expanse of 80 million km² where endurance replaces tempo.⁵⁵ Dispersed basing points and disconnected terrain turn every movement into a line of communication.⁵⁶ Deep ocean basins exceeding 8,000 metres neighbour shallow straits such as Lombok and Luzon, shaping submarine

44 Kristi Govella, "Undersea Cables, Goeconomics, and Security in the Indo-Pacific: Risks and Resilience," *Marine Policy* 180, October 2025, 2-3. <https://doi.org/10.1016/j.marpol.2025.106809>.

45 Daniel Runde et al., "Safeguarding Subsea Cables," *CSIS Briefs*, August 2024, 3-5.

46 Office of the Director of National Intelligence, *2025 Annual Threat Assessment of the U.S. Intelligence Community*, 11-13. <https://www.dni.gov/index.php/newsroom/reports-publications/reports-publications-2025/4058-2025-annual-threat-assessment>.

47 Jeffrey Edwards, "The Things That Bedevil U.S. Cyber Power," *War on the Rocks*, 16 October 2025. <https://warontherocks.com/2025/10/the-things-that-bedevil-u-s-cyber-power/>.

48 Willett, "The Cyber Dimension of the Russia-Ukraine War," 11-17.

49 NATO, *Regional Perspectives Report on the Indo-Pacific*, 47-58.

50 Matthew P. Funaiolo et al., *Confronting China's Dual-Use Shipbuilding Empire*, 2025, 1-4.

51 Selwyn Parker, "The US Wakes up to China's Latest Threat - Big Ships". Lowy Institute: The Interpreter, 11 October 2024. <https://www.lowyinstitute.org/the-interpreter/us-wakes-china-s-latest-threat-big-ships>.

52 Romeo Bosneagu et al., "Influence of Geography and Weather Conditions on the Navigation and Seaborne Trade in the Black Sea," *IOP Conference Series. Earth and Environmental Science* (Bristol) 1236, no. 1, 2023, 4-6. <https://doi.org/10.1088/1755-1315/1236/1/012006>.

53 International Military Council on Climate and Security, *Climate and Security in the Indo-Asia Pacific*, World Climate and Security Reports 2020. Center for Climate and Security, 2020, 5-9. https://imccs.org/wp-content/uploads/2020/07/Climate-Security-Indo-Asia-Pacific_2020_7.pdf.

54 Lalan Mishra and Naima Kaabouch, "Impact of Weather Factors on Unmanned Aerial Vehicles' Wireless Communications," *Future Internet* 17, no. 1, 2025, 24-26. <https://doi.org/10.3390/fi17010027>.

55 Wayne P. Hughes, Jr., and Robert P. Girrier, *Fleet Tactics and Naval Operations*. Naval Institute Press, 2018, 227. <https://www.usni.org/press/books/fleet-tactics-and-naval-operations-third-edition>.

56 US Department of Defense, *Indo-Pacific Strategy Report 2019*, 17-20.

concealment, cable protection, and mine warfare.⁵⁷ These chokepoints function simultaneously as arteries of trade and vulnerabilities for sea-control operations.

Natural resources and environmental pressures add a further strategic layer. Europe's pipelines and rail corridors are limited but substitutable; Indo-Pacific resources are offshore, dispersed, and contested.⁵⁸ Fisheries, hydrocarbons, and seabed minerals intersect with EEZ disputes, pushing competition into the undersea domain where ecological legitimacy and strategic access converge.^{59,60}

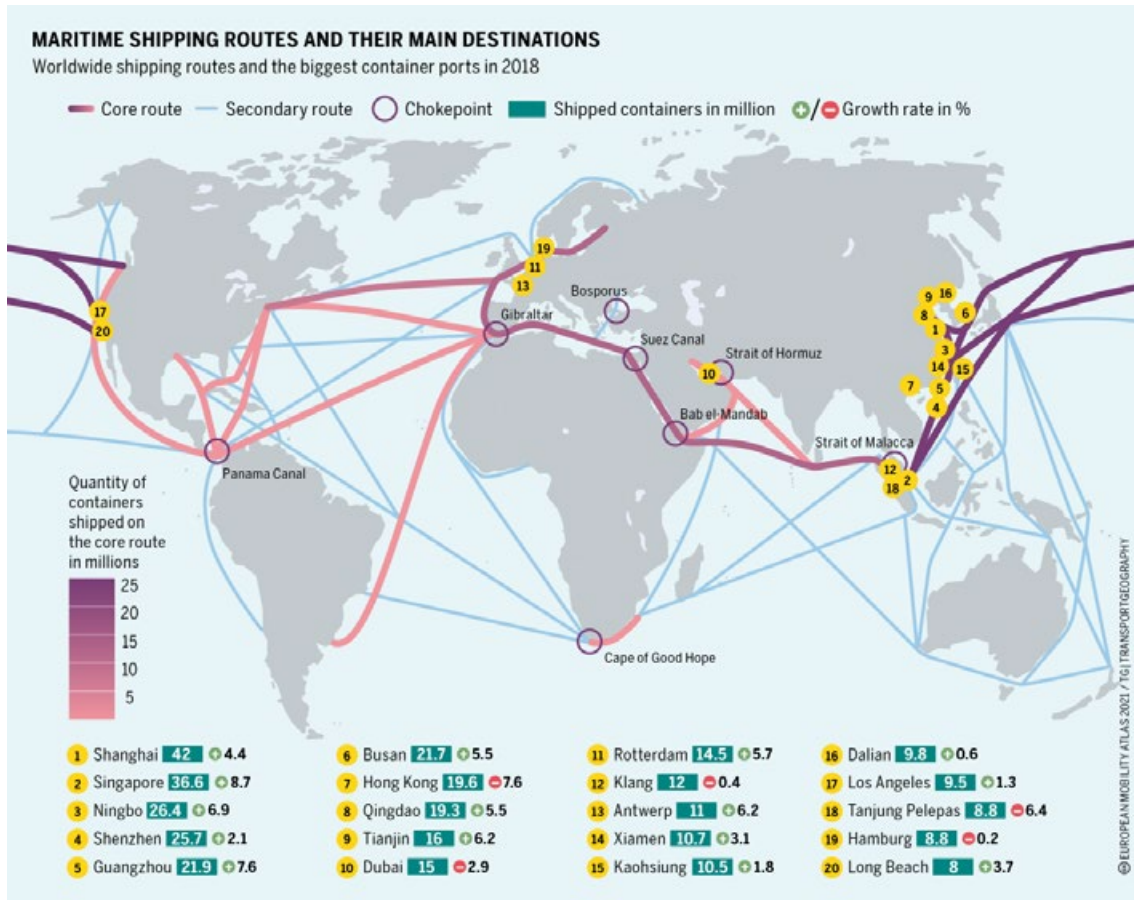


Figure 7. Global maritime shipping routes and chokepoints | Wikipedia

Timing

Time determines how strategy turns decisions into action and how long systems maintain momentum. In the Russo-Ukrainian war, Russia's centralised command enabled quick initiation but limited feedback loops, leading to misjudgements.⁶¹ Ukraine's coalition process started slowly but sped up once alignment was achieved, with its tempo increasing through shared logistics and ISR networks.⁶² Democratic decision cycles thus develop in a non-linear way – slow to begin, quick to sustain.⁶³

57 National Centers for Environmental Information, "Bathymetric Data Viewer," accessed 17 October 2025. <https://www.ncei.noaa.gov/maps/bathymetry/>.

58 NATO, *Regional Perspectives Report on the Indo-Pacific*, Strategic Foresight Analysis. 2023, 59-65. <https://www.act.nato.int/wp-content/uploads/2023/05/regional-perspectives-2022-07-v2-2.pdf>.

59 Oriana Mastro, "How China Is Bending the Rules in the South China Sea," *The Interpreter*, 17 February 2021. <https://www.lowyinstitute.org/the-interpreter/how-china-bending-rules-south-china-sea>.

60 Asia Maritime Transparency Initiative, "Maritime Claims of the Indo-Pacific," *Asia Maritime Transparency Initiative*, n.d., accessed 17 October 2025. <https://amti.csis.org/maritime-claims-map/>.

61 Jessica Weeks, "Strongmen and Straw Men: Authoritarian Regimes and the Initiation of International Conflict," *The American Political Science Review* 106, no. 2, 2012, 326-47. <https://doi.org/10.1017/S0003055412000111>.

62 Dan Reiter and Allan C. Stam, eds., *Democracies at War*. Princeton University Press, 2002, chapters 3 and 4.

63 NATO, "Comprehensive Assistance Package (CAP) for Ukraine," NATO, 20 June 2025. https://www.nato.int/cps/en/natohq/topics_231639.htm.

The Indo-Pacific reflects this pattern on a strategic level. China's Party–military cohesion provides consistency but also creates rigidity.^{64,65} Democracies, and subsequently a US-led coalition, value quick responses over deep adaptability.⁶⁶ Technological innovation highlights this paradox: open societies innovate rapidly but proceed cautiously; autocracies act swiftly but often too early.⁶⁷

Lessons for the Indo-Pacific theatre

The most consequential lesson of the Russo-Ukrainian War is not the proliferation of individual technologies but the interaction between systems. Ukraine's effectiveness derived from the coupling of dense ISR, mission-command authority, rapid industrial adaptation, and coalition sustainment into a feedback loop that compressed decision cycles faster than Russian forces could adapt. These mechanisms generated campaign effects (endurance, resilience, and denial) that were disproportionate to Ukraine's material strength. In the Indo-Pacific, where geography dilutes mass and time expands distance, similar effects will depend less on platform superiority than on the ability to integrate sensing, autonomy, logistics, and decision-making into resilient networks.

1. Treat distributed missile nodes, uncrewed systems, and afloat magazines as mobile fortifications.
2. Develop industrial backing, quick-repair and replacement capabilities for high-burn-rate munitions and platforms.
3. Share repair, replenishment, and production burdens to offset unfavourable loss rates.
4. Prepare the public and forces for extended campaigns where progress is slow.
5. Manage attrition with narratives to maintain legitimacy and coalition unity and maximise uncrewed systems to reduce the impact of human losses on domestic support.

Figure 8. Author's summary of adaptation priorities

Lessons related to distributed ISR, autonomous systems, mission command, and industrial tempo translate most readily, forming the backbone of maritime combat power over long distances. Others, such as geographic depth and static defence, must be reconceived as functional depth, achieved through dispersion, distributed sustainment, and resilient coalition networks. Endurance now resides in systems, societies, and alliances, rather than in territory. Democratic coalitions must therefore plan for adaptation: secure legal access, integrate information, and build surge capacity in industry before a crisis occurs. Autocracies may act more quickly, but democracies last longer when cohesion and logistics align. The Indo-Pacific won't mirror Ukraine's battlefields, but its wars will depend on the same formula: force plus resilience over time. Victory will go to the side that can think, supply, and communicate faster than it bleeds.

64 "Xi Jinping Thought on Strengthening the Military," China.Org, 5 November 2021. http://www.china.org.cn/english/china_key_words/2021-11/05/content_77853472.html.

65 "Three Steps to Modernize China's National Defense and Military in the New Era," China.Org, 5 November 2021. http://www.china.org.cn/english/china_key_words/2021-11/05/content_77853431.html.

66 NATO, *Regional Perspectives Report on the Indo-Pacific*, Strategic Foresight Analysis 2023, 19-28. <https://www.act.nato.int/wp-content/uploads/2023/05/regional-perspectives-2022-07-v2-2.pdf>.

67 Michael Horowitz, ed., *The Diffusion of Military Power: Causes and Consequences for International Politics*. Princeton University Press, 2010, chapters 1 and 2

Implications for New Zealand, Australia, and partners

The Indo-Pacific's defining feature is distance: it has strategic depth without physical depth. For New Zealand, Australia, and like-minded partners, this means resilience must be embedded in systems, societies, and alliances before a crisis occurs. The lessons of Ukraine, reinterpreted through maritime geography, highlight five interconnected imperatives: 1) pre-war integration, 2) autonomous reach, 3) industrial endurance, 4) information control, and 5) societal cohesion. Each is considered below.

Pre-war integration as deterrence

Political alignment must come before mobilisation. Success in any Indo-Pacific contingency will rely on established access rights, pre-approved authorities, and legal interoperability. Long-term frameworks for intelligence sharing, logistics access, and escalation procedures should be embedded in multilateral agreements and regional instruments. Neither Australia nor New Zealand can act alone; their strategic influence depends on being trusted connectors between US power projection and regional legitimacy. Early alignment of command structures, cross-domain data exchange, and sustainment protocols will reduce the time lag between political decision-making and operational action, thereby strengthening democratic responses.

Autonomous reach and distributed lethality

The shortening of kill-chains in Ukraine highlights the importance of networked small, attritable systems. In the more spacious Indo-Pacific, autonomy replaces proximity. The ADF and NZDF should invest in leading-edge ISR, affordable unmanned platforms, and delegated engagement logic that enables action at the tactical level while maintaining political oversight. Operational design must account for long-range, persistence, intermittent connectivity, and one-to-many C2. Autonomy and mission command should be the norm rather than the exception. Coalition standards for data architecture and AI assurance are vital to avoid fragmentation among partners. Importantly, refreshing doctrine, processes, and training for short innovation cycles is resource-intensive and impedes maintaining an edge over the adversary. Therefore, innovation needs to be the paramount doctrine, process, and training philosophy, and the fundamental inputs to capability must be designed to promote innovation and adaptation.

Industrial tempo and logistics endurance

Industrial capacity has become a decisive element of combat power. High-burn-rate munitions, attritable uncrewed systems, and persistent infrastructure repair demand production and replacement cycles measured in weeks, not years. In a maritime Indo-Pacific conflict characterised by distance, attrition, and disruption of sea lines of communication, forces unable to regenerate platforms, sensors, and logistics nodes will lose operational relevance regardless of initial force quality. For Australia and New Zealand, this means shifting from boutique production to surge-ready ecosystems. Defence industry policy should prioritise modular manufacturing, dual-use tooling, and forward repair hubs capable of servicing allied assets. Agile logistics must replace reliance on static supply chains. Joint stockpiles and common munitions standards across allies would turn collective capacity into sustained firepower. Economic strength is achieved through networked redundancy, not self-sufficiency, and must therefore be treated as a warfighting capability rather than a peacetime efficiency concern.

Information control and narrative discipline

Strategic communication now functions as a weapon system. Partners must anticipate a contested information environment where attribution, legitimacy, and perception determine access to regional basing and diplomatic support. Standing 'information coordination cells' should synchronise public messaging, attribution releases, and counter-disinformation efforts across the coalition. Countries require regionally tailored narratives that present deterrence and preparations as stability operations, not escalation. Incorporating open-source

intelligence, cyber defence, and public diplomacy will enable democratic coalitions to take control of the narrative and protect the public from manipulation.

Conclusion: societal and political endurance

Societal resilience, not technology, is the key factor that determines staying power. Countries need public education programs that connect national security with community wellbeing, strengthening civic readiness and tolerance for disruptions. Transparent communication, military-civil liaison, and continuity in emergency governance should be embedded and practised regularly. The goal is to turn democratic legitimacy into operational endurance, maintaining unity of purpose even when a military campaign drags on or faces indecision.



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LESSONS FROM JAPAN'S WW II SUBMARINE STRATEGY¹

Commander David Roderick, RNZN

As assessed by a framework of ends, ways, means, risk and military effectiveness, the Imperial Japanese Navy's submarine strategy in World War II failed. Commander David Roderick argues that Japan's submarine force was doomed by a misalignment of strategic ends and doctrinal ways compounded by insufficient means. Japan's interservice and civil-military rivalries were dysfunctional, the fleet command structure was overcentralized, decision-makers were inexperienced, submarines were relegated to supporting the surface attack forces or transport roles, and boats were insufficiently equipped technologically, notably lacking radar. These failures, particularly in contrast to US Navy successes, can teach valuable lessons to today's naval decision-makers. – Ed.

Ends and Means: The Submarine's Role

The submarine was recognised as an important weapon in Japan's envisaged war of attrition. Japan had begun experimenting with submarines as early as 1904. Initially sourcing them internationally, Japan would move to domestic production, augmented by a small number of German submarines awarded following the Treaty of Versailles.² The specific role of the submarine in the strategy was twofold. First, the submarines would operate at a distance from Japan, engaging enemy forces with the aim of disabling or sinking them whilst leaving harbour or in transit. Second, in the decisive battle, the submarine force would then be used to assist the surface force by preventing the enemy's retreat.³

Submarine construction was not restricted by the Washington Pact, so Japan built them in great numbers. Japan leveraged the technology of other nations to construct submarines that were optimised for distant open-ocean operations and could stay at sea for extensive periods.

Interestingly, the US concept of submarine employment was similar. But among US strategists the importance of the submarine waned after World War I. The Washington naval disarmament conferences had placed heavy restrictions on submarine commanders, aiming to prevent the 'unrestricted warfare' conducted by the German U-boats in the Atlantic that had been so devastating to commercial shipping.⁴ This, coupled with the advent of sonar, meant that the US placed less importance on its submarine fleet or ASW procedures.⁵

1 This is an abridged version of an essay Commander Roderick wrote while studying at the NZDF Command and Staff College in 2025. The views presented herein are his own. -Ed.

2 Carl Boyd and Akihiko Yoshida, *The Japanese Submarine Force and World War II*. UK: Air Life Publishing Ltd., 1996, 8-13.

3 Donald M. Goldstein and Katherine V. Dillon, (eds), *The Pacific War Papers: Japanese Documents of World War II*.

4 Mark Lardas, *USN Submarine vs IJN Aircraft Carrier: The Pacific 1942-1944*, New York: Bloomsbury/Osprey Publishing, 2025, 15-18.

5 Mark Stile, *USN Fleet Destroyer vs IJN Fleet Submarine: The Pacific 1941-1942*, New York: Bloomsbury/Osprey

The IJN attack on Pearl Harbour would change everything. Recognizing Japan's dependence on maritime supply, the USN upended its submarine strategy and pivoted to unrestricted warfare against Japanese merchant vessels – the same strategy they had once condemned. Whereas previously submarine commanders were required to surface and warn a potential commerce target prior to engaging, unrestricted warfare provided no such courtesy to the target. The USN also adopted a strategy of attrition, targeting merchant ship destruction rather than destruction of fleet units. The Pearl Harbour attack had decimated the Pacific Fleet, and the US was also engaged in war in Europe, so an under-strength USN was not ready to respond to Japan's main fleet challenge immediately; the US needed to play for time. Submarines would fill the gap by harassing Japan's shipping and threatening its Sea Lines of Communication (SLOC), thereby slowing Japan's advance across the Pacific.⁶

Risks

Japan's strategy was a risky one. If successful, it would only give Japan an even chance at victory, and it hinged on a political gamble that the US would capitulate. The strategy did not anticipate the enemy's ability to adapt; it relied on a presupposed US course of action. No part of the Japanese strategy addressed US industrial capacity to replace losses if the war were to persist, nor did it provide a solution for Japan's critical vulnerabilities – its SLOCs and dependence on materials from abroad.

Ways: Operational Concepts and Doctrines

Japanese Submarine Operations in Practice. At the outset of the war, the IJN Submarine Force was tasked with reconnaissance. This would see the large ocean-going submarines deployed great distances in the hopes of encountering USN fleet units as they sailed from port in the initial stages of their Pacific transit. Their operational orders directed that USN capital ships, specifically aircraft carriers and battleships, were to be the force's primary targets. This was followed by cruisers and destroyers (typically used as escorts for the capital ships), and a distant third was the targeting of enemy merchant shipping.⁷ So great was the importance of the primary and secondary targets that IJN high command even went so far as to dictate how many torpedoes submarine commanders were permitted to use against each target. Full salvos were permitted for capital ships, while only a single torpedo was allowed against merchant ships. This meant that on many occasions IJN submarine commanders would let low-priority targets sail by unmolested.⁸ In contrast, the USN adopted a 'bird in the hand' approach: any enemy vessel was fair game unless a higher-value target was present.⁹

Publishing, 2018, 94.

6 Joel I. Holwitt, "Execute against Japan": freedom-of-the-seas, the U.S Navy, fleet submarines, and the U.S. decision to conduct unrestricted warfare, 1919-1941" Doctoral dissertation, 2005, Ohio State University]. OhioLINK Electronic Theses and Dissertations Center. http://rave.ohiolink.edu/etdc/view?acc_num=osu1127506553_270.

7 Mochitsura Hashimoto, *Sunk, The Story of the Japanese Submarine Fleet 1941-1945*. New York: Holt, Rinehart and Winston, 1954, 61.

8 Peter Padfield, *War Beneath the Sea: Submarine Conflict 1939-1945*. London: PIMLICO, 1997, 36.

9 W. J. Holmes, *Undersea Victory, The Influence of Submarine Operations on the War in the Pacific*. Garden City, NY: Doubleday & Company, 1966, 308.



Figure 1. IJN Submarine Operating Area 1941-1945¹⁰ | Wikimedia Commons

IJN submarines were employed over a vast operating area. Figure 1 depicts their main areas of operation, along with the location of main operating bases, and the location of significant battles from the Pacific Theatre. IJN submarines would span all corners of the Pacific along with the Indian Ocean in their hunt for enemy capital ships. This would include boats stationed off the West Coast of the US, monitoring USN and merchant shipping movements.¹¹ The force would operate as far north as the Bering Sea in support of Japanese interests in the Aleutian Islands. IJN submarines also conducted operations off Australia, and even New Zealand felt their presence when I-25 launched a reconnaissance aircraft near Wellington.¹²

US and Japanese Submarine Forces 1941-45				
Year/Quarter	United States		Japan	
	Commissioned	Lost	Commissioned	Lost
Pre War	111	0	63	0
1941 Q4	4	2	0	1
1942 Q1-Q2	16	4	8	6
1942 Q3-Q4	17	2	12	11
1943 Q1-Q2	27	6	14	8
1943 Q3-Q4	47	8	12	19
1944 Q1-Q2	20	8	12	36
1944 Q3-Q4	39	12	8	18
1945 Q1-Q3	30	7	8	26
Total War Built	200	49	74	125

Figure 2. IJN Submarine Production vs Losses 1941-1945¹³

10 Map File Only. SiirSki, "File: World centred on the Pacific Ocean locator map.", Wikimedia Commons, 2017. https://commons.wikimedia.org/wiki/File:World_centred_on_the_Pacific_Ocean_locator_map.svg.

11 Stile, op cit, 102-107.

12 Ibid, 45.

13 Padfield, *War Beneath the Sea*, op cit, 356.

Japanese Tactical Successes

The IJN Submarine Force made its greatest contribution to Japan's attrition strategy in 1942. The first major success was the torpedoing of *USS Saratoga* by I-6 in January, which sidelined the carrier for six months. She was struck again by I-26 in August, further delaying her return to service.¹⁴ In June, Lieutenant Commander Yahachi Tanabe's I-168 penetrated the destroyer screen around the damaged *USS Yorktown*, finishing the carrier despite heavy USN ASW protection.¹⁵ In September, I-19 launched a full spread of torpedoes at *USS Wasp*, sinking her and also striking the battleship *USS North Carolina* and destroyer *USS O'Brien*. These actions left *USS Hornet* as the only operational US carrier in the Pacific at that point.¹⁶

Figure 3 shows the cumulative effect, as of the six US carriers deployed in the Pacific from December 1941 to December 1942, three were sunk or heavily damaged by IJN submarines. In total, 18.5 months of carrier service were lost to submarine, nearly half the available carrier force for that period. And in July 1945, the battleship *USS Indianapolis* was sunk by LTCDR Mochitsura Hashimoto's I-58.

Japanese Submarine Successes against USN Carriers 1941-1942		
Carrier	Months in Service	Months lost to submarine attack
Lexington	6	0 (sunk by IJN air attack, May 8, 1942)
Saratoga	4	9
Yorktown	6	6 (sunk by I-168, June 7, 1942)
Enterprise	13	0
Wasp	4	3.5 (sunk by I-19, September 15, 1942)
Hornet	7	0 (sunk by IJN air attack, October 27, 1942)
Totals	40	18.5

Figure 3. IJN Submarine Successes 1941-1942¹⁷

To sum up thus far, in the early years of the war the submarine force was responsible for the majority of damage to USN carriers and the sinking of the battleship *USS Indianapolis*. The IJN also pioneered the development of many novel submarine technologies such as aircraft carrying submarines, midget submarines, and human controlled torpedoes. While these developments were technically impressive, these silver bullets often never found their mark. Many arrived too late to have an effect, those that were able to be used often performed poorly compared to their designer's vision. The potential offered by maintaining a lethal posture in US waters, earlier pursuit of radar, and further investment in ASW was not fulfilled.

Missed Opportunities

The IJN Submarine Force failed to take advantage of several opportunities during its campaign. Two of these, under-exploitation of submarine attack and intelligence-gathering opportunities and neglect of earlier adoption of radar and ASW measures, are examined below.

Failure to Exploit Reconnaissance. In the aftermath of Pearl Harbour, a significant proportion of the IJN Submarine Force was in the vicinity of Hawaii and the West Coast of the United States. Despite the substantial number of US ship movements (including warships) to and from

¹⁴ Holmes, *Undersea Victory*, op cit, 163.

¹⁵ Stile, *USN Fleet Destroyer vs IJN Submarine*, op cit, 113.

¹⁶ Ibid, 125.

¹⁷ Ibid, 135.

Pearl Harbour and West Coast ports, Japan scored very few sinkings. The lack of success was attributed to overly conservative tactics on behalf of IJN submarine commanders.¹⁸

As the priority for the Japanese shifted to the central Pacific (and perhaps due to the lack of success thus far), the submarine force was withdrawn from the US coastline to assist with combined fleet operations elsewhere. This movement of the submarine force denied IJN forces advanced warning of USN movements. IJN forces then became reliant on the interception of USN communications to gain situational awareness of enemy movements and disposition. The delay between receiving, interpreting, and disseminating this information (compared to single immediate transmission to all stations from a IJN submarine) often meant that by the time this intelligence was received it was of little tactical use. Throughout the war, there were numerous examples of IJN submarines chasing the shadows of USN forces who had long since vacated the area.¹⁹

Neglect of Radar. The failure to fit radar to IJN submarines was a significant handicap for much of the war. Since the advent of USN radar, IJN submarines on the surface now found themselves unable to hide. A significant number of IJN submarines were attacked and sunk by an enemy they never saw coming. The need for radar became pressing in 1943 after the loss of six submarines operating in the vicinity of the Gilbert Islands. One of the surviving captains attempted to raise the issue with higher command but his pleas to Vice Admiral Takeo Takagi, the Commander-in-Chief of the 6th Fleet (also a submariner) fell on deaf ears.²⁰ Submarine losses continued to mount, and at the Battle of Saipan 2/3rds of the submarine losses were those without radar. While IJN high command would eventually relent, the damage was done. An overly conservative high command, prioritisation of the surface fleet, a lack of technical skill, and materials required for radar construction meant the vital tool was not available for submarine crews until too late in the war to have any meaningful effect.²¹

Neglected ASW. Another opportunity lost was prioritisation of ASW, specifically protection of Japanese commerce shipping. As a resource poor maritime nation, Japan was reliant on resources sourced from overseas to power its war effort. The IJN knew in advance of hostilities that a prolonged war against the US was likely to be unwinnable. Admiral Yamamoto famously said to the Japanese Prime Minister that if ordered to war “I would run wild considerably for the first six months or a year; but have utterly no confidence in the second and third years.”²² The Japanese estimated that as many as 360 large escort vessels would have been required to secure the Japanese SLOCs. Unfortunately, none were ever built, due to the pre-war focus on fleet units for decisive battle.²³ Protection of the IJN SLOCs only started to feature in 1943 when the Maritime Escort Command was established. Unfortunately, this was largely too little too late, and force was rendered ineffective, as it lacked both doctrine and priority from higher command for asset allocation.²⁴ The significant loss of merchant shipping would eventually force the IJN to begin utilising their submarine force for resupply missions to their island garrisons.²⁵ Had protection of merchant shipping been given the priority it deserved earlier in the war, the submarine force might have been better able to contribute to the IJN strategic objectives, instead of conducting resupply missions.

18 Boyd and Yoshida, *The Japanese Submarine Force*, op cit, 65.

19 Holmes, *Undersea Victory*, op cit, 329.

20 Ibid, 268-269.

21 Boyd and Yoshida, *The Japanese Submarine Force*, op cit, 49.

22 Padfield, *War Beneath the Sea*, op cit, 37.

23 Ibid, 38.

24 Holmes, *Undersea Victory*, op cit, 272.

25 Hashimoto, *Sunk*, op cit, 94-95.

Summary of IJN Submarine Performance

The IJN Submarine Force's contribution to the Japanese war effort ranged from strategically significant to almost completely ineffective. The force's purpose was to reduce the size of the enemy's fleet to enable a victory in the decisive battle. Unfortunately, a series of failures by the IJN would prevent the force from contributing to this goal.

Figure 4 shows the contribution of IJN and USN submarines at many of the key battles of the Pacific Campaign. Of note, the IJN Submarine Force either failed to make an appearance or were unable to achieve anything meaningful towards the IJN strategic objectives in almost all these battles. Up until Guadalcanal, the poor results were largely caused by conservative tactics or by centralised command overreacting to dated intelligence. Following Guadalcanal, they can be attributed to the forced employment of the submarines in resupply missions and to significant advances made in USN ASW. The USN results appear similarly sparse but for different reasons. The USN submarines are underrepresented in the significant battles because their focus was not on set-piece battles like the IJN. Indeed, on the few occasions where they were employed in this way (Midway and Leyte Gulf) they too were ineffective. The most significant contributions for the USN submarines were made away from the battles, attacking unguarded IJN merchant shipping – a role in which they excelled.

IJN and USN Submarine Contribution to Pacific Battles		
Battle	IJN Submarines	USN Submarines
Pearl Harbour ²⁶	27 subs involved, none made a successful attack (including midgets).	N/A
Coral Sea ²⁷	No significant role	No significant role
Midway ²⁸	Largely ineffective except for sinking of Yorktown by I-168 (well-placed but late)	Largely ineffective (poorly placed but on time)
Guadalcanal ²⁹	Largely ineffective (Engaged in Resupply Missions)	No significant role
Leyte Gulf ³⁰	Meagre successes, 6 of 8 I-boats lost.	No significant role (too far away)
Iwo Jima ³¹	No significant role	Lifeguard operations for US carrier strike groups due lack of Japanese merchant ships.
Okinawa ³²	No significant role (8 of 11 I-boats lost)	Lifeguard operations.

Figure 4. IJN and USN Submarine Contribution to Pacific Battles

Throughout the latter stages of the war IJN submarines were almost completely unable to be used for their primary purpose. The prioritisation of the supply missions signalled the death knell for any real contribution of the force against its strategic objective. US industrial might would easily replace USN losses, ensuring that any prospect of winning the longed-for decisive battle would forever remain a dream.

²⁶ Hashimoto, *Sunk*, Op cit, 228.

²⁷ Holmes, *Undersea Victory*, op cit, 113.

²⁸ Ibid, 147.

²⁹ Hashimoto, *Sunk*, op cit, 86.

³⁰ Holmes, *Undersea Victory*, op cit, 387-392.

³¹ Ibid, 440.

³² Ibid, 174-175.

Contrast: USN Submarine Performance

In contrast, the USN submarine campaign was a decisive success. From the outset, the USN had a singular focus – the destruction of Japan's merchant marine.³³ The USN submarine forces used a decentralised command-and-control structure, which allowed its submarine commanders significantly more freedom to exercise mission initiatives than the tightly controlled IJN submarine commanders.³⁴ USN commanders were able to adapt tactics and procedures, while the IJN remained rigid. For example, the issue of poorly performing US torpedoes was pinpointed by submarine skippers who communicated it to higher command.³⁵ Fortunately for them, their commanders were open to the feedback and made the necessary changes. IJN submarine commanders were similarly proactive with their reporting and provided examples of lessons learned (such as the benefits of radar) to their high command.³⁶ Unfortunately for them, Japanese hierarchical culture often meant these were seldom listened to, or were actioned far too late to have an effect.

Another key to the USN submarine forces' success was the interception and decoding of IJN submarine radio transmissions. The information contained from the German enigma decodes was known as 'ULTRA', and decodes from Japan were known as 'Japanese ULTRA'. Code breaking allowed the USN to assemble real-time intelligence regarding IJN submarine positions and Japanese merchant shipping routes. This information allowed the USN to pre-position their submarine forces and anti-submarine units, leading to interdiction of Japan's SLOCs and the loss of many IJN submarines.³⁷

In sum, USN strategy responded logically to the problems faced. It was coherent, and showed clear alignment between ends, ways and means. The USN were effective not just because they had greater numbers but because, in contrast to the IJN, they were able to learn from failures and adapt policies rather than cling to outdated doctrine.

Lessons Learned

Despite occurring more than 80 years ago, the Japanese submarine campaign presents several lessons still pertinent to today's commanders.

Lesson 1: Adapt Doctrines and Technology. Firstly, adaptability and integration of technology are more important than initial doctrine choice. The IJN stubbornly held to its decisive battle doctrine despite evident failures. The doctrine relied on a preconceived notion of USN responses. When the USN refused to engage as predicted, the IJN were unable to adapt. The USN found itself in a perilous position at the outset of the war, against a well-trained and committed foe. However, they were willing to reconsider their original submarine doctrines and were able to learn and adapt from their mistakes in a way that the IJN could not. The unrestricted submarine campaign attacked Japan's fundamental weakness, one that would force the Japanese to use their submarines in ineffective roles.

Lesson 2: Don't Neglect Defensive Measures. Secondly, the campaign highlights the importance of defensive measures. From a cultural perspective the Japanese heavily favoured offence and a quick decisive blow to secure victory. This was most evident in the lack of investment in ASW, and commercial shipping vulnerability to US submarines would see Japan inexorably bled of resources.

Lesson 3: Avoid the Silver Bullet Fallacy. Thirdly, are the perils of reliance on technological silver bullets. As seen with the development of the I-400, midgets, *kaitens* and the submarine-launched aircraft, the Japanese did not lack innovation. The problem was that these innovations

³³ Holwitt, "Execute Against Japan." op cit, 173-175.

³⁴ Holmes, *Undersea Victory*, op cit, 236.

³⁵ Ibid, 247.

³⁶ Hashimoto, *Sunk*, op cit, 165.

³⁷ Boyd and Yoshida, *The Japanese Submarine Force*, op cit, 114.

were often developed to respond to an extremely specific problem, or poor intelligence, rather than guided by Japan's overarching strategy. This would see precious resources diverted into their creation, only to see them arrive too late or in too few numbers to decisively affect the war's outcome.

Lesson 4: Integrate Ends, Ways, and Means. Underlying all these lessons is the importance of having a coherent strategy at all levels of war. For Japan's submarine force, the original concept of the strategy of attrition was plausible given the challenge they faced at the time. However, Japan's late change of strategic goals created a significant mismatch of means and ends. Additionally, commitment to the decisive battle concept at all levels, subordination of the submarine force to the Combined Fleet and to resupply roles, and a failure to adapt would see the ways the force was used at odds with both the ends and means.

As described by Colonel Arthur F. Lykke, US Army, a mismatch between ends, ways and means results in risk,³⁸ and as shown in the case of the IJN submarine campaign, the risks proved to be overwhelming. Ultimately, the potential of the IJN Submarine Force was squandered. Tactical level successes could not offset a failure of strategy. The ultimate lesson that naval decision-makers should draw from the Japanese failure and the US success is to align ends, ways, and means adaptively so as to minimize risk and maximise military effectiveness.

38 Arthur F. Lykke, "Defining Military Strategy=E+W+M", *Military Review*, May 1989, 6. <https://www.armyupress.army.mil/Journals/Military-Review/English-Edition-Archives/MR-75th-Anniversary/75th-Lykke/>



COMMANDER DAVID RODERICK, RNZN

Commander David (Rodders) Roderick joined the Royal New Zealand Navy in 2004. Serving in No. 3 Squadron RNZAF, he deployed to Timor Leste as part of OP GYRO. He subsequently joined No. 6 Squadron RNZAF as Flight Pilot, Tasking Officer, and later Flight Commander, earning the Chief of Navy's commendation for Commitment to Naval Aviation.

In 2015 Commander Roderick attended the Defence Helicopter Flying School at RAF base Shawbury UK and was awarded the Westland Trophy as Dux of his class.

Returning to No. 6 Squadron in 2017, Commander Roderick served as Training Flight Commander and Executive Officer, and was awarded the Guild of Air Pilots and Navigators sword for operational excellence.

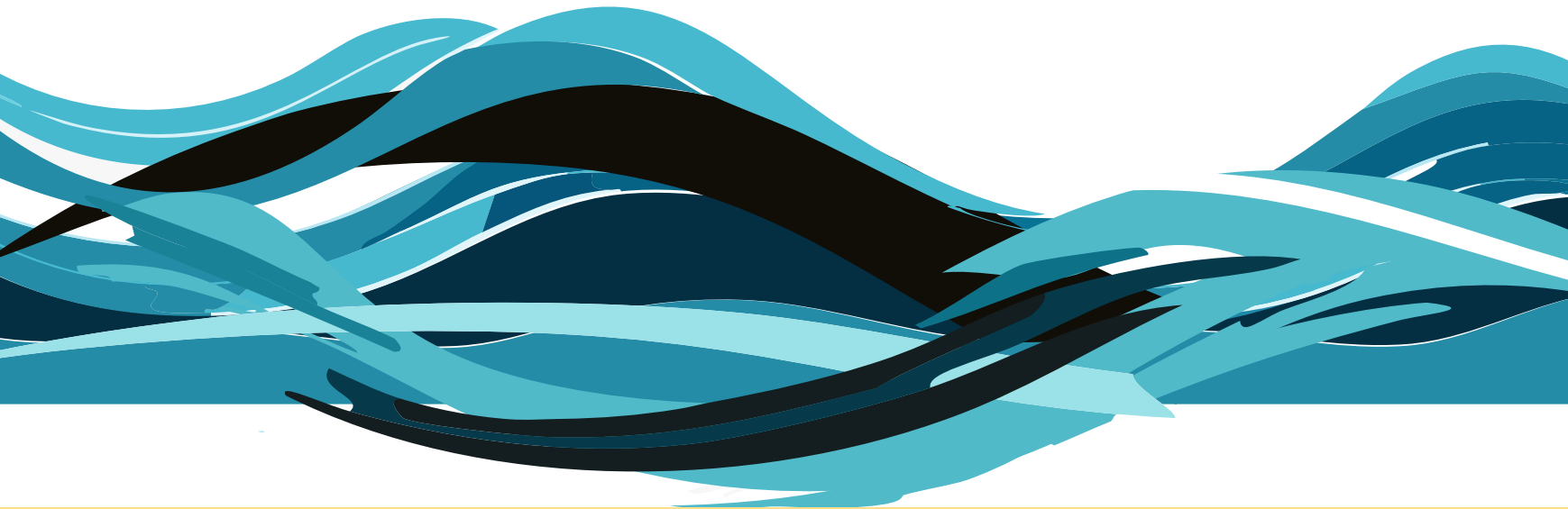
Commander Roderick's staff appointments have included: Staff Officer Naval Helicopters; Staff Officer Aviation Readiness; and Operational Requirements Manager and Deputy Capability Integration Lead for the Maritime Helicopter Replacement Project.

In addition to a double A Category qualification, Commander Roderick holds a certificate in Aviation (Helicopter), and completed the NZDF Advanced Command and Staff Course (Joint) in 2025, earning a Masters Degree in Strategic Studies from Massey University.

Commander Roderick is currently Commanding Officer of No. 6 Squadron RNZAF.

PART 5:

BOOK REVIEWS



LIEUTENANT COMMANDER MARC GRIFFITHS, RNZN BOOK REVIEW EDITOR

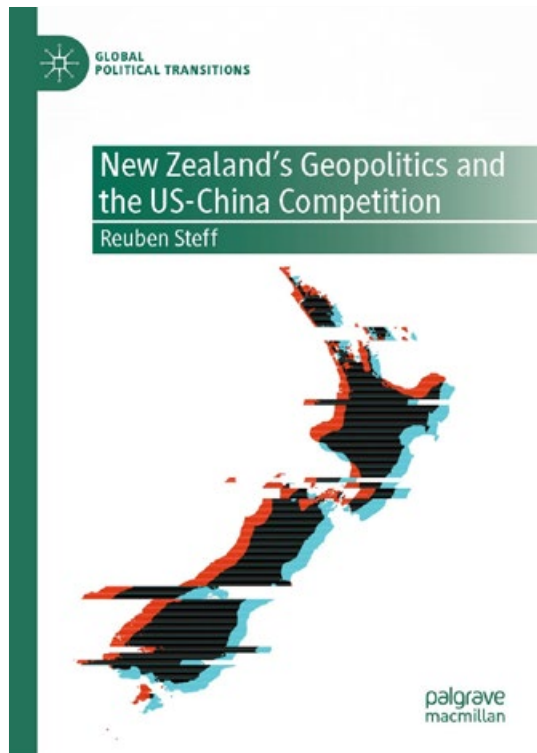
Since joining the RNZN in 2011, Lieutenant Commander Marc Griffiths' postings have included Technical Training Officer, Maintenance Planning Officer and Project Engineer (within Defence Logistics Command (Maritime)), Defence Training Manager at the Royal Navy's Defence School of Marine Engineering at HMS SULTAN, and Head of Engineering Department aboard HMNZS AOTEAROA.

He has served on HMNZS AOTEAROA, HMNZS CANTERBURY and HMS BULWARK, and participated in EXERCISE JOINT WARRIOR 2013, EXERCISE RIMPAC 2014, EXERCISE BERSAMA LIMA 2023, and EXERCISE SOUTHERN KATIPO 2015 as an exercise umpire.

Lieutenant Commander Griffiths earned a Bachelor of Mechanical Engineering degree at the University of Auckland and is a graduate of the NZDF Intermediate Command and Staff Course, the University of Portsmouth's Master's degree of Science (Engineering and Management), Massey University's Graduate Certificate of Arts (History) and (pending) Massey University's Post-Graduate Certificate in Defence Studies.

He is a Chartered Marine Engineer and Fellow of the Institute of Marine Engineering, Science and Technology (IMarEST).

At present Lieutenant Commander Griffiths is posted as Class Manager, Naval Support Force, Defence Logistics Command (Maritime).



NEW ZEALAND'S GEOPOLITICS AND THE US-CHINA COMPETITION

by **Reuben Steff**

Published by Palgrave Macmillan and Springer Nature, Singapore, 2024.

Reviewed by **Mr Andrew Wierzbicki**, a former Ministry of Defence official engaged in policy and acquisition issues. Mr Wierzbicki has been a Board Member of the New Zealand Institute of International Affairs and chair of the Editorial Committee of the *New Zealand International Review* for many years.

How does New Zealand position itself, both bilaterally and in the Indo-Pacific region, in the ever-growing competition between the United States and China, this country's most important strategic partner on the one hand, and economic partner on the other?

Dr Reuben Steff, a senior lecturer at the University of Waikato and a prolific strategic analyst, has masterfully canvassed this subject in *New Zealand's Geopolitics and the US-China Competition*. In a comprehensive and wide-ranging consideration across nine chapters, Steff discusses historical, geographical, strategic, political, military, economic and international factors influencing New Zealand's approach to this difficult issue. After considering the interrelationship and intersection between these factors, he offers a thought-provoking proposal: that New Zealand should adopt a strategy he calls Armed Neutrality and Comprehensive National Resilience.

A key aspect of Steff's analysis is the maritime dimension. Steff notes its significance in terms of New Zealand's geographic placement in the South Pacific; the challenges which being a maritime nation poses for our trading and international relationships; and the impact on New Zealand defence policy. Steff provides stark reminders of the challenges which New Zealand is having to navigate in its key maritime areas in Asia, the South Pacific and the Southern Ocean and Antarctica.

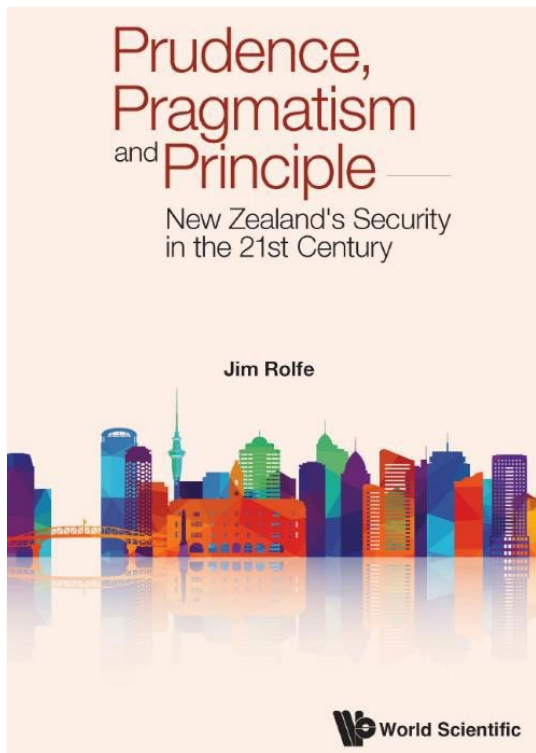
Regarding Asia, on the one hand the South China Sea is a vital line of communication for New Zealand's trade, so much so that 'what happens there [the South China Sea] has immense importance to its [New Zealand] prosperity'. On the other hand, the South China Sea has become 'of immense geostrategic importance' to China, thereby making it a flashpoint as China asserts its authority and the United States resists this. If conflict were to erupt, this would inevitably have disruptive implications for New Zealand, not the least in how we would balance the significant relationships we have with these two powers.

The South Pacific is no less challenging. Steff rightly puts to bed any lingering notions that there remains a 'benign security environment' in our region, an assertion by then Prime Minister Helen Clark in 2000-2001. Steff says that assessment 'has now been cast into the dustbin of history'. Steff highlights the increasing strategic importance of the South Pacific space for the two super powers, their 'strategic theatre' as he calls it. China in particular, he notes, is aggressively seeking to build influence in, and relationships with, South Pacific nations. The Western pushback to this poses challenges for how New Zealand pursues its relationships in the region without in the process damaging relations with either China or the Pacific nations.

Similarly, quoting from New Zealand's *2023 National Security Strategy*, Steff reminds his readers that the once uncontentious region of the Southern Ocean and Antarctica is now an area of 'strategic competition', driven by demand for polar natural resources. The Madrid Protocol's prohibition of Antarctic exploitation is up for renewal in 2048, and Steff notes that New Zealand, China and the United States, along with dozens of other countries, are positioning themselves in anticipation of this.

The book came out before the Coalition Government released its Defence Capability Plan in April 2025. That Plan has committed the Government to eventually increasing defence spending to 2% of GDP, and keeping the Naval Combat Force. These decisions, alongside the recently acquired Poseidon P-8 maritime patrol aircraft and new naval helicopters and drones, ensure that New Zealand can assert authority in the maritime domain.

There is much to commend in this book: the detailed treatment of the important contemporary issue of US-China rivalry; innovative suggestions of different lenses through which the subject might be viewed, and a proposed alternative security policy of armed neutrality. The book also covers the defence relationship with Australia, the Five Eyes intelligence sharing arrangement, AUKUS, and other security and defence issues of potential interest. Readers will appreciate the excellent cross references to other sources within each chapter (although this layout might not be to everyone's liking) and the comprehensive reference list at the end of each chapter.



PRUDENCE, PRAGMATISM AND PRINCIPLE: New Zealand's Security in the 21st Century

by **Jim Rolfe**

Published by World Scientific, Hackensack, New Jersey, USA, 2024.

Reviewed by **Lieutenant Commander Aston Talbot**, VRD, RNZN. Lieutenant Commander Talbot is a recent graduate of the Canadian Forces College, has a Master of Arts degree with 1st Class Honours in Political Studies from the University of Auckland and is the Executive Officer of *HMNZS Aotearoa*.

Having served in the New Zealand Army, and as a civil servant in the Department of Prime Minister and Cabinet, Jim Rolfe is now a senior fellow at Victoria University's New Zealand Centre for Strategic Studies. As both a scholar and practitioner, he has become one of New Zealand's most trusted voices when it comes to Asia-Pacific security issues and their intersection with New Zealand. Rolfe has published numerous books, journals and articles about New Zealand's national and regional security. His 1997 book, *Cutting Their Cloth: New Zealand's Defence Strategy*, was written before New Zealand's defence transformation in the early 2000s; nevertheless, it offers considerations that remain relevant to the defence transformation work underway today.

In his latest book in 2024, *Prudence, Pragmatism and Principle: New Zealand's Security in the 21st Century*, Jim Rolfe highlights New Zealand's centralised all-of-government approach across a wide range of security perspectives. He does this by asking if New Zealand achieves security through prudence, pragmatism, or principle. The text covers several security themes and is relevant to readers in fields ranging from defence, foreign policy, economic security, diplomacy, law enforcement and emergency management.

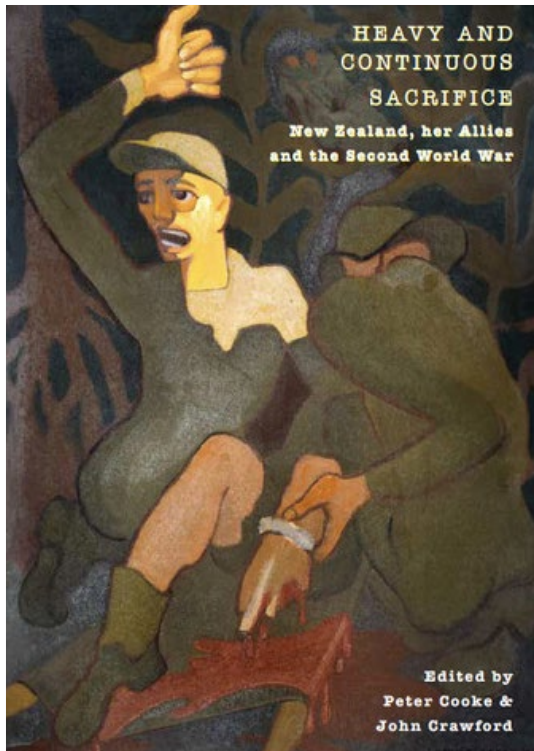
Prudence, pragmatism and principle are not just slogans. Rolfe uses these core concepts to explain how national values translate into policy decisions, trade-offs and institutional behaviour over time. Rolfe shows how New Zealand's national identity and geopolitical position pull in different directions. His discussion of principle will resonate with readers who support the notion that realism alone cannot account for security decision making, whilst also warning that prudence and pragmatism without principle risks strategic incoherence.

The first three chapters provide a broad history of the development of New Zealand's security systems. Rolfe explains how the current system has come to be, how it operates and why it is what it is. The following five chapters tackle specific areas of security – international disorder, the Pacific neighbourhood, domestic security concerns emanating from within New Zealand, domestic security concerns emanating from international events, and natural disasters. The final two chapters look at an evolving society and changing perspectives. In his summary Rolfe asks, then answers, a series of questions like “so what?”, “does the system work?” and “can the system work better?”

I found this book to be foundational in recent academic discourse exploring strategic leadership, systemic thinking, and advocacy of more robust systems engineered for military effectiveness through agility, focus and convergence. The concepts of *prudence*, *pragmatism* and *principle* anchored abstract strategy to the dilemmas faced when constructing advice or managing capability decisions with constrained resources, or when friction arises when long-term capability procurements collide with short-term needs, and effective outcomes are not easily found.

Prudence, Pragmatism and Principle has been published at a time where many nations are being asked to rethink their capabilities, partnerships and institutions. A sober tone is brought to the fore in Rolfe's decision to base the book not on academic theories and frameworks, but rather on the bedrock of the all-of-government approach to decision making. He draws together a wide cross-section of archival material, policy documents and contemporary commentary, allowing the reader to weigh risks, costs and values when balancing prudence, pragmatism and principle. Specific chapters offer a New Zealand context to specific security fields. The extensive reference lists by chapter and source type can guide deeper reading.

In summary, this book will be a valuable practical companion for readers who must apply systems thinking and integrated decision-making within, and in support of, New Zealand's security system. Its combination of clear reasoning and practical judgement will hone the quality of advice that defence leaders prepare for senior leadership and government, and in doing so, strengthen the coherence and value of New Zealand's security enterprise. And the casual reader will come away with a wider understanding of the why, how and what behind security-related policy thinking in New Zealand.



HEAVY AND CONTINUOUS SACRIFICE: New Zealand, her Allies and the Second World War

Edited by Peter D. F. Cooke and John Crawford

Published by New Zealand Military History Committee, Wellington, 2024.

Reviewed by **Lieutenant Commander Marc Griffiths**, RNZN. Lieutenant Commander Griffiths serves as this Journal's Book Review Editor.

'The war on which we are entering may be a long one, demanding from us heavy and continuous sacrifice.' – Prime Minister Michael Savage, 6 September 1939

This quotation provides an appropriate title to this substantial book, which brings together 23 chapters representing some of the best writing on New Zealand in World War II. It is comprised of a selection of the most meritorious papers presented at the Heavy and Continuous Sacrifice Conference run in 2020 by the New Zealand Military History Committee. Topics range from overviews of political and social histories of the War through analyses of the leadership of individuals such as Generals Freyburg and Auchinleck, to accounts of notable battles such as Operation Crusader in North Africa. It is the sixth of a sequence of publications produced by the New Zealand Military History Committee, and with the 2026 conference upcoming at the time of writing, will likely not be the last.

Readers interested in topics with a naval focus will find two chapters of particular relevance. The first is the contribution by Peter Dennerly on the "Royal New Zealand Navy in the Fall of Singapore," briefly covering the interwar politics of Fleet Base Singapore before focusing on the (mostly) unrecognised gallantry of individual New Zealanders serving during the evacuation of Singapore, to which "Dunkirk was a picnic" in comparison. The second is by Michael Wynd on "The 'Big Thump': HMNZS LEANDER at the Battle of Kolombangara, 13 July

1943,” emphasizing the importance of the damage control preparation and training insisted on by the executive officer, Commander Stephen Roskill RN, without which “with the damage we sustained any lesser ship may well have been lost.”

Other chapters focus on contributions to the War effort made by the Army, the Air Force, the Government, society, and foreign partners. A notable example is “Facing the Rising Sun: Experiences of New Zealand Airmen During the Campaign in Malaya and Singapore, 1941-1942” by Simon Moody. A somewhat unexpected theme, but adding a unique perspective to the wider picture of World War II, is broached by Louisa Hormann in her chapter “‘Strangers at the Wharf’: Material Histories of German-Jewish Refugees in New Zealand, 1933-1941”.

However, there is very limited coverage of the New Zealand Merchant Marine, referred to variously as the ‘Fourth’ or ‘Forgotten’ Service. One hopes this gap can be filled by the editors of the next edition, perhaps in 2028. Another minor criticism that could be laid is that through the compendium’s energetic diversity of topics it risks incoherence of focus. Although each contribution displays historic and scholarly qualities, no clear theme besides the context of the War links them, and some, such as the chapter on Rommel, seem to have little to do with New Zealand.

Nevertheless, there is much to learn from and appreciate in the collection’s 486 pages. This reviewer benefited particularly from Reg Newell’s “Fighting with the Americans: 3 NZ Division in the South Pacific”, finding in it themes and sources useful for his current post graduate studies. Also standing out, but for other reasons, was the chapter by Claire Cookson-Hills on “Sexual Violence Among Canadian and New Zealand Armies of Occupation, 1945-48”. This controversial topic challenges the commonly held idolisation of the faultless New Zealand soldiers serving overseas. I applaud the courage of the author and editors for dealing unflinchingly with this distressing lapse of good order and discipline. We are reminded that modern realist historians don’t always discover gold but rather, sometimes, uncover a corrupted alloy.

The value of the compendium is enhanced by the skilful crafting by its editors. Peter Cook and John Crowford are veteran historians with distinguished records of writing, editing, and publishing, much of it sponsored by the New Zealand Ministry of Defence and the New Zealand Defence Force and other official agencies such as the Ministry of Culture and Heritage. The book features illustrations, an index, and other aids to readers, not least a 10-page Introduction to set the historical scene. Overall, the publication projects professionalism, credibility, and appeal.

To sum up: this collection traverses a broad stretch of modern scholarship on New Zealand’s involvement in World War Two. It is an accessible collection of material ranging from historical primers to scholarly analyses, from which readers ranging from students to academics to military professionals can gain behind-the-headlines insights into New Zealand’s profound involvement in World War II.

INVITATION AND GUIDELINES FOR CONTRIBUTORS

The Editorial Committee of the *Professional Journal of the Royal New Zealand Navy* welcome submissions to the next issue, Volume 7, 2027.

Guidelines for submissions are as follows –

- Submissions should be broadly consistent with the aims of this *Journal*, which are to inform debate on New Zealand's maritime and naval policies and to encourage strategic and policy-relevant thinking about New Zealand's wider security context.
- Draft articles should normally not exceed 4,000 words in length. Shorter articles, commentaries, and book reviews are welcome. All lengths are negotiable in the interests of equity, consistency, relevance, and readability.
- Sources of quotations and specific information should be flagged as footnotes. These should be consistent with the *Chicago Manual of Style's* 'Shortened Notes' and 'Bibliography' styles, accessible at <https://www.chicagomanualofstyle.org/tools/citationguide/citation-guide-1.html>. Online references should include a hyperlink. Potential contributors should consult earlier volumes of this *Journal* for examples. <https://www.nzdf.mil.nz/assets/Uploads/DocumentLibrary/RNZN-Journal-4June2025.pdf>.
- Illustrations should be high resolution (300 dpi minimum at full scale). Captions and sources should accompany the illustrations. The Editor may augment captions and insert additional illustrations as appropriate.
- An official biography and high resolution portrait photo of the author should be appended.
- Submissions to the 2027 issue of this *Journal* should be emailed to the following e-dress by the end of January 2027, and preferably earlier: rnznjournal@gmail.com.
- Once drafts are received, they may be edited for consistency with the *Journal's* format. Authors will be consulted for approval of significant editorial alterations.

Members of the Editorial Committee welcome communications with potential authors at any time. We stand ready to help authors shape their provisional topics into acceptable articles or reviews. Please feel free to consult us. rnznjournal@gmail.com.



TE TAUA MOANA
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A FORCE FOR NEW ZEALAND