The Institute for Regional Security

Space Security Indo-Pacific Brief

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Prepared by:

SpaceCyT Institute
SPACE . CYBER . TECHNOLOGY

Introduction

Space is rapidly emerging as a critical domain in Indo-Pacific security strategy.

Growing militarisation and contestation of space: The emergence of counterspace (deny, disrupt, degrade, damage, or destroy an adversary's space assets) capabilities, space-based weapons systems, and the proliferation of long-range precision missiles in the Indo-Pacific have heightened the strategic value of space resilience and collective security cooperation.

Rising geopolitical competition in space: Recent developments, including Russia's threats to deploy nuclear weapons in orbit, China's rapid expansion of counterspace capabilities, the steadily increasing missile/rocket/hypersonic glide vehicle capabilities of North Korea and the growing reliance on vulnerable space assets highlights the increasingly congested, contested, and competitive nature of the space domain.

U.S. Alliance and the Indo-Pacific lattice: Within the U.S. Indo-Pacific Strategy's "latticework" of partnerships, Australia, Japan and the Philippines form a complementary security triangle. Australia contributes strategic depth and southern hemisphere situational awareness; Japan brings advanced technological capabilities and industrial scale; and the Philippines occupies a frontline position along the First Island Chain.[1] Together, these roles support distributed resilience and collective deterrence in the space domain.

[1] Center for Strategic and International Studies, 'Building a U.S.-Australia-Philippines Triad' (Analysis, 15 December 2022) https://www.csis.org/analysis/building-us-australia-philippines-triad.

Australia

Strategic Context

The convergence of rapid technological advancements, regional military build-up, and intensifying strategic competition between the United States and China has catalysed a shift in Australia's Defence posture towards a Strategy of Denial.[2] Within this context, space has become a critical domain for deterrence, resilience, and operational advantage in the Indo-Pacific.

Australia's most enduring strategic advantage is its geography. The continent's vast landmass and position in the Indo-Pacific region has rendered it a 'middle power' asset to more geographically distant allies - particularly to the US.[3]

Australia's reliance on space-enabled systems for military operations, economic activity, and alliance integration heightens its exposure to disruption in an increasingly congested and contested space environment, reinforcing the need for collective approaches to space security and stability.

Australia's Space Security Governance Landscape

Australia's space security governance landscape is characterised by a growing concentration of military capability within Defence, alongside a more fragmented civil space policy environment. While multiple federal and state government agencies have interests in space, Australia currently lacks a single, overarching strategic framework that integrates civil and defence space policy and coordination, alongside strengthening Australia's commercial space industry.[4] Australia does not yet have a national Strategic Space Policy.

The Australian Space Agency was created in 2018. The Australian civil space legislation, the *Space (Launches and Returns) Act 2018*, primarily focuses on licensing for launches and returns, and space ports.

The Australian Defence Force (ADF) Space Command was stood up in 2022 and transitioned in 2023 into the Joint Capabilities Group.

[2] Department of Defence (Cth), *2024 National Defence Strategy* (Strategy, 17 April 2024), 6.
[3] See, eg, Thomas S Wilkins, 'Australia and Middle Power Approaches to Asia Pacific Regionalism' (2017) 52(1) Australian Journal of Political Science 110.
[4] SIAA, 'Capturing Australia's Space Potential: A Strategic Imperative - 2025-2026 Pre-Budget Submission', 31 January 2025 https://www.spaceindustry.com.au/wp-content/uploads/2025/03/SIAA_Pre-Budget-Submission_Capturing-Australias-Space-Potential-A-Strategic-Imperative-1.pdf.

Australia

Space Command serves as a functional command responsible for space operations, integrating personnel from the Air Force, Army and Navy. Its core focus areas include space control, space domain awareness, satellite communications (SATCOM), and intelligence, surveillance and reconnaissance (ISR). The ADF is developing dedicated Space Officer and Space Operator career streams, with full operational staffing expected by 2030.[5]

Defence has expanded its operational capabilities through assets such as the 1-Space Surveillance Unit (responsible for Space Domain Awareness (SDA)), and the Joint Commercial Operations Cell, which integrates commercial space domain awareness data with allied military oversight. Australia is also advancing key international initiatives, including the Enhanced Space Cooperation Initiative and the trilateral Deep Space Advanced Radar Capability (DARC) with the United States and United Kingdom. Space capabilities are still largely viewed as enablers of the ADF's warfighting capabilities across the traditional domains of air, land, and sea,[6] although there are growing calls to reconsider this perspective.[7]

Australia's Regional Space Security And Defence Priorities

Australia's strategic objectives in space are centred on resilience, selective sovereign capability, and deep integration with allies, reflecting both national interests and the realities of the Indo-Pacific security environment.

- **Space as a critical military enabler:** Australia recognises space as foundational to modern military operations, underpinning secure communications, targeting, navigation, ISR and situational awareness across joint and combined forces. Ensuring access to these capabilities is central to Australia's defence preparedness and deterrence posture.

[5] Chris Maclean, 'Signalling the Future: Royal Australian Corps of Signals and the Next Century of Australian Space Power', The Cove, (9 July 2025) https://cove.army.gov.au/article/signalling-future-royal-australian-corps-signals-and-next-century-australian-space-power.

[6] See: Department of Defence (Cth), *2024 Integrated Investment Program*, at p. 47.

[7] Malcolm Davis, 'A higher place for space in the defence strategic review', Australian Strategic Policy Institute, (8 May 2023) https://www.aspistrategist.org.au/a-higher-place-for-space-and-the-defence-strategic-review/.

Australia

- **Resilience and protection of space-enabled systems:** Given Australia's reliance on space-enabled services, Defence places increasing emphasis on resilience, redundancy, and the ability to operate in contested and degraded space environments, including through enhanced space domain awareness and integration of commercial capabilities.

- **Economic and national resilience:** Space systems are equally critical to Australia's economy, supporting industries such as agriculture, mining, transport, finance, and emergency/disaster management.[8] Australia has designated space systems as critical infrastructure (*Security of Critical Infrastructure Act 2018*).

- **Selective sovereign capability development:** Australia is prioritising the development of sovereign capabilities where they provide strategic value, while avoiding unnecessary duplication by leveraging trusted international partnerships.

- **Allied integration and regional cooperation:** Australia has leveraged its geography, technical expertise, and growing space industry to deepen integration with key allies, particularly the United States and other like-minded partners, contributing to collective space security, interoperability, and regional stability in the Indo-Pacific. [9]

Key Challenges for Australia: Space Security

To effectively advance space resilience in the short to medium term, Australia faces a core operational challenge:
To move **beyond Enabling, into Operating.**

This involves addressing the following three core factors:

- Vulnerabilities of Australian space-enabled systems and critical infrastructure.
- Threats from counterspace activities, cyber intrusions, and space debris.
- Normative and regulatory gaps affecting Australia's security interests.

[8] SHIELD Cooperative Research Centre, 'Safeguarding Australia's Critical Infrastructure' (Presentation, December 2024) https://www.gps.gov/sites/default/files/2025-06/AdvisoryMeetings_Kealy_Dec2024.pdf.
[9] Tristan Moss, 'The space between alliance and self-reliance: The evolution of the Australia-US defence space relationship', United States Studies Center (9 August 2023).

Japan

Strategic Context

Japan is surrounded by three nuclear-weapon States, which also deploy (China and Russia) or develop (North Korea) hypersonic glide vehicles that could neutralize Japan's ballistic missile defence systems (BMD).[10] Japan's multilayered BMD architecture is critical to the defence of its territory, operating consistent with Japan's 'Defence Only Policy', under Japan's Self-Defence Force (SDF) (established in 1954). Thus, in order to protect the Japan islands stretching approximately 3,000 kilometres along the both north-south and east-west axes, Japan has been endeavouring to build a multi-domain integrated defence force by fusing capabilities in the space, cyber and electromagnetic spectrum domain with those of traditional land, sea and air domains since 2018.[11]

The Space Operations Squadron was newly established in the Air SDF in 2020 to be responsible for space domain awareness (SDA). This was upgraded into the Space Operation Groups in 2022, and the Air SDF is planned to be renamed as the Aerospace SDF in 2027.

Japan has maintained its three-tier defence policy since 1976: firstly by Japan itself, then through the Japan-U.S. alliance and, third, through collaboration with like-minded countries.[12] Japan's space security is also constructed within this policy. A basic security framework in the Indo-Pacific consists of a series of bilateral or trilateral defence treaties with the U.S. and security cooperation arrangements among U.S. allies. Japan, Australia and the Philippines are well positioned to enhance regional security space cooperation within this already robust architecture.

History of Japan's Space Policy

Leveraging space capabilities for preventing invasion and fostering national and international security formally dates from 2008, when Japan departed from the long-standing policy that 'peaceful uses' of outer space meant strictly non-military use.[13] In 2015, Japan's third Basic Space Plan recognised space security as a prioritised area of space activities.[14] Since then, the new policy has been steadfastly pursued in the later BSPs.

[10] Ministry of Defence (MOD), 2025 Defence of Japan, Chapter 3, sections 2, 4 & 5, https://www.mod.go.jp/j/press/wp/wp2025/pdf/DOJ2025_EN_Full.pdf.
[11] Cabinet and National Security Council, National Defence Strategy, 16 December 2022, III1 (1). https://www.mod.go.jp/j/policy/agenda/guideline/strategy/pdf/strategy_en.pdf [hereinafter NDS]; Cabinet and National Security Council, National Defence Program Guidelines, 18 December 2018, III 1 (2) b.
[12] Ibid, NDS, III chapeau.
[13] Basic Space Act, arts 2 & 14, act no. 43 of 2008 as amended.
[14] Strategic Headquarters of Space Development (SHSD), Basic Space Plan, 9 January 2015, 2(1) (in Japanese) .

Japan

In June 2023, the first Space Security Initiative (SSI) was adopted pursuing sufficient space capabilities as a part of the truly resilient multi-domain integrated defence force.

Japan's Regional Security and Defence Priorities

'Security by space' and 'security in space'

- **Space Security Initiative:** aims to promote Japan's security by leveraging space systems (security by space) and to maintain safe, secure and stable use of space together with the United States and like-minded countries (security in space).[15]

- **Satellite Technology:** The two aims in the Space Security Initiative will be realised by a wide variety of military and dual-use satellites owned and operated both by Japan and foreign States (e.g. GPS) as well as by private actors regardless of nationality. Japan has satellites for communications, remote sensing, navigation and weather forecasting, but there are no early-warning satellites due to insufficient capability in advanced infrared sensors.

Satellite capabilities include:

Dual-use Information Gathering Satellites (IGS) (currently comprising four optical, six radar and one data-relay satellites) and four quasi-zenith navigation satellites whose service started in 2018.[16] When a seven constellation of the quasi-zenith satellite systems (QZSS) is completed, Japan will have an independent navigation system.[17] The eventual eleven constellation of the QZSS to be completed in the latter half of the 2030s will cover Oceania and the South-East Asian region.[18]

The Japanese SDF has only three military satellites that are for communication purposes, but two new projects are developing:
(1) Construction of a constellation of several dozen remote-sensing satellites (optical and synthetic aperture radar (SAR)) to detect and track missiles and HGVs so that a counter-attack would be possible - completion by March 2028.[19]
(2) Japan's first military SDA satellite - to be launched in the 2026 fiscal year.

[15] SHSD, Space Security Initiative, 23 June 2023, https://www8.cao.go.jp/space/anpo/kaitei_fy05/enganpo_fy05.pdf [hereinafter SSI].
[16] ibid, at 5-7.
[17] This was planned to be completed in the 2026 fiscal year, but the failed launch of the 5th satellite on 22 December 2025 made it impossible to keep that schedule.
[18] National Space Policy Secretariat (NSPS), QZSS Policy 2025 (in Japanese), at 70-73.
[19] SHSD, The Approved Schedule List to the 5th BSP of the fiscal year 2024 (23 December 2025), at 8 [hereinafter Schedule List 2024].

Japan

- **Novel in-space activities:** To increase 'security in space', Japan also endeavours to develop space debris removal and on-orbit refuelling, but it is in the technology demonstrations phase. [20]

- **Norms for responsible behaviours in space:** Establishing rules and norms to prohibit counter-space activities is included as a goal in Japan's space policy. As a first step, Japan welcomed the adoption of the 2022 UN General Assembly resolution that 'calls upon all States to commit not to conduct destructive direct-ascent anti-satellite missile tests'.[21]

- **Space Launch and Exploration:** Japan owns space launch vehicles, scientific exploration probes and application satellites. Space transportation capabilities are limited partly because no private companies have successfully developed an ingenious orbital rocket. The next launch is however set for 25 February 2026.[22]

- **Japan's Space Budget:** In 2024, the Government started the Space Strategy Fund (one trillion yen for 10 years) to nurture Japan's space industry,[23] and the MOD spends a rapidly increasing amount on its space systems. The space budget for the fiscal year 2024 was about one trillion yen, showing the sharp increase.[24] The result - to realise a virtuous cycle, between enhanced space security and strengthened space industry - remains unclear at this stage.

[20] Japan Aerospace Exploration Agency (JAXA), https://www.kenkai.jaxa.jp/eng/crd2/index.html.
[21] UN Doc A/RES/77/41 (12 December 2022).
[22] Space One, 15 December 2025, https://www.space-one.co.jp/news/news_20251215.html (in Japanese). Space One failed its orbital launch twice in 2024.
[23] JAXA, https://fund.jaxa.jp/content/uploads/Overview_of_The_SpaceStrategy_Fund.pdf.
[24] NSPS, https://www8.cao.go.jp/space/budget/r07/fy07yosan_fy6hosei.pdf (in Japanese).

Philippines

Strategic Context

The Philippines' strategic outlook is shaped by intensifying maritime and geopolitical tensions in the Indo-Pacific, particularly in the South China Sea and West Philippine Sea, which increasingly elevate the importance of space-enabled capabilities. China's actions persist despite the 2016 ruling of the Permanent Court of Arbitration (under the UN Convention on the Law of the Sea), which found no legal basis for China's maritime claims in the South China Sea.[25]

Frequent low-level confrontations below the threshold of armed conflict highlight the Philippines' vulnerability to grey-zone tactics. They reinforce the importance of surveillance, monitoring and attribution capabilities, which are increasingly dependent on space-based systems.

Under its current President, the Philippines has cautiously re-emphasised its security alliance with the United States while broadening partnerships with other regional actors.[26]

Philippines' Space Governance Framework

The Philippine Space Act 2019 is the cornerstone of the country's space governance framework. It established the **Philippine Space Agency** (PhilSA) and provides the legal basis for national space policy, coordination, and program development. PhilSA operates under the Office of the President, reflecting the strategic importance of space at the national level.

The **Philippine Space Council** functions as the principal advisory and coordinating body for space-related policies, programs, and resources, with the Director General of PhilSA acting as its Head Secretariat.

The **Philippine Space Development and Utilization Policy** (Philippine Space Policy) serves as the country's strategic roadmap for becoming a space-capable and space-faring nation. It identifies six Key Development Areas:

- National Security and Development
- Hazard Management and Climate Studies

[25] The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China), 2013-19, Permanent Court of Arbitration, 12 July 2016; https://pca-cpa.org/cn/cases/7/.

[26] Mateusz Chatys, Web of Deterrence: How the Philippines Is Reframing Security Cooperation in the Indo-Pacific, The Diplomat, 16 October 16 2025, https://thediplomat.com/2025/10/web-of-deterrence-how-the-philippines-is-reframing-security-cooperation-in-the-indo-pacific/. Vincent So, The logic of neutrality in the Indo-Pacific, Lowy Institute The Interpreter, 10 June 2025 http://lowyinstitute.org/the-interpreter/logic-neutrality-indo-pacific.

Philippines

- Space Research and Development
- Space Industry Capacity Building
- Space Education and Awareness
- International Cooperation

Space is recognised as an operational military domain in the Philippines' National Security Policy 2023–2028, which emphasises deterrence, protection of sovereign spaces, enhanced maritime and space domain awareness, and deeper defence cooperation with partners.[27]

Philippines' Regional Space Security And Defence Priorities

The **Comprehensive Archipelagic Defence Concept (CADC),** announced in 2024, moves the focus of the Philippines military strategy from internal security to the comprehensive defence of the Philippines' archipelagic territory and its internationally recognized exclusive economic zone.[28]

- **Space-enabled maritime domain awareness (MDA):** Space and MDA are central to CADC implementation, enabling surveillance, connectivity, and threat detection in the West Philippine Sea.[29] Partnerships with allies and partners - including Australia, Japan and the United States - support access to space-based data and enhance the Philippines' ability to monitor, attribute, and respond to grey-zone activities.

- **Pursuit of selective sovereign space capabilities:** The Philippines is investing in national satellite development.[30] Since the launch of its first satellite in 1997, the Philippines has deployed 10 satellites and plans to launch up to 12 more by 2031, primarily for communications, education, and advanced remote sensing.[31]

- **Earth Observation (EO) monitoring:** EO is a priority capability given the Philippines' acute exposure to natural disasters. EO satellites support disaster preparedness, response and recovery. PhilSA's Decadal Survey provides a structured roadmap for EO capability development over the next decade.[32]

[27] Philippines Government, National Security Policy 2023-2028, p. 19 and 20.
[28] M. Reyes, "Archipelagic defense doctrine anchors Philippines' territorial sovereignty', Indo-Pacific Defense Forum, 16 April 2025.
[29] Sushmita Sihwag, 'Comprehensive Archipelagic Defence Concept (CADC) of The Philippines and Opportunities for India Arising Therefrom', National Maritime Foundation, 24 July 2025.
[30] Space to Thrive: Southeast Asia's Space Industry on the Rise, Deloitte and Singapore Space & Technology Ltd, February 2025.
[31] Ibid.
[32] Kabatiran mula Kalawakan: 'The 2023 Decadal Survey of Earth Observation in the Philippines', available here: https://philsa.gov.ph/books/kabatiran-mula-kalawakan-the-2023-decadal-survey-of-earth-observation-in-the-philippines/.

Philippines

- **Building international partnerships:** Given limited national space infrastructure, the Philippines relies heavily on allied, partner, and commercial space services for surveillance, EO, communications, and situational awareness - reinforcing the importance of interoperability, trusted data-sharing arrangements, and defence partnerships in its space security strategy. Currently, the Philippines rely on Japan's EO satellites data and more recently, has partnered with the European Space Agency (ESA) on SCOPE DIGITAL, a new initiative to strengthen the use of Copernicus Earth observation data in Southeast Asia.[34]

Strategic Constraints and Pressures

The Philippines face the following strategic constraints and pressures in pursuit of its central ambition to become a space-capable and space-faring nation by 2030:

- **Limited sovereign space capability:** Limited satellite infrastructure, launch access, and workforce capacity constrain the Philippines' space posture.

- **Capacity-building and resourcing constraints:** Space capability development competes with defence, disaster response, and development priorities, slowing institutional and capability maturation.

- **Dependence on external partners:** Reliance on allied and commercial systems raises challenges for continuity and assured access.

- **Managing strategic tensions with China:** The Philippines must balance space-enabled deterrence with economic and political sensitivities.

- **Balancing alignment and autonomy:** Deepening security cooperation requires balancing enhanced integration with the preservation of strategic autonomy and domestic political consensus.

[33] "Philippines, Japan highlight growing space economy ties, strengthen space cooperation", Philippine Space Agency, 19 December 2025, https://philsa.gov.ph/news/philippines-japan-highlight-growing-space-economy-ties-strengthen-space-cooperation/.

[34] "PhilSA, the EU, ESA, GISTDA, and BRIN collaborate through SCOPE DIGITAL to strengthen Earth observation cooperation in Southeast Asia", Philippine Space Agency, 17 November 2025, https://philsa.gov.ph/news/philsa-the-eu-esa-gistda-and-brin-collaborate-through-scope-digital-to-strengthen-earth-observation-cooperation-in-southeast-asia/.

Advancing Regional Space Security

TRILATERAL OPPORTUNITIES

Strengthening regional SDA, SSA and data-sharing.
A key space security opportunity in the Indo-Pacific is narrowing disparities in national satellite monitoring capabilities. This is particularly relevant for the Philippines, which faces increasing grey-zone activity in the South China Sea.[35] Initiatives such as the Quad's Indo-Pacific Partnership for Maritime Domain Awareness demonstrate how satellite-enabled data sharing can enhance maritime situational awareness, helping partners detect and attribute violations and turn transparency into a practical form of deterrence.

Supporting norms of responsible behaviour in space.
While Australia, Japan, and the Philippines are already partners in the National Space Legislation Initiative, which aims to promote information sharing and enhance countries' capacity to draft space legislation, there remains room to improve on establishing norms of responsible behaviour in space - particularly in the area of SSA.[36]

Building resilience and redundancy through Partnerships.
Building resilience through trusted partnerships, recognising that redundancy, interoperability, and collective capacity are essential in an increasingly contested space environment.

- **U.S. Alliance:** leveraging the US alliance networks, including the Quad.
- **AUKUS (Pillar II):** provides a framework for deeper cooperation on advanced and emerging technologies.
- **Australia–Philippines defence partnership:** expected to be formalised in 2026.
- **Australia – Japan strategic coordination**: further elevating defence cooperation through the *Framework for Strategic Defence Coordination* (2025).[37]
- **Japan–Philippines Reciprocal Access Agreement 2022:** supports defence cooperation, including enhanced technology cooperation and maritime surveillance.

[35] Carnegie Endowment for International Peace, 'Combating the Grey Zone: Examining Chinese Threats to the Maritime Domain' (Analysis, June 2024).
[36] Douglas Barrie, Matthew Bint and Ester Sabatino, Enabling Responsible Space Behaviours Through Space Situational Awareness (Report, International Institute for Strategic Studies, April 2025).
[37] This builds on the Australia–Japan Joint Declaration on Security Cooperation (2022).

Discussion

Possible Priority Policy Actions

1. Agreement on immediate gaps for Japan, Australia and the Philippines in space security and resilience.
2. Development of common principles to guide trilateral policy cooperation in the space domain.
3. Mechanisms for enhanced information sharing and intelligence in space policy and operations.
4. Immediate and longer-term opportunities for commercial and security (and dual use) capability and technology partnerships and investments.
5. Joint diplomacy around a rules-based space domain.

The above possible priority policy actions need to be considered in light of:

- Political and practical constraints
- Capacity gaps
- Opportunities for alignment with U.S. and Quad initiatives
- Identification of low-risk, high-value early steps.

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