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Sustained Denial and Strategic Depth

Policy Recommendations for Japan's Next Strategic Documents

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Executive Summary

The 2022 Three Strategic Documents marked a historic turning point in Japan's defense policy, introducing counterstrike capabilities and a substantial increase in defense spending. Yet a significant gap remains between the documents' appropriate but ambitious objectives and the concrete capabilities needed to achieve them. Those objectives include "disrupting and defeating invasion much earlier and at places further afield," "ensuring asymmetric advantages," and "operating in a swift as well as persistent manner." To realize them, Japan must further strengthen the posture of the Japan Self-Defense Forces (JSDF), develop the doctrine needed to support that posture, reinforce its social and industrial foundations, and improve its defense research and development (R&D) system.

These challenges have been compounded by major changes in Japan's strategic environment since the 2022 documents were formulated. Under these conditions, regional stability and Japan's security cannot be ensured simply by extending existing concepts of deterrence and capability development. Japan now faces both growing military threats from revisionist states such as China and increasing uncertainty about the role of the United States. Japan must therefore strengthen the autonomy of its own defense capabilities so that it can better repel aggression, improve its own response capacity, and encourage sustained U.S. involvement.

Based on this understanding of the problem, this report examines the policymaking process behind the current Three Strategic Documents, drawing on interviews with officials involved at the time. It then proposes strategies and policies to address both the challenges revealed through that process and the subsequent changes in Japan's strategic environment. At the center of the report is the need to build an asymmetric, sustainable, denial-oriented defense capability that can continue operating under enemy threat. This capability would combine long-range missiles, efficient air defense, unmanned systems, distributed forces, and various forms of passive defense. It would also make use of Japan's complex geography, including islands, underground tunnels, and the underwater domain. Together, these elements would create a temporal buffer that enables Japan to resist aggression, attrit an enemy's invasion forces, and help trigger U.S. involvement. The report also argues that stand-off airpower, operated with allies from overseas bases that provide strategic depth, should play a key role in facilitating U.S. involvement. Its survivability and maneuverability would also help Japan seize the initiative in defense operations. Finally, these concepts must not remain theoretical. Japan needs to strengthen the resilience and sustainability of its defense industrial base and critical infrastructure, establish secure sea lines of communication (SLOCs, or sea lanes) with the support of allies and like-minded countries, and build an R&D foundation capable of supporting and accelerating new ways of warfare using drones and artificial intelligence (AI).

To translate these concepts into practice, this report presents the following 20 policy recommendations.

A Trigger Strategy and Sustained Denial Strategy to Strengthen Extended Deterrence

1. As an overarching strategy, Japan should shift from high-value, concentrated defense capabilities toward distributed and asymmetric capabilities that can provide an advantage in long-term strategic competition. To this

end, Japan should redesign the JSDF's force structure so that it can contribute to the cumulative attrition of an enemy over time, achieve sustained denial, and help induce U.S. involvement within the framework of the Japan-U.S. alliance.

2. To strengthen the credibility of extended deterrence, Japan should make greater use of strategic depth to improve the survivability of its defense capabilities and the sustainability and initiative of its operations. To this end, Japan must establish mechanisms through which the JSDF's initial response to an armed attack can smoothly trigger U.S. involvement. Specifically, Japan should develop overseas operational bases for JSDF transport aircraft and other platforms capable of carrying large numbers of low-cost, long-range missiles. These "long-range multipurpose weapon carriers" should be operated in wartime as part of an "Allied Depth Task Force," integrated with U.S. forces and other partners. Japan should also conduct regular rotational deployments and joint training to make this concept operational.
3. These rotational deployments and joint training activities should be designed in a distributed manner. They should be centered on the Japan-U.S. alliance and make use of bases in the United States, while also including deployments to Australia, the Philippines, and other countries. Japan should also hold regular consultations with allies on wartime role-sharing, conditions for transitioning to operations, and doctrine, and should institutionalize these arrangements. At the same time, Japan should promote the creation of a real-time integrated intelligence, surveillance, and reconnaissance (ISR) network, the constant sharing of a common operational picture, and the standardization of data links. This process of institutionalization should also be communicated externally as a strategic message.
4. As a core element of a sustained denial strategy, the defense of Japan's Southwest (Nansei) Islands should focus on the limited operational objective of area denial. On this basis, Japan should prioritize active and passive defense, resupply under contested conditions, and stand-off fire support from distant locations, so that forces deployed to the Nansei Islands can continue operating under enemy threat.
5. To conduct sustained denial operations against an adversary with quantitative and qualitative superiority across multiple domains, Japan should make maximum use of asymmetric advantages. These include AI and unmanned systems, as well as Japan's geographic characteristics: its islands, underground tunnels, the underwater domain, and strategic depth provided by the territories of allies and like-minded countries. In addition to peacetime preparations such as ammunition stockpiles, Japan should establish a system for rapidly modifying and upgrading equipment in response to changes in the character of warfare. To ensure that operations can continue even if some assets are destroyed, Japan should also field large numbers of relatively low-cost platforms that are mobile and easy to disperse, rather than relying on a small number of high-value assets.

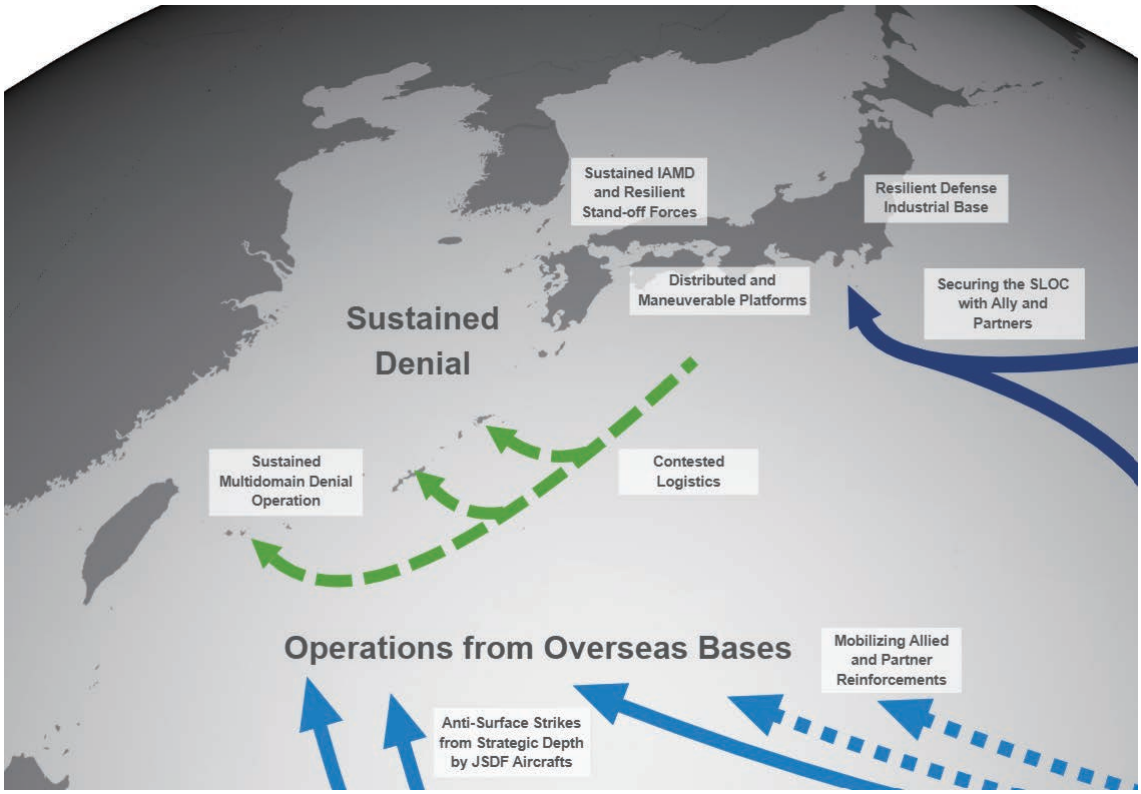


Figure 1 Illustration of the Trigger Strategy, built on the two pillars of sustained denial and operations from overseas bases (created by the author)

Redesigning JSDF Capabilities and Force Structure

6. To narrow the quantitative missile gap with China and acquire asymmetric advantages, Japan should substantially expand the Japan Ground Self-Defense Force's (JGSDF) long-range missile units to the scale of multiple missile brigades. It should also strengthen their resilience by concealing and protecting these units within underground tunnel networks. Japan should also begin the domestic development of ballistic missiles to increase payload capacity. In addition, it should deploy anti-ship missile units and other forces along the second island chain and export ground-launched anti-ship missiles to the Philippines. These steps would strengthen the ability of Japan and its partners to restrict the passage of Chinese naval vessels through the Bashi Channel.
7. To accelerate the operationalization of drones, Japan should make them an indispensable element of the JGSDF's combined-arms capabilities. This could be done by establishing specialized drone units, creating dedicated branches, or incorporating drones into the standard structure of existing units. To acquire asymmetric advantages at sea and underwater, Japan should also introduce large and small USVs and UUVs at an early stage and on a large scale. These systems should be assigned to diverse roles, including strike, sensing, mine-laying, and counter-satellite disruption. In addition, Japan should consider developing unmanned systems capable of operating across

both the underwater and air domains.

8. To use Japan's limited defense capabilities and personnel more effectively, Japan should further reduce personnel requirements for manned submarines while also expanding the fleet size. It should also build a mesh-type, wide-area seabed sensor network to detect enemy underwater assets and begin developing underwater counter-drone systems capable of disabling the propulsion systems of enemy UUVs.
9. To direct personnel and budgets more effectively toward units with capabilities that will be needed in the future, Japan should make bold reductions to existing JGSDF divisions, brigades, and similar units. It should also substantially reduce general-purpose destroyer and fixed-wing patrol aircraft units that would have low survivability under China's anti-access/area-denial (A2/AD) threat, replacing them with unmanned systems and more survivable platforms such as Aegis-equipped vessels. For relatively new vessels such as Mogami-class frigates, Japan should consider developing modular variants with more specialized onboard functions, rather than equipping every ship in the same class with the same full range of capabilities.
10. To operate airpower by making use of terrain and strategic depth, Japan should reorganize the Japan Air Self-Defense Force's (JASDF) capabilities into three concentric rings. The first ring should consist of a high-low mix air defense system that combines low-cost and expendable capabilities able to counter the enemy's cost-imposition strategy. The second should consist of stealth airpower that can survive in contested areas and deliver effective strikes against the enemy, supported by space-based ISR capabilities. The third should consist of rotationally operated stand-off defense capabilities based at overseas operational bases, including large transport aircraft and other platforms equipped with large numbers of palletized long-range missiles.
11. To preserve airpower against enemy attacks, Japan should strengthen passive defense measures. These should include expanding aircraft shelters, reinforcing runway repair units, dispersing aircraft through the expanded joint use of U.S. military air bases and civilian airports, and acquiring decoys on a large scale. Similarly, to improve the survivability of JGSDF missile units, Japan should also consider a limited revival of tunnel excavation units.
12. In the space domain, Japan should develop its ISR satellite constellation into a system that can provide effective targeting capabilities against moving maritime targets. To achieve this, Japan should substantially increase the number of satellites in the constellation and disperse its ground stations. The project should be led by JASDF, which has a clearer understanding of operational requirements. The next defense communications satellite system should be designed to flexibly support the communications needs of the Japan Ministry of Defense (MOD) and the JSDF. This should be done by distributing communications satellites across multiple orbits, ensuring redundancy, and making greater use of commercial communications satellite capabilities. In addition, to disrupt an adversary's ISR and

communications capabilities in the space domain, Japan should establish a posture that enables small, mobile counter-satellite disruption systems to be deployed on land and at sea in large numbers and with high mobility.

13. To make effective use of AI in command and control, Japan should strengthen the headquarters functions of the Joint Operations Command and frontline units. At the same time, it should rationalize the organization and functions of intermediate headquarters and shift toward a more non-hierarchical, distributed command structure.

Foundations for War-Sustaining Production Capability

14. To prepare for a rapid surge in wartime demand and strengthen emergency production and rapid modification capabilities, Japanese companies should expand excess production capacity by capturing overseas demand during peacetime. The government should also move quickly to establish government-owned, contractor-operated facilities, especially for ammunition, missiles, and drones, which are likely to be consumed in large quantities during a conflict.
15. To ensure that defense equipment can continue to be produced and repaired even under attack, Japan should strengthen both passive and active defense measures for the defense industrial base and critical infrastructure. Passive measures should include dispersal, undergrounding, and hardening, while active measures should include designation as “important facilities” and the provision of point air defense. Japan should also strengthen the rapid recovery capabilities of key factories. The costs of these measures should be borne by the government.
16. To retain and secure personnel at defense companies and infrastructure facilities that would face a high risk of attack, Japan should first implement the protective measures described above. It should then establish appropriate systems for certain private-sector civilians and employees, drawing on the allowances, compensation, and social recognition provided to JSDF personnel. Japan should also make active use of retired JSDF personnel, who may be better prepared to work in wartime environments due to their professional background and organizational experience. The government should support the education and training needed for retired JSDF personnel to transition into such companies.
17. For securing the SLOCs, Japan should strengthen maritime domain awareness over wider areas in cooperation with allies and like-minded countries. It should also establish a system in which the government provides or reinsures the war-risk insurance needed for maritime transport. In addition, Japan should introduce the technologies and legal frameworks needed to enable unmanned navigation by civilian vessels in high-risk maritime areas.
18. To compensate for vulnerabilities in its defense industrial base, Japan should leverage the strategic depth of allies and like-minded countries to build systems for overseas production, maintenance, storage, and data backup.

Research and Development for Sustaining New Ways of Warfare

19. To promote the domestic development of drones by both existing defense companies and start-ups seeking to enter the market, Japan should establish airfields and test areas where companies can conduct drone flight testing. These should include maritime test areas. At the same time, Japan must ensure compatibility with civilian aviation safety and the commercial use of radio spectrum. Japan also needs a mechanism to rationalize regulations under the Civil Aeronautics Act and the Radio Act within these designated areas. In such cases, the MOD should be able to grant testing permits to companies through the delegation of such authority by the Ministry of Land, Infrastructure, Transport and Tourism and the Ministry of Internal Affairs and Communications. Furthermore, Japan should consider providing opportunities for flight testing at sea through the operation of Japan Maritime Self-Defense Force (JMSDF) vessels or the chartering of civilian vessels. It could also rent military airfields and testing facilities in the territories of overseas allies and like-minded countries, such as Australia, and provide companies with testing opportunities there.
20. To create incentives for companies to produce inexpensive, low-margin drones while encouraging product improvement and innovation, the JSDF should procure drones in large quantities and use them as consumables in peacetime training and other activities. This would help generate continuous demand. Japan should also increase opportunities for JSDF operators, development divisions, and companies to work together. Such collaboration would allow them to rapidly advance development and improve capabilities based on lessons from testing and training. Furthermore, to encourage knowledge-intensive software development incorporating AI, companies should review salary levels for the highly skilled engineers needed for such work. Correspondingly, the MOD should revise the way it calculates processing and design costs under its cost-estimation system for determining defense equipment prices.

Japan itself bears the primary responsibility for defending its territory. Strengthening its ability to sustain denial against an adversary can both prevent aggression aimed at creating a fait accompli and increase the credibility of U.S. alliance commitments. Given Japan's geographic position, stronger Japanese defense capabilities are also indispensable to regional stability. The formulation of the next Three Strategic Documents will therefore have implications well beyond Japan's own defense posture, and the process of developing them can itself contribute to deterrence. Their effectiveness, however, will ultimately depend on the government's ability to translate the intended defense strategy into concrete policy. Greater attention must therefore be paid to the implementation stage. The policy recommendations set out above have been designed with particular emphasis on specificity and feasibility so that they can have practical effect at precisely that stage.

Chapter 1

Strategic Context and Key Challenges

Kuniharu Kakihara, Hirohito Ogi, and Rintaro Inoue

1 The Problem

Four years have now passed since the Japanese government began its fundamental reinforcement of defense capabilities under the Three Strategic Documents adopted in December 2022. The government has begun full-scale work on the next revision of these documents, with particular emphasis on incorporating lessons from the war in Ukraine and other recent conflicts. Key areas under consideration include the use of unmanned systems and artificial intelligence (AI), the introduction of new ways of warfare, and the strengthening of war-sustaining capabilities. Given the changing character of modern warfare, these are appropriate priorities.[1]

Significant challenges nevertheless remain. A more fundamental problem is that the strategic environment surrounding Japan is itself changing substantially from what was assumed when the Three Strategic Documents were formulated in 2022. China's buildup of conventional military capabilities has continued at an unprecedented pace since their adoption.[2] Of particular concern are the widening gaps between the People's Liberation Army (PLA) and the Japan Self-Defense Forces (JSDF) and U.S. Forces Japan in missile, air, and undersea capabilities. In missile forces, the PLA already possesses more than 1,000 launchers for medium-range and shorter-range missiles capable of reaching Japan.[3] By contrast, the JSDF only began deploying missiles capable of reaching China's coastal areas at the end of FY2025. China is also believed to be further expanding its missile production capacity, making it highly likely that the pace of its force buildup will accelerate further.[4] In the air domain, the PLA operates roughly five times as many fighter aircraft as the JSDF and is producing approximately 120 J-20 fifth-generation fighters per year.[5] At this rate, China is adding a fleet of fifth-generation fighters equivalent to the JSDF's entire current fighter inventory roughly every three years.

China is also steadily closing the gap in the undersea domain, an area in which Japan and the United States are still generally considered to retain an advantage. The deployment of a carrier strike group centered on the aircraft carrier *Liaoning* east of the Second Island Chain, for example, suggests that Chinese undersea forces may also be operating in the same waters.[6] By around 2035, China's submarine fleet is projected to reach approximately 80 boats, about half of which are expected to be

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1 Government of Japan, "National Security Strategy," "National Defense Strategy," and "Defense Buildup Program," approved by the Cabinet on December 16, 2022.

2 Japan Ministry of Defense, The Promotion HQ for Transformation of Defense Capabilities, "Security Environment Surrounding Japan," November 21, 2025, https://www.mod.go.jp/en/d_policy/defense-capability-transformation/images/2nd_21-nov-2025a.pdf.

3 U.S. Department of War, "Military and Security Developments Involving the People's Republic of China," December 2025, 71, https://media.defense.gov/2025/Dec/23/2003849070/-1/-1/1/ANNUAL-REPORT-TO-CONGRESS-MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA-2025.PDF.

4 Josh Xiao, Adrian Leung, Christopher Udemans, Andy Lin, "China's Secretive Missile Program Is Making Dozens of Companies Rich," *Bloomberg*, May 13, 2026, https://www.bloomberg.com/graphics/2026-china-missiles-military-ambitions/.

5 Japan Ministry of Defense, *Bōei hakusho Reiwa 7 nenban* [*Defense of Japan 2025*], 2025, 72; Caleb Larson, "China Is Building 100 J-20 Stealth Fighters Per Year—Its New Production Facilities Are Larger Than America's Entire F-35 Complex," *19FortyFive*, March 21, 2026, https://www.19fortyfive.com/2026/03/china-is-building-100-j-20-stealth-fighters-per-year-its-new-production-facilities-are-larger-than-americas-entire-f-35-complex/.

6 Toshihisa Ishii, "Chūgoku kūbo 3-seki taisei: Taiheiyō shinshutsu, sono nerai wa" [China's Three-Carrier Fleet: The Strategic Aims Behind Its Expansion into the Pacific], *Yomiuri Shimbun*, December 19, 2025, https://www.yomiuri.co.jp/choken/kijironko/ckworld/20251030-OYT8T50023/.

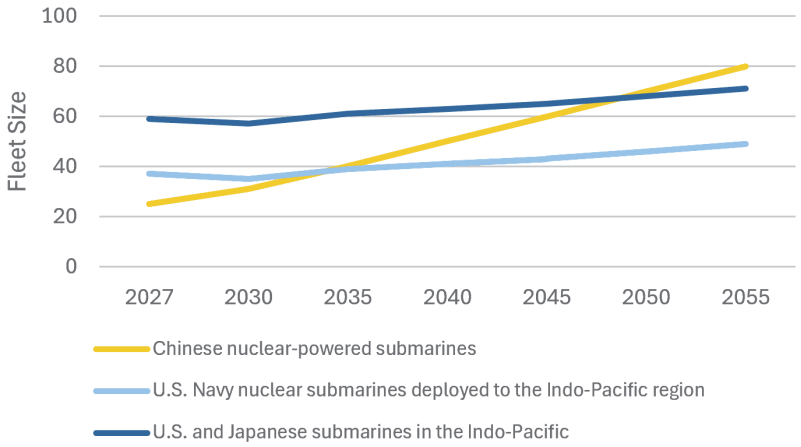


Figure 2　Projected Number of Chinese Nuclear-Powered Submarines

Source: Compiled by the author based on the sources listed below. The estimates assume that 60 percent of U.S. Navy nuclear-powered submarines are deployed to the Indo-Pacific. Japan's undersea forces are calculated based on a fleet of 22 submarines. Mike Brookes, "Testimony of RADM Mike Brookes, Part of Your World: U.S.-China Competition Under the Sea," U.S.-China Economic and Security Review Commission, March 2, 2026, https://s3.documentcloud.org/documents/27718060/us-china-competition-under-the-sea-testimony.pdf; Hung Cao, "U.S. Navy Shipbuilding Plan," May 2026, https://media.defense.gov/2026/May/11/2003928909/-1/-1/1/NAVY%20SHIPBUILDING%20PLAN%20MAY%20 2026.PDF; Henry Boyd, Tom Waldwyn, "Boomtime at Bohai: China ramps up submarine production," Military Balance Blog, IISS, February 16, 2026, https://www.iiss.org/online-analysis/military-balance/2026/02/boomtime-at-bohai-china-ramps-up-submarine-production/.

nuclear-powered submarines. By around 2040, China is also expected to be capable of conducting regular deployments to more distant waters, including the Indian Ocean, the Arctic Ocean, and the Atlantic.[7]

Cooperation among China, Russia, and North Korea is also deepening in both scope and substance, while each country continues to strengthen its nuclear posture. Of particular concern is China's rapid nuclear buildup, which is altering the structure of nuclear deterrence between the United States and China and bringing the relationship closer to nuclear parity in a form distinct from that of the Cold War.[8]

In response, the United States is shifting toward a strategy that places greater emphasis on the Western Hemisphere, with defense of the U.S. homeland at its core, while reassessing the division of roles with its allies. Moreover, U.S. military operations in Latin America and the Middle East in early 2026 exposed inconsistencies with the Trump administration's National Security Strategy and reinforced perceptions of growing unpredictability in U.S. strategy. These developments are increasing uncertainty among U.S. allies regarding the

[7] Mike Brookes, "Testimony of RADM Mike Brookes, Part of Your World: U.S.-China Competition Under the Sea," U.S.-China Economic and Security Review Commission, March 2, 2026, https://s3.documentcloud.org/documents/27718060/us-china-competition-under-the-sea-testimony.pdf.

[8] U.S. Department of Defense, "Military and Security Developments Involving the People's Republic of China 2023," 64–92; Fiona S. Cunningham and M. Taylor Fravel, "Dangerous Confidence? Chinese Views on Nuclear Escalation," *International Security* 44, no. 2 (Fall 2019): 61–109.

credibility of extended deterrence, particularly Washington's willingness to intervene in limited regional conflicts.[9]

In addition, the large-scale expenditure of precision-guided munitions and other weapons during the strikes on Iran suggests that U.S. readiness and war-sustaining capabilities may be subject to significant global constraints. If avoiding nuclear escalation with China becomes Washington's overriding priority, the United States may become more cautious about direct intervention in a limited conventional war. This, in turn, would increase the likelihood of a "stability-instability paradox," in which stability at the nuclear level creates greater room for conflict at lower levels of escalation.[10]

Taken together, these developments suggest that Japan's defense strategy must move beyond a structure that treats U.S. extended deterrence as an automatic premise on which Japan can depend. Instead, extended deterrence should be positioned as the ultimate backstop, while Japan develops a deterrence strategy designed to prevent a limited regional conventional war from occurring in the first place. In other words, Japan needs a strategic concept that aligns escalation-control approaches within the alliance to ensure their effectiveness against adversaries, while leveraging Japan's independent denial capabilities to thwart an adversary's objectives in the early stages of a crisis.

The introduction of new ways of warfare must also go beyond the acquisition of individual systems. More structural reforms are essential, including the development of operational doctrine premised on a battlefield innovation ecosystem and the reorganization of forces so that they can adapt rapidly to changes during a conflict.[11]

Moreover, countering China's overwhelming military advantages will require Japan to draw lessons from the ways in which weaker actors have fought in conflicts such as the war in Ukraine and then adapt those lessons to the predominantly maritime geography surrounding Japan. This will require greater resilience, the large-scale deployment of low-cost asymmetric capabilities, and institutional arrangements that enable forces to sustain combat over time. Japan's defense industrial base will therefore also need to move away from a peacetime production model toward one designed to adapt to wartime requirements.[12]

There are, of course, important differences between a conflict in the Indo-Pacific involving Japan and the wars fought in Europe or the Middle East. Even so, modern military technologies such as long-range missiles and drones have increased the efficiency with which firepower can be delivered while helping to limit personnel losses, thereby contributing to the prolongation of conflict. Japan's maritime strategic environment also differs from Europe, where large-scale land warfare is possible. Yet any conflict involving land, including island

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[9] The White House, "National Security Strategy 2025," November 2025, https://www.whitehouse.gov/wp-content/uploads/2025/12/2025-National-Security-Strategy.pdf; Michael J. Mazarr et al., *Understanding the Emerging Era of International Competition* (Santa Monica, CA: RAND Corporation, 2018), chap. 1.

[10] Glenn H. Snyder, "The Balance of Power and the Balance of Terror," in *The Balance of Power*, ed. Paul Seabury (San Francisco: Chandler, 1965), 184–201.

[11] T. X. Hammes, *The Sling and the Stone: On War in the 21st Century* (Zenith Military Classics, 2004), 211–240.

[12] Seth G. Jones, "The Tech Revolution and Irregular Warfare: Leveraging Commercial Innovation for Great Power Competition," Center for Strategic and International Studies, January 2025, 1–3, 11–16.

territories, still carries a risk of becoming protracted. At a minimum, Japan must therefore be prepared both to prevent an adversary from creating a fait accompli in the opening phase of a conflict and to sustain operations over the longer term.[13]

China also continues to hold an advantageous position in the space, cyber, and electromagnetic domains. However, Japan may still be able to offset some of these disadvantages by shifting away from the pursuit of comprehensive superiority and instead combining localized and time-limited advantages. How Japan should address these challenges will be another major issue in the revision of the next Three Strategic Documents.

Against this backdrop, this chapter reassesses both the achievements of the current 2022 Three Strategic Documents and the strategic challenges they left unresolved, with the aim of identifying where their limitations lie. In doing so, it examines the constraints and decision-making logic embedded in the policymaking process at the time, while highlighting the growing gap between those assumptions and the strategic environment now taking shape. This makes it possible to identify the strategic issues that should be redesigned in the next Three Strategic Documents to strengthen Japan's defense. The following section explains the analytical approach used for this purpose and the overall structure of the recommendations that follow.

2 Methodology and Structure

This report seeks to go beyond the presentation of normative arguments or theoretical hypotheses by linking the actual policy formulation process with the realities of the strategic environment. To this end, it adopts a combined methodological approach consisting of three elements: (1) qualitative analysis based on the practical knowledge and experience of those directly involved in policymaking; (2) collective deliberation within the research group; and (3) literature reviews and individual research conducted by specialists in each field.

First, Section 3 of this chapter draws on interviews with former senior government officials,

[13] The argument that a Taiwan contingency is likely to become a protracted conflict has gained increasing attention since the outbreak of the war in Ukraine and is now becoming a mainstream view. Examples include the following works. Seth G. Jones, "Is the United States Prepared for a War with China?" CSIS, May 12, 2026, https://www.csis.org/analysis/united-states-prepared-war-china; Zack Cooper, "How War in Taiwan Ends If Deterrence Fails, Could America Thwart China?" *Foreign Affairs*, November 6, 2025, https://www.foreignaffairs.com/taiwan/how-war-taiwan-ends; Andrew Faulhaber, "The Art of Protracted War: A Taiwanese Insurgency the Maoist Way and the US Department of Defense's Role," *Journal of Indo Pacific Affairs*, April 21, 2025, https://www.airuniversity.af.edu/JIPA/Display/Article/4169901/the-art-of-protracted-war-a-taiwanese-insurgency-the-maoist-way-and-the-us-depa/; Joel B. Predd, et al., *Thinking Through Protracted War with China: Nine Scenarios* (Santa Monica, CA: RAND Corporation, 2025); Andrew Metrick, Philip Sheers and Stacie Pettyjohn, "Over the Brink: Escalation Management in a Protracted War," Center for a New American Security, August 6, 2024, https://www.cnas.org/publications/reports/over-the-brink; Brian Kerg, "There will be no 'short, sharp' war. A fight between the U.S. and China would likely go on for years," Atlantic Council, March 19, 2024, https://www.atlanticcouncil.org/blogs/new-atlanticist/there-will-be-no-short-sharp-war-a-fight-between-the-us-and-china-would-likely-go-on-for-years/; Hal Brands, "Getting Ready for a Long War with China: Dynamics of Protracted Conflict in the Western Pacific," American Enterprise Institute, July 25, 2022, https://www.aei.org/research-products/report/getting-ready-for-a-long-war-with-china-dynamics-of-protracted-conflict-in-the-western-pacific/; Andrew Krepinevich, "Protracted Great-Power War: A Preliminary Assessment," Center for a New American Security, February 5, 2020, https://www.cnas.org/publications/reports/protracted-great-power-war; Joshua Rovner, "Two kinds of catastrophe: Nuclear escalation and protracted war in Asia," *Journal of Strategic Studies* 40, no. 5 (2017): 696–730.

including senior JSDF officers, who were involved in formulating the 2022 Three Strategic Documents. All interviews were conducted on the condition of anonymity. They were used to identify perceptions, constraints, alternative options, and the logic behind priority-setting in the policymaking process—factors that are difficult to capture through official documents or public statements alone. This approach makes it possible to distinguish between what the Three Strategic Documents were able to achieve and those issues that were deliberately deferred or could not be incorporated at the time, not simply through retrospective evaluation but from the perspective of those directly involved in the process.

Second, this report reflects the issues and perspectives developed through nine intensive rounds of discussion within the research group. These discussions went beyond assessing the current Three Strategic Documents. Drawing on recent developments and analyses—including the war in Ukraine, changes in the Middle East, shifts in U.S. strategy, China's nuclear buildup, and the evolution of its regional denial strategy—the group examined from multiple perspectives the structural challenges facing Japan's defense strategy. Core concepts running throughout this report, including "sustained denial," the "war-sustaining foundation," and the "research and development base supporting new ways of warfare," were refined through this collective process. Because the primary focus of this report is on high-intensity and potentially protracted defense operations in the event of an invasion of Japan, as well as the force structure, industrial base, and R&D foundation required to sustain them, it does not address other activities conducted from peacetime, such as responses to cognitive warfare, cyber operations, or economic security measures.

Third, each chapter and section from Chapter 2 onward reflects the expertise of its principal author, drawing on both a systematic review of the relevant literature and the author's own research. Rather than mechanically applying a single theoretical framework, the report seeks to integrate distinct bodies of scholarship—including nuclear deterrence theory, alliance strategy, conventional force employment, defense industrial policy, and research on emerging defense innovation systems—into a coherent overall vision for Japan's defense strategy.

The report is structured as follows. Chapter 1 begins with the problem outlined in Section 1. Section 3 of this report assesses the achievements and remaining challenges of the 2022 Three Strategic Documents, while Section 4 examines changes in the international security environment. Building on this analysis, Chapter 2 presents the basic strategic direction that should guide the next revision of the Three Strategic Documents. Chapter 3 and the chapters that follow then examine, in sequence, the operational concept of sustained denial; the design and force structure of the JSDF required to implement it; the development of the foundations needed to sustain prolonged operations; and the R&D base necessary to support new ways of warfare.

In this way, the report combines an internal assessment of current policy with an analysis of structural changes in the strategic environment, with the aim of designing a next-generation defense strategy that is both strategically coherent and practically implementable.

3 Achievements and Remaining Challenges of the 2022 Three Strategic Documents

Before turning to specific recommendations in the next chapter, this section examines the achievements and remaining challenges of the 2022 Three Strategic Documents, drawing on a total of eight interviews conducted on the condition of anonymity with former senior government officials who were involved in the policymaking process at the time.

1. Achievements of the 2022 Three Strategic Documents

Among the achievements of the 2022 Three Strategic Documents, many former senior officials pointed first to the introduction of stand-off defense capabilities and counterstrike capabilities. One former official recalled that the introduction of counterstrike capabilities finally enabled the JSDF's force development, in a substantive sense, to move beyond the Basic Defense Force Concept set out in the 1976 National Defense Program Outline.[14] In other words, Japan was able to shift toward a threat-based defense strategy grounded in military logic.

In introducing stand-off defense and counterstrike capabilities, those involved in the process placed particular emphasis on developing the necessary long-range missiles domestically. This reflected concerns that U.S. deterrence against aggression at the theater level could weaken in light of the nuclear buildup by countries surrounding Japan and delays in the deployment of U.S. ground-launched short- and intermediate-range missiles. More specifically, there was concern that, as U.S. and Chinese capabilities approached greater balance at the strategic nuclear level and U.S. conventional intervention centered on carrier strike groups became increasingly constrained, the United States might be unable to climb up the escalation ladder sufficiently to deter an adversary. Under such circumstances, even if Washington hesitated to act, Japan's demonstrated willingness to employ long-range strike capabilities was expected to complicate an adversary's calculations and thereby contribute to escalation management.[15]

If, however, Japan were to depend on U.S.-made systems for its long-range missiles and the kill chain needed to employ them, including intelligence, surveillance, and reconnaissance (ISR) capabilities, it would lose flexibility in its own decision-making and do little to complicate an adversary's calculations. The view at the time was therefore that, while coordination with the United States would remain essential, Japan needed the capability to employ its counterstrike capabilities independently. Possessing such an autonomous capability would make the option more credible in the eyes of both adversaries and the United States and, in turn, enable Japan and the United States to manage escalation jointly. At the core of this effort were domestic R&D programs for systems such as the Type 25 Surface-to-Ship Missile and the Type 25 Hyper-Velocity Gliding Projectile. Because developing these systems would take time, the acquisition of U.S.-made Tomahawk cruise missiles was also incorporated as an interim measure to bridge the capability gap and respond more rapidly to the deteriorating international security environment.[16]

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[14] Authors' interview with a former senior government official, February 18, 2026.
[15] Ibid.; authors' interview with a former senior government official, March 27, 2026; April 6, 2026; April 21, 2026.
[16] Ibid.; authors' interview with a former senior government official, April 7, 2026.

The proliferation of missile technology, which has made it increasingly difficult for Japan to maintain an effective missile defense posture on the basis of its previous approach alone, was also a major factor behind the decision to acquire counterstrike capabilities.[17] In parallel with these efforts, progress was also made in strengthening U.S. extended deterrence, including the formulation of the U.S.-Japan Guidelines for Extended Deterrence in 2024.[18]

Beyond counterstrike capabilities, former officials also emphasized the achievement of raising defense spending to 2 percent of GDP and strengthening capabilities for cross-domain operations.[19] For many years, Japan's defense budget had been constrained even as the roles and capabilities expected of the JSDF expanded beyond the traditional domains into areas such as space, cyber, and the electromagnetic spectrum. As a result, maintenance, sustainment, and readiness, including the ability to operate equipment already acquired—had come under increasing strain. Restoring this negative condition to a basic, sustainable footing was therefore treated as a second major pillar of the reforms.[20] The increase in defense spending also helped ease the tendency of each service to remain confined within its traditional land, maritime, or air domain, as well as the zero-sum competition among organizations for limited resources.[21] The establishment of the Joint Operations Command further created the institutional framework necessary for more effective joint operations.

2. Remaining Challenges

At the same time, several major challenges remained unresolved. First, several former senior officials noted that the stand-off defense and counterstrike capabilities set out in the 2022 Three Strategic Documents represented only the minimum that Japan could realistically introduce at the time, given the technologies and resources then available.[22] From the outset, the assumption was that these capabilities would need to be steadily expanded and strengthened, including during the period covered by the next Defense Buildup Program. This will require, among other things, further development of small-satellite constellations for ISR and a substantial expansion of units equipped with long-range missiles. In this regard, one unresolved issue is that, despite placing stand-off defense capabilities at the top of the seven priority capability areas, the current Defense Buildup Program calls for only a relatively limited expansion of missile units. One former official reflected that Japan's traditional incremental approach to force development had been overly focused on preserving the existing force structure, and that top-down efforts to correct this approach, as well as the underlying sense of urgency, had not necessarily permeated the JSDF as a whole.[23] Another concern was that current R&D programs associated with counterstrike capabilities remain centered on cruise missiles. To give these capabilities genuine strategic significance, Japan will need to develop systems with substantially

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[17] Ibid.
[18] Authors' interview with a former senior government official, February 18, 2026.
[19] Ibid.; authors' interview with a former senior government official, April 7, 2026.
[20] Authors' interview with a former senior government official, April 21, 2026.
[21] Authors' interview with a former senior government official, February 18, 2026; April 7, 2026.
[22] Authors' interview with a former senior government official, February 18, 2026; April 9, 2026; April 21, 2026.
[23] Authors' interview with a former senior government official, February 18, 2026.

greater destructive effect.[24]

Second, this has also contributed to the preservation of legacy force structures dating back to the Cold War.[25] This is particularly true of traditional Japan Ground Self Defense Force (JGSDF) divisions and brigades, older Japan Maritime Self Defense Force (JMSDF) surface combatants that are vulnerable to aerial threats, and patrol aircraft.

Third, because the Three Strategic Documents were formulated in the early stages of the war in Ukraine, they do not fully reflect the lessons that have emerged from more than four subsequent years of modern warfare.[26] These include the need to prepare for prolonged conflict, the large-scale use of attritable drones, and the application of AI in warfare. Although AI is included to some extent under the current documents' priority area of "command and control and intelligence-related capabilities," some interviewees argued that AI should have been established as a distinct pillar in its own right and that greater emphasis should have been placed on acquiring relevant capabilities.[27] Others stressed that, as Japan moves to introduce and develop military AI in an area where it currently lags behind, ensuring interoperability with the U.S. military and other partners will be critically important.[28]

Fourth, although the establishment of the Joint Operations Command created the institutional foundation for joint operations, one former senior official emphasized the continuing importance of the Joint Staff after operational command functions were transferred to the new headquarters.[29] This is because the Joint Staff will need not only to strengthen its role in providing professional military advice to the prime minister and minister of defense, but also to enhance its capacity to formulate operational doctrine.

Fifth, the major increase in defense spending has expanded the number of acquisition programs while also increasing the level of expertise required to manage them. As a result, weaknesses in the system for budget execution have become increasingly difficult to ignore. Some interviewees argued that, rather than leaving program management largely to defense contractors, the JSDF and the Acquisition, Technology & Logistics Agency (ATLA) should take a more active role. At the same time, where expertise is lacking, the Japan Ministry of Defense (MOD) should make greater use of mid-career recruitment and external contracting, particularly in fields such as space and cyber.[30] Greater attention should also be paid to broader spillover effects across the economy and to strengthening infrastructure outside the JSDF that contributes to national security. In addition, because authorities relevant to crisis response and national security are dispersed across ministries other than the MOD, achieving strategic objectives will require a more whole-of-government and cross-ministerial approach. This includes, for example, the involvement of the Ministry of Land, Infrastructure,

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[24] Authors' interview with a former senior government official, April 27, 2026.
[25] Authors' interview with a former senior government official, February 18, 2026; April 9, 2026.
[26] Authors' interview with a former senior government official, February 18, 2026; April 21, 2026.
[27] Ibid.
[28] Authors' interview with a former senior government official, April 9, 2026.
[29] Authors' interview with a former senior government official, April 7, 2026.
[30] Authors' interview with a former senior government official, March 27, 2026.

Transport and Tourism (MLIT), which administers the Civil Aeronautics Act.[31]

Sixth, some interviewees argued that progress has also been slow in creating a government-industry-academia ecosystem capable of strengthening innovation in the defense sector.[32] Such an ecosystem, they argued, should be international in scope and include allies and partner countries.

Seventh, several former senior officials expressed serious concern about the JSDF's personnel base. With demographic decline making it increasingly difficult to secure the necessary workforce, they pointed to several possible measures. These included reviewing nationality requirements for public servants, making more extensive use of outsourcing, and employing retired JSDF personnel under a new category distinct from both uniformed personnel and civilian officials so that they could undertake specialist roles that do not require high levels of physical fitness.[33]

Finally, interviewees also expressed concern about growing uncertainty surrounding U.S. defense commitments in the Indo-Pacific. There was relatively little concern about the defense of Japanese territory, where U.S. forces are stationed and where Japan itself retains primary agency in defending the country. By contrast, the defense of the wider Indo-Pacific, including Taiwan, presents a different problem. JSDF activities in such a contingency cannot be conducted as a wholly separate and independent effort from those of the U.S. military; they depend on an overarching U.S. operational concept. Yet precisely this dimension is subject to uncertainty arising from U.S. capability constraints and decision-making under the Trump administration. The resulting lack of autonomy on Japan's part was viewed as a serious strategic vulnerability.[34] This is not a problem that can be resolved simply through closer consultations between Japanese and U.S. defense authorities. In fact, the relationship between the U.S. military—particularly U.S. Pacific Command—and the JSDF is widely regarded as one of the most stable and reliable channels in the broader U.S.-Japan relationship.[35] The source of uncertainty, however, lies not primarily with the military authorities themselves, but with political leadership and domestic politics. It is therefore difficult to expect closer bilateral coordination alone to resolve the problem. Several interviewees argued that the only viable response is to increase the JSDF's autonomy in terms of its own capabilities.[36]

4 Changes in the International Security Environment

Since Russia's invasion of Ukraine, the so-called "rules-based international order" has come under severe strain. Violations of sovereignty and attempts to change the status quo by force have not been effectively deterred, while the constraining power of the postwar international order centered on the United Nations Charter has relatively weakened. The international security environment is undergoing

[31] Ibid.; authors' interview with a former senior government official, April 7, 2026; April 9, 2026.
[32] Authors' interview with a former senior government official, February 18, 2026; April 9, 2026.
[33] Authors' interview with a former senior government official, April 7, 2026; April 9, 2026; April 21, 2026.
[34] Authors' interview with a former senior government official, April 9, 2026; April 21, 2026.
[35] Authors' interview with a former senior government official, February 18, 2026.
[36] Authors' interview with a former senior government official, April 21, 2026.

a qualitative shift from competition over an order based on rules and norms toward competition among major powers over spheres of influence.[37]

One manifestation of this shift is the deepening alignment between China and Russia, which has developed in ways that support Russia's war of aggression. China has supported Russia diplomatically, economically, and technologically, while Russia has strengthened its strategic ties with China through energy and military cooperation. Russia's dependence on China for components used in drone production should also not be overlooked. At the same time, Russia has rapidly deepened its relationships with North Korea and Iran, sustaining its war effort through supplies of weapons, ammunition, unmanned systems, and other materiel. As a result, a war-sustaining network is emerging among revisionist states in which weapons, ammunition, energy, and other resources are provided in mutually complementary ways.[38]

This network is developing beyond a loose alignment into a substantive framework of cooperation that can indirectly sustain each country's capacity to wage war during a conflict. It remains uncertain whether China, Russia, and North Korea would conduct coordinated military operations in the event of a conflict in Japan's vicinity. From a capability perspective, however, the possibility cannot be excluded that, while Japan is resisting Chinese aggression in the Southwest (Nansei) Islands or the Pacific, Russia and North Korea could create pressure on Japan's northern front and force it to disperse its resources.[39]

At the same time, developments in U.S. strategy are becoming increasingly uncertain. Since the beginning of the second Trump administration, U.S. policy toward the Russia-Ukraine war has shifted substantially, with Washington moving rapidly to pursue ceasefire negotiations with Russia. This process, however, has generated serious friction with European allies and created strains within the Western alliance.[40]

The U.S. National Security Strategy released in December 2025 marked a clear shift toward an "America First" strategy centered on homeland defense and prioritizing the maintenance of U.S. primacy in the Western Hemisphere. While the document explicitly emphasized competition with China, it adopted a more limited approach toward involvement in regional conflicts. Yet the U.S. raid against Venezuela in January 2026 and the strikes on Iran conducted jointly with Israel beginning in late February exposed a gap between this stated strategic direction and actual U.S. behavior.[41]

These actions have raised questions among U.S. allies about the consistency of American strategy and have relatively weakened confidence in the credibility of extended deterrence. In particular,

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[37] Stephen M. Walt, "The Predatory Hegemon: How Trump Wields American Power," *Foreign Affairs* 105, no. 2 (March/April 2026): 8–23.

[38] U.S. Department of Defense, "Military and Security Developments Involving the People's Republic of China 2023," 1–8.; Hanna Notte, "Russia, the Global South and the Mechanics of the Nuclear Order," *Survival* 66, no. 3 (2024): 49–57.

[39] Japan Ministry of Defense, *Bōei hakusho Reiwa 7 nenban*, Part I, Chapter 1, "Overview," and Chapter 3, "Defense Policies and Other Issues of Foreign Countries"; Daniel Byman and Seth G. Jones, "Legion of Doom? China, Russia, Iran and North Korea," *Survival* 66, no. 4 (2024): 39–42.

[40] Zack Cooper, "Asia After America: How U.S. Strategy Failed and Ceded the Advantage to China," *Foreign Affairs* 105, no. 2 (2026): 76–91.; Walt, "The Predatory Hegemon."

[41] The White House, "National Security Strategy 2025"; Zack Cooper, "Asia After America."

it has become increasingly plausible that a United States primarily concerned with avoiding nuclear escalation could hesitate to intervene directly in a limited conventional conflict. Under such conditions, the "stability-instability paradox"—in which stability at the nuclear level creates greater scope for conflict at lower levels of escalation—could also become increasingly salient in the Indo-Pacific.[42]

Taken together, the international security environment is shifting away from the maintenance of order through rules and norms toward competition involving a reconfiguration of spheres of influence among major powers. The emergence of an axis of revisionist powers centered on China, Russia, and North Korea, the possibility of simultaneous crises across multiple fronts, and growing uncertainty regarding the consistency of U.S. strategy and the credibility of extended deterrence are fundamentally challenging the assumptions on which Japan's defense strategy has long rested.

Under these conditions, regional stability and Japan's security can no longer be ensured simply by extending existing concepts of deterrence and capability development. As the military threat posed by revisionist states such as China and uncertainty surrounding the United States increase simultaneously, Japan must strengthen the autonomy of its own defense capabilities so as to enhance both its capacity to respond to aggression and the prospects for U.S. involvement. At the core of this approach should be an asymmetric and sustainable denial capability. By creating a temporal buffer that allows Japan to continue resisting aggression, such a capability would enable Japan, even in the absence of immediate U.S. involvement, to defend itself through its own efforts—a so-called "Plan B"—while providing the basis for efforts to bring the United States back into the conflict and restore "Plan A," —joint responses with the United States.

The next chapter directly addresses the structural condition created by the narrowing gap toward U.S.-China nuclear parity and sets out the strategic direction Japan should pursue to maintain both the credibility of extended deterrence and crisis stability while remaining a non-nuclear-weapon state.

[42] Snyder, "The Balance of Power and the Balance of Terror," 184–201.

Chapter 2

Strategic Direction for Japan in an Era of Emerging Nuclear Parity: Redesigning Extended Deterrence through a Trigger Strategy and Sustained Denial

Kuniharu Kakihara and Hirohito Ogi

1 Structural Challenges Facing Extended Deterrence as Nuclear Parity Approaches

China's rapid quantitative expansion and qualitative modernization of its nuclear forces are fundamentally transforming the strategic environment in the Indo-Pacific. Through the large-scale construction of intercontinental ballistic missile (ICBM) silos, the deployment of multiple independently targetable reentry vehicles (MIRVs), and improvements in the continuous patrol capabilities of its ballistic missile submarines (SSBNs), China is seeking to establish a secure second-strike capability against the United States. As a result, the strategic nuclear balance between the United States and China is moving closer to de facto nuclear parity.[1]

This shift involves more than a numerical balance in nuclear forces. As nuclear parity advances, it weakens the assumption that the United States can dominate every stage of escalation unilaterally and shifts the focus of deterrence from "how to avoid nuclear war" to "how to deter limited aggression below the nuclear threshold." It creates conditions under which the so-called "stability-instability paradox" becomes more pronounced: the greater the stability at the nuclear level, the greater the potential instability at the conventional level immediately below it.[2]

In the context of extended deterrence, this structural change has especially serious implications. If China were to employ limited and incremental coercion or military force in areas such as the Taiwan Strait, the East China Sea, or the Korean Peninsula, structural uncertainty would arise over whether the United States would intervene immediately at the risk of exposing its homeland to nuclear retaliation. This is the classic concern over "decoupling," and from the perspective of U.S. allies, it can undermine confidence in the credibility of extended deterrence.[3]

Traditional models of extended deterrence have often rested on the assumption that, once an ally's vulnerability becomes sufficiently acute, U.S. political resolve will crystallize and deterrence will function accordingly. Under contemporary conditions, however—including increasingly multipolar nuclear competition, more sophisticated anti-access/area-denial (A2/AD) capabilities, and compressed escalation timelines—this assumption can no longer be taken for granted. As nuclear parity approaches, the success or failure of deterrence depends less on the ultimate possibility of nuclear use itself than on the broader structure of escalation: what actions occur before the nuclear threshold is reached, how those actions unfold, and which actors become involved as the crisis develops.

The approach toward U.S.-China nuclear parity therefore compels Japan to reassess a defense strategy built on traditional assumptions about extended deterrence. The central challenge for Japan is not the credibility of nuclear deterrence itself, but how to deter and manage conventional aggression and attempts to create faits accomplis while ensuring that nuclear deterrence remains intact. With this structural problem in mind, the next section

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[1] U.S. Department of Defense, "Military and Security Developments Involving the People's Republic of China 2023," 64–92; Fiona S. Cunningham and M. Taylor Fravel, "Dangerous Confidence? Chinese Views on Nuclear Escalation," *International Security* 44, no. 2 (Fall 2019): 61–109.

[2] Glenn H. Snyder, "The Balance of Power and the Balance of Terror," in *The Balance of Power*, ed. Paul Seabury (San Francisco: Chandler, 1965), 184–201; Thomas C. Schelling, *Arms and Influence* (New Haven: Yale University Press, 1966), 221–259.

[3] Brad Roberts, *The Case for U.S. Nuclear Weapons in the 21st Century* (Stanford: Stanford University Press, 2015), chap. 7.

examines the limitations of existing deterrence frameworks and considers why Japan requires a new strategic option—a "third way."

2 Limitations of Existing Deterrence Theory and the Need for a "Third Way"

Traditional debates on nuclear deterrence and extended deterrence have largely developed around two basic models: deterrence by punishment and deterrence by denial. Deterrence by punishment seeks to prevent aggression by demonstrating the capability and resolve to impose intolerable costs, whereas deterrence by denial seeks to make the achievement of an aggressor's objectives sufficiently difficult that aggression no longer appears rational. During the Cold War, these two approaches were generally understood to function in a complementary manner through a division of roles between nuclear and conventional forces.[4]

As discussed in the previous section, however, this binary conception of deterrence is becoming less adequate in a strategic environment in which the United States and China are moving toward greater balance in strategic nuclear capabilities. As nuclear parity advances, mutual incentives to avoid escalation to nuclear war increase, while the incentives for limited action at the conventional or theater level may also grow, creating conditions in which the so-called "stability-instability paradox" becomes more pronounced. In the context of extended deterrence, the greater the credibility of nuclear use as an ultimate option, the more serious the problem of instability at the level immediately below the nuclear threshold can become.[5]

Against this structural backdrop, the 2022 Three Strategic Documents explicitly introduced stand-off defense capabilities and counterstrike capabilities. As discussed in Chapter 1, one of the principal priorities in the policymaking process at the time was to develop long-range missiles domestically and thereby preserve room for Japan to employ its counterstrike capabilities independently. This reflected a shared concern that, given the nuclear buildup of neighboring countries and delays in the deployment of U.S. ground-launched short- and intermediate-range missiles, U.S. deterrence against aggression at the theater level could relatively weaken.

In other words, policymakers were concerned that, if a growing U.S.-China balance at the strategic nuclear level were combined with an increasingly sophisticated A2/AD environment that constrained U.S. conventional intervention—particularly intervention centered on carrier strike groups—the United States might find it increasingly difficult to move smoothly up the escalation ladder in order to deter an adversary. In such circumstances, even if Washington hesitated to intervene, Japan's demonstrated ability and willingness to employ long-range strike capabilities was expected to complicate an adversary's strategic and tactical calculations and thereby contribute to escalation management.[6]

At the same time, this logic also contains important unresolved questions regarding the design of Japan's counterstrike capabilities.

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[4] Lawrence Freedman, *Deterrence* (Cambridge: Policy Press, 2004), 25–58.
[5] Government of Japan, "National Security Strategy" and "Defense Buildup Program."
[6] Fumio Kishida, statement before the Budget Committee, Senate, 211th Diet, No. 16, March 28, 2023.

First, it remains insufficiently clear through what mechanism Japan's counterstrike capabilities would be linked to U.S. escalation control. If Japan's long-range missiles and the kill chain required to employ them—including ISR capabilities—became heavily dependent on U.S.-made systems, Japan's flexibility in decision-making would be constrained. As a result, the value of Japan's counterstrike capabilities in complicating an adversary's calculations could be limited. For such capabilities to carry credible deterrent value, Japan must retain a certain degree of operational autonomy while establishing a structure in which escalation can be managed jointly with the United States. From this perspective, the domestic development of ISR satellite constellations is particularly important and should be strengthened further.

Second, a strategic design that places excessive emphasis on counterstrikes against missile bases and other targets on the Chinese mainland carries serious risks alongside any potential deterrent benefits. It could create incentives for China to launch a preventive first strike. Moreover, if Japanese counterstrikes were conducted on a scale or in a manner insufficient to neutralize launchers and missile forces effectively, they could increase the risk of rapid Chinese escalation, including theater-level nuclear use or nuclear coercion. Japan does need a certain degree of counterstrike capability as part of deterrence by denial against Chinese missile saturation attacks—that is, the ability to degrade launchers used to conduct missile attacks against Japan, as well as supporting infrastructure such as satellite downlink stations. Yet so long as these capabilities rely primarily on conventionally armed cruise missiles, even if longer-range hypersonic glide weapons are introduced in the future, it is questionable whether they would possess sufficient striking power and destructive effect to complicate an adversary's calculations to a meaningful degree.

Third, if the objective is to defend the Senkaku Islands and the Nansei Islands in practice, Japan's strategic focus should be placed on degrading China's invading naval forces and their ability to sustain operations. As the Chinese navy increasingly normalizes deployments into the Western Pacific, the outcome of a limited regional conflict would depend heavily on whether China could establish a fait accompli within a short period. The key variables would therefore be the ability to employ anti-surface strike capabilities and to sustain their resupply over time.

This analysis highlights the limitations of understanding counterstrike capabilities primarily as an extension of deterrence by punishment or as a means of striking the Chinese mainland. To be sure, the Japanese government's own explanation appears to contain an element of deterrence by denial insofar as it describes deterrence as convincing an adversary that "achieving its objectives would not be easy" and that "it would be better not to attack." At the same time, however, its stated objective of "complicating the adversary's strategic and tactical calculations" leaves a degree of ambiguity, suggesting that elements of deterrence by punishment also remain embedded in the concept.

Taken together, these considerations suggest that Japan needs to reposition counterstrike capabilities more clearly within a broader deterrence structure—one designed to remove conventional aggression from the adversary's set of rational options without unnecessarily increasing the risk of escalation to nuclear war. The "third way" proposed in this report is precisely this: integrating conventional forces,

including counterstrike capabilities, into a strategic architecture that combines sustained denial with escalation management.

The next section reinterprets André Beaufre's trigger strategy as the theoretical foundation for this "third way" and examines how it can be applied to redesign extended deterrence in an era of nuclear parity.

3 A Contemporary Reinterpretation of Beaufre's Trigger Strategy

As a theoretical starting point for redesigning extended deterrence, this report draws on the concept of the trigger strategy developed by the French strategic thinker André Beaufre. What distinguished Beaufre's approach was that he located the essence of strategy not in the mere possibility of nuclear use, but in how the structure of escalation could be designed and how an adversary's political calculations could be shaped.[7]

For Beaufre, deterrence was not simply a matter of symmetry in capabilities or the display of threats. Rather, it was a structural phenomenon created by giving an adversary a clear and advance understanding of the chain of political and military consequences that aggression would set in motion. In his trigger strategy, the essence of the "trigger" lay in the way a small-scale and limited defensive action could serve as a mechanism that made higher levels of escalation appear unavoidable.[8]

In the context of Cold War France, Beaufre's trigger strategy presupposed the use of an independent French nuclear capability. Beaufre envisaged that a limited and proportionate French nuclear response to a Soviet invasion would confront Moscow with a stark choice: either absorb the damage or retaliate and thereby accept the risk of a general nuclear war involving the United States. France did not seek nuclear symmetry. Instead, by constructing a form of escalation entrapment, it sought to bind U.S. strategic interests and Soviet choices together in a way that made them inseparable.[9]

The important point is that nuclear weapons were not conceived primarily as the decisive instrument of war, but as a mechanism for manipulating the structure of escalation.

The Indo-Pacific strategic environment facing Japan, however, differs fundamentally from the early Cold War European context in which Beaufre developed his ideas. First, Japan is a non-nuclear state and therefore has no option to incorporate nuclear use itself as the trigger. Second, under a tripolar nuclear structure involving the United States, China, and Russia, movement toward nuclear parity does not automatically produce stability. On the contrary, it may create stronger incentives for limited coercive action at the conventional level. The contemporary relevance of Beaufre's strategy for Japan therefore lies not in replicating an independent nuclear capability, but in translating the structural logic of escalation management that he identified into a non-nuclear, conventional-force context. This report accordingly redefines the trigger not as a "trigger for nuclear use," but as an activation mechanism that institutionally links

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[7] André Beaufre, *Dissuasion et strategie* (Paris: Armand Colin, 1964).

[8] André Beaufre, *An Introduction to Strategy: With Particular Reference to Problems of Defence, Politics, Economics, and Diplomacy in the Nuclear Age*, trans. R. H. Barry (London: Faber & Faber, 1965), esp., chap. 5.

[9] Lawrence Freedman, *Strategy: A History* (Oxford: Oxford University Press, 2013), 388–395.

Japan's conventional denial actions to U.S. extended deterrence.[10]

As nuclear parity approaches, the central challenge for extended deterrence lies not in deterring nuclear war at the final stage of escalation, but in managing crises at the conventional and limited regional levels below it. As long as U.S. strategic nuclear forces, particularly SSBNs, continue to function as a structural backstop, the central question is not whether nuclear weapons will be used, but how U.S. extended deterrence can be activated and shaped at the appropriate time and in the appropriate manner.[11]

From this perspective, a Japanese version of the trigger strategy reinterprets Beaufre's concept as a structural theory of escalation activation. Japan's conventional denial actions would be designed as part of an institutionalized process that, in accordance with arrangements agreed in advance, progressively and irreversibly activates U.S. involvement. The defining feature of this trigger is that it makes the pathway of escalation visible through action rather than through threatening rhetoric alone.[12]

Equally important, this trigger should not be conceived as a one-off mechanism. It must instead have a phased structure that continues to operate over time. The longer aggression persists, the deeper allied integration, force commitment, and mobilization of industrial and war-sustaining capacity should become. By embedding this expectation in advance, the strategy should deny an aggressor the prospect of achieving a quick victory or creating a fait accompli. This logic is inseparable from the concept of "sustained denial" developed in Chapter 3 and the chapters that follow.

In this sense, André Beaufre's trigger strategy remains a useful theoretical resource for Japan in an era of nuclear parity. Its relevance, however, depends not on reproducing its historical form, but on reconstructing it as a strategic architecture suited to the contemporary interaction between nuclear and conventional forces. Building on this reinterpretation, the next section sets out the basic design of a trigger architecture adapted to Japan's strategic circumstances.

4 Basic Design of Japan's Trigger Architecture

As discussed in the previous section, the central challenge for extended deterrence as nuclear parity approaches lies not in the credibility of nuclear use at the highest level of escalation, but in escalation management at the conventional and theater levels below the nuclear threshold. This section presents the basic design of a trigger architecture that Japan should adopt as a concrete strategic concept for addressing this challenge.

For this architecture to be effective, however, it cannot remain an abstract concept. Unless its functional requirements and activation process are made concrete and visible, it will fail to provide an adversary with a sufficiently clear understanding of how events are likely to unfold, thereby limiting its deterrent effect.

First, the trigger should not be designed as a

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[10] Kuniharu Kakihara, "Japan's Offshore Trigger Architecture: Escalation Control under Emerging Nuclear Parity," draft manuscript, May 27, 2026.

[11] Roberts, *The Case for U.S. Nuclear Weapons in the 21st Century*, chap. 7.

[12] Kakihara, "Japan's Offshore Trigger Architecture."

single "tripwire," but as a multilayered structure that operates progressively over time. Japan's initial response should not automatically lead to full-scale allied involvement. Rather, the architecture should function as a "phased activation mechanism" in which the depth of allied involvement increases as specified conditions are met and actions accumulate.

Second, the relationship between actions taken at each stage and their consequences must be predictable both within and outside the alliance. In other words, it is essential that the extent of allied involvement likely to be triggered by particular Japanese actions be institutionally defined in advance.

Third, the forces constituting the trigger must possess sufficient resilience to continue functioning even after an initial attack. Capabilities deployed at overseas operational bases are especially important in this regard, serving as a preserved force that helps ensure the sustainability of operations.

Only when these requirements are met can the trigger strategy function not merely as a theoretical framework, but as a substantive deterrence mechanism that compels an adversary to anticipate concrete consequences for its actions.

The trigger architecture proposed in this report may be understood as an institutional structure designed so that actions by Japan's conventional forces progressively activate U.S. extended deterrence and the involvement of allies and like-minded countries. Its purpose is to convince an adversary, from the initial stage of aggression, that continuing the attack will become strategically untenable, without unnecessarily provoking nuclear escalation.[13]

At the core of this architecture is a combination of stand-in, asymmetric denial capabilities based on Japanese territory and a counterstrike posture that makes use of overseas operational bases. The former refers primarily to highly survivable land-based missile capabilities, submarines, and various attritable aerial and maritime unmanned systems. Their primary purpose is to deny the sustainability and success of an adversary's air and maritime invasion operations. Overseas operational bases, meanwhile, are operational hubs located in the territories of allies and like-minded countries outside Japan. They serve to connect Japan's defensive actions with allied involvement both spatially and politically.[14] Based on these elements, the trigger architecture proposed in this report can conceptually be organized into a three-stage activation structure.

The first stage, or initial trigger, consists of autonomous Japanese denial operations. At this stage, Japan would reduce the likelihood of successful aggression through defensive operations centered on its own territory, while simultaneously initiating intelligence sharing and operational coordination with its allies. The essential purpose of this stage is to demonstrate that aggression cannot succeed quickly.

The second stage, or intermediate trigger, consists of the formation of integrated allied operations using overseas operational bases. Japan's actions would serve as the starting point for integrating U.S. and partner capabilities into the theater, enabling dispersed forces to begin sustained strikes and integrated ISR operations. The key point

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[13] Freedman, *Deterrence*, 129–158.

[14] Evan Branden Montgomery, "Contested Primacy in the Western pacific: China's Rise and the Future of U.S. Power Projection," *International Security* 38, no. 4 (Spring 2014): 115–149.

is that allied involvement would be activated not as an ad hoc political decision, but as an extension of force employment arrangements prepared in advance.

The third stage, or higher-level trigger, consists of deeper strategic integration. At this stage, more explicit involvement by U.S. long-range strike capabilities and strategic assets would create a multilayered escalation structure, including pressure exerted from outside the immediate theater.

The trigger architecture should therefore be understood not as a "single trigger," but as a structure in which allied involvement progressively deepens from the starting point of Japan's initial actions.

The architecture envisaged here does not assume a sudden leap in escalation once a single threshold is crossed. Rather, it is multilayered and activates progressively as aggression develops. More specifically, Japan's deterrence and defense activities are envisioned as unfolding through roughly four phases as the level of escalation rises and the range of actors involved expands.[15]

The first phase involves establishing a deterrence and denial posture from peacetime through the initial stages of a crisis, centered on preparations by Japan's conventional forces and coordination within the alliance. The second phase consists of denial operations by Japan's conventional forces in response to the onset of aggression, with the objective of preventing a rapid adversary victory. In the third phase, Japan's initial denial operations lead to deeper involvement by allies and like-minded countries, expanding the confrontation both geographically and politically. The fourth phase is the point at which U.S. extended deterrence, including nuclear forces, functions as the ultimate backstop. Japan's strategy seeks to exploit the prospect of transition to this stage as an element of deterrence.

As a concrete form of integrated allied operations in the third phase, this report proposes the formation of an Allied Depth Task Force. Centered on Japanese, U.S., and Australian forces, this task force would operate from overseas operational bases and integrate the following functions.

First is long-range stand-off strike. By integrating Japan's ground-launched missiles, air-launched cruise missiles, and allied bomber forces, the task force would apply sustained pressure against China's forward-deployed forces and supply lines. Particularly important in this context would be the introduction of long-range multipurpose weapon-carrier aircraft, deployed in advance to overseas operational bases as a preserved component of Japan's airpower. Such aircraft would serve as platforms capable of carrying large numbers of long-range anti-ship missiles and projecting sustained strike power into the theater from rear-area bases less vulnerable to an initial attack. This would allow Japan to retain a counterstrike capability from the outer edges of the theater even if forces based on the Japanese homeland suffered attrition in the opening stages of a conflict, while also placing multidirectional pressure on forward-deployed Chinese naval forces.

Second is the development of integrated ISR. Sensor data from Japan, the United States, Australia, and other partners would be integrated in real time to create a common operational picture, improving

[15] Kakihara, "Japan's Offshore Trigger Architecture."

theater-wide situational awareness and accelerating decision-making.

Third is distributed air and missile defense. Air defense assets dispersed across multiple locations would be networked to prevent the neutralization of the overall defense system through saturation attacks against any single base.

These air assets should not depend on fixed-base operations alone. Instead, rotating them among multiple overseas operational bases would make them more difficult to track and increase their survivability, while the geographic expansion of the theater itself would contribute to deeper allied involvement. Such a task force should therefore be more than a wartime force package. It should be integrated and exercised among allies from peacetime so that it can become operational smoothly in a crisis. In this sense, the Allied Depth Task Force would constitute the central mechanism of the intermediate trigger within the trigger architecture, serving as the link that irreversibly connects Japan's initial actions to theater-wide allied integration.

Asymmetric and sustained denial based on Japanese territory involves questions of operational concepts and force design and will therefore be addressed primarily in Chapters 3 and 4. At the strategic level, however, the incorporation of overseas operational bases is central to the concept and warrants further explanation.

First, overseas operational bases would strengthen survivable and effective denial capabilities against an adversary's ability to conduct an invasion without placing excessive emphasis on direct counterstrikes against the Chinese mainland. As the Chinese navy increasingly normalizes operations in the Western Pacific, the outcome of a limited regional conflict would depend heavily on the effectiveness of China's invading naval forces and its ability to sustain them. Anti-ship strikes and supporting operations conducted from overseas bases could place continuous pressure on sea lines of communication (SLOCs, or sea lanes) and forward-deployed forces, making it more difficult for China to achieve a fait accompli through a short, decisive campaign.[16]

Second, overseas operational bases would function as an "intermediate trigger" for escalation management. Large-scale direct counterstrikes launched from the Japanese homeland could lead an adversary to anticipate rapid escalation, including nuclear use or nuclear coercion. Operations from overseas bases, by contrast, would constitute neither unilateral Japanese action nor full-scale U.S. intervention. Yet they would make clear that, as aggression continued, the confrontation would inevitably become more multinational and expand geographically. This would deny an aggressor the expectation that a war could remain localized and limited.[17]

Third, this concept would structurally link Japan's stand-off defense capabilities with U.S. extended deterrence. Overseas operational bases would necessarily be tied closely to prior alliance coordination, division of roles, and logistics and resupply arrangements. Japan's denial operations would therefore contain built-in pathways through which U.S. and partner involvement could deepen.

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[16] Toshi Yoshihara, "Going Anti-Access at Sea: How Japan Can Turn the tables on China," Center for a New American Security, 2014, 6–10.

[17] T. X. Hammes, *The Sling and the Stone: On War in the 21st Century* (Zenith Military Classics, 2004), 211–240.

Japanese strike operations would thus cease to be a stand-alone military option and instead become part of joint U.S.-Japan escalation control.[18] During the latter part of the Cold War, Japan developed anti-submarine warfare (ASW) and air defense capabilities in part to ensure the safe arrival of major U.S. forces based in the continental United States.[19] Under current conditions, however, uncertainty surrounding the United States—particularly political decision-making by a U.S. administration—has increased. Simply possessing forces capable of securing reinforcement routes can therefore no longer be assumed to guarantee that U.S. reinforcements will actually arrive. Japan must instead take a more proactive role, using its own operations from overseas bases as a catalyst to induce U.S. reinforcement and involvement.

Equally important, a trigger architecture incorporating overseas operational bases would not operate as a "one-time trigger." Its effects would intensify over time. The longer aggression continued, the more anti-ship firepower would be brought to bear, the greater the pressure on supply lines, and the broader multinational involvement would become, producing cumulative attrition for the aggressor. This time-dependent structure is closely linked to the concept of "sustained denial" developed in detail in Chapter 3.

In this way, a trigger architecture incorporating overseas operational bases would provide a deterrence structure capable of making aggression strategically unsustainable without relying on large-scale strikes against the Chinese mainland that could generate excessive escalation risks. At the same time, it would redefine Japan's stand-off defense capabilities in a manner suited to an era of

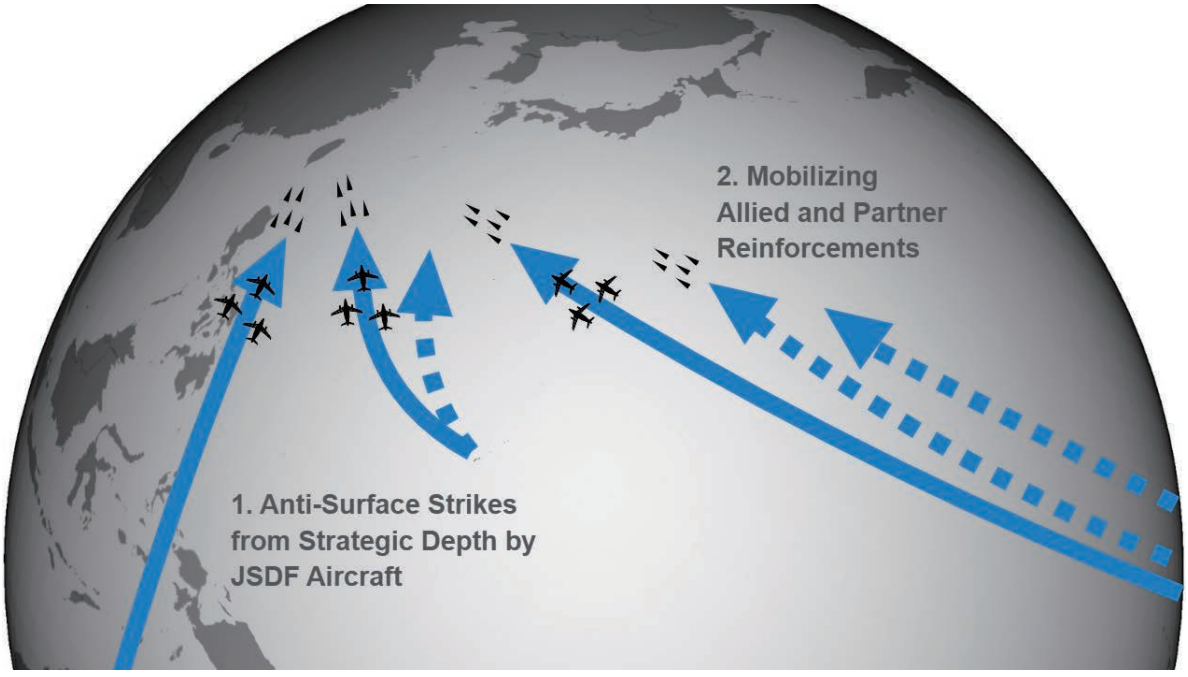


Figure 3　Phase Three of the Trigger Architecture (created by the author)

[18] Roberts, *The Case for U.S. Nuclear Weapons in the 21st Century*, chap. 7.

[19] Shingo Yoshida, *Nichibei Dōmei no Seidoka: Hatten to Shinka no Rekishi Katei [The Institutionalization of the U.S.-Japan Alliance: The Historical Process of Development and Deepening]* (Nagoya: Nagoya University Press, 2012), chap. 5.

nuclear parity and place cooperation with allies and like-minded countries at the center of deterrence design. The platforms envisioned here would have different characteristics from conventional fighters and bombers in terms of operational cost and survivability, and would serve as a complementary core capability for sustaining the projection of strike power.

The next section considers the broader implications of this strategic concept for Japan's alliance strategy and defense policy.

5 Strategic Implications —Redefining Alliance Deterrence and Transforming Japan's Role

The trigger architecture outlined above should be understood not as an abstract concept of deterrence, but as an operationally viable blueprint for escalation management that progressively connects Japan's initial response to integrated alliance operations and, ultimately, to strategic-level involvement.

The trigger architecture incorporating overseas operational bases, as proposed in the previous section, has important implications for fundamentally rethinking the role of Japan's counterstrike capabilities. This section considers what this concept means for the future of extended deterrence centered on the U.S.-Japan alliance, for Japan's role within the alliance, and for Japan's defense policy as a whole.[20]

First, the trigger architecture proposed here shifts extended deterrence from a matter of "assurance" to one of "structure." Japan's security has traditionally depended heavily on U.S. extended deterrence, particularly U.S. nuclear capabilities and political resolve. Yet as nuclear parity approaches, the international order becomes more multipolar, and U.S. strategic priorities fluctuate, it is no longer sufficient to view deterrence solely in terms of allied credibility or the willingness to intervene promptly. By embedding a structure in which Japanese actions institutionally activate alliance involvement and escalation management, the trigger architecture places the credibility of extended deterrence on a more stable foundation.[21]

Second, this concept qualitatively transforms Japan's role within the alliance. Japan would no longer be merely a passive beneficiary of deterrence, but an actor capable of shaping and activating the deterrence structure itself during the initial stages of a crisis. The primary purpose of Japan's stand-off defense and counterstrike capabilities would not be to impose direct punishment on an adversary. Rather, they would demonstrate that continued aggression would lead to an irreversible deepening of involvement by the United States and other like-minded countries. In this sense, these Japanese capabilities should be understood not as a substitute for alliance deterrence, but as a catalyst that enables alliance deterrence to function in practice.[22]

Third, a trigger architecture incorporating overseas operational bases would expand alliance deterrence beyond a purely bilateral framework into a more multilateral deterrence structure. As aggression continued, not only U.S. involvement

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[20] Michael J. Mazarr et al., *Understanding the Emerging Era of International Competition: Theoretical and Historical Perspectives* (Santa Monica, CA: RAND Corporation, 2018), chap. 1.

[21] Roberts, *The Case for U.S. Nuclear Weapons in the 21st Century*, chap. 7.

[22] Kakihara, "Japan's Offshore Trigger Architecture."

but also logistical support, equipment provision, intelligence sharing, and eventually political and economic involvement by like-minded countries would expand progressively. Such a structure would reduce an aggressor's ability to conceive of the conflict as a localized, short-duration war that could be managed on favorable terms.[23]

Fourth, this strategic concept also provides clear guidance for Japan's force-development priorities. The objective should not be to maximize Japan's ability to strike the Chinese mainland, but to build capabilities that prevent aggression from succeeding or being sustained. Anti-surface warfare capabilities, distributed and resilient force employment, the ability to replenish munitions and equipment, and interoperability with allies and like-minded countries should therefore become central principles of force design. These priorities are inseparable from the concept of "sustained denial" discussed in Chapter 3 and the war-sustaining foundation examined in Chapter 5.

Finally, the trigger architecture provides a framework for repositioning Japan's defense policy from responding to individual contingencies toward managing long-term strategic competition. Even if it is unrealistic to develop the capability to eliminate the possibility of aggression entirely, Japan can seek to ensure that aggression does not become a successful precedent and that the aggressor's strategic attrition accumulates over time. This long-term perspective is essential to reconciling deterrence stability with deterrence effectiveness in an era of nuclear parity.[24]

This perspective also offers one answer to concerns surrounding a so-called "Plan B" in the event that sufficient U.S. defense commitments cannot initially be secured. Reinforcements from the continental United States would, of course, remain essential to defeating a full-scale Chinese invasion. But even if Japan's own efforts failed initially to trigger such involvement, the JSDF could continue to impose attrition on the adversary while maintaining strategic depth and survivability through a combination of stand-in defense capabilities based on Japanese territory and stand-off capabilities operating from overseas bases. Such a posture would strengthen deterrence in the first place. If deterrence nevertheless failed and a U.S. administration hesitated to intervene, Japan's continued resistance could create the time needed to repeatedly force a reassessment of that decision.

U.S. foreign and defense policy is not determined exclusively by the administration in office. It is subject to continual influence from military authorities, including U.S. Indo-Pacific Command, the broader executive bureaucracy, Congress, the media, and public opinion. The temporal buffer created by sustained Japanese resistance would therefore itself become a strategic asset for an ally seeking to mitigate uncertainty surrounding U.S. political decision-making.

In particular, the weapon-carrier aircraft envisioned here would differ from conventional fighter-centric airpower in important ways. They could provide relatively low-cost, high-volume strike capacity while also enabling sustained attacks

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[23] Mira Rapp-Hooper, *Shields of the Republic: The Triumph and Peril of America's Alliances* (Cambridge, MA: Harvard University Press, 2020), chap. 7, esp. 184–185, 195–196.

[24] Michael J. Mazarr, Amanda Kerrigan, and Benjamin Lenain, "Stabilizing the U.S.-China Rivalry," RAND Corporation, RRA4107-1, 2025.

and multidirectional pressure from the outer edges of the theater through rotational operations among overseas bases. In this sense, they would constitute an asymmetric capability supporting sustained denial.

Building on this strategic framework, the chapters that follow translate the concepts presented here into concrete military implementation. They examine, in turn, the operational concept of sustained denial, the design and force structure of the JSDF, the development of the foundations needed to sustain prolonged operations, and the industrial base required to support them.

Chapter 3

The Concept of Sustained Denial

Rintaro Inoue

Chapter 2 identified the limitations of relying entirely on traditional extended deterrence under the structural condition of an approaching U.S.-China nuclear parity. It also proposed a "trigger architecture" as a new framework through which Japan, while remaining non-nuclear, could reconcile deterrence credibility with crisis stability. This concept assumes uncertainty over U.S. involvement and seeks to preserve Japan's initiative in escalation management through conventional denial operations, while progressively inducing and locking in allied involvement as the crisis develops.

For such phased escalation management to function in an actual theater of operations, however, a conceptual framework alone is insufficient. Japan also requires concrete capabilities and operational concepts that can continuously reduce an adversary's prospects of successful aggression while creating the time and conditions necessary to draw in deeper allied involvement. In other words, for the trigger architecture to work, Japan itself must possess denial capabilities that can continue operating in a high-intensity environment from the opening stages of a conflict and sustain those capabilities long enough to shape the broader trajectory of escalation across the theater.

From this perspective, this chapter presents sustained denial as the operational-level concept needed to make the trigger architecture effective and examines both how such a concept should be implemented in practice and what kinds of defense capabilities it would require.

1 Scenarios for Which Japan Should Prepare

Japan's defense capabilities must be able to respond seamlessly across the spectrum from peacetime to armed conflict. At the same time, because the resources available for defense are finite, force development must be based on prioritized scenarios. From the 2010 National Defense Program Guidelines through the 2018 Guidelines, particular emphasis was placed on responding to gray-zone situations, and capabilities were developed accordingly. By contrast, the 2022 Three Strategic Documents placed greater emphasis on responding to higher-intensity conflicts such as "invasions from outside," and the priority capabilities identified in the Defense Buildup Program changed accordingly.

Looking ahead, the next set of strategic documents will need to place even greater emphasis on preparing for high-intensity and protracted conflict. In East Asia, the contingency with the most serious potential consequences for Japan's survival and prosperity is a unilateral change to the status quo by force on the part of China. A wide range of scenarios is conceivable, but two in particular warrant attention: a Chinese maritime blockade of Taiwan and an amphibious invasion of Taiwan.[1]

[1] The following think tank studies have examined scenarios involving a full-scale invasion of Taiwan. Robert Greenway, Anna Gustafson, "TIDALWAVE: Strategic Exploitation and Sustainment in a U.S.-China Conflict," The Heritage Foundation, January 16, 2026, https://www.heritage.org/tidalwave; Mark A. Gunzinger, Heather Penney, "Rebuilding American Airpower: Balancing the Air Force's Combat Forces for Peer Conflict," The Mitchell Institute for Aerospace Studies, April 9, 2026, https://www.mitchellaerospacepower.org/rebuilding-american-airpower-balancing-the-air-forces-combat-forces-for-peer-conflict/; Mark F. Cancian, Matthew Cancian, Eric Heginbotham, "The First Battle of the Next War: Wargaming a Chinese Invasion of Taiwan," CSIS, January 9, 2023, https://www.csis.org/analysis/first-battle-next-war-wargaming-chinese-invasion-taiwan; Stacie Pettyjohn, Becca Wasser, Chris Dougherty, "Dangerous Straits: Wargaming a Future Conflict over Taiwan," CNAS, June 15, 2022, https://www.cnas.org/publications/reports/dangerous-straits-wargaming-a-future-conflict-over-taiwans.

The former is sometimes regarded as less intensive than the latter, but a maritime blockade is itself an act conducted in the context of armed conflict and carries substantial potential to escalate into high-intensity military confrontation.[2] Moreover, recent conflicts around the world have demonstrated that high-intensity wars can become protracted and that even major powers may find it difficult to subdue states possessing a certain degree of resilience. As discussed in Chapter 1, the view that a war over Taiwan would be unlikely to end quickly and could instead become prolonged has become increasingly prevalent, particularly within the U.S. strategic community.

Since the 2010s, MOD and JSDF have strengthened their ability to respond to gray-zone situations and have established a considerable degree of readiness in this area. By contrast, it is difficult to argue that the JSDF has yet adapted sufficiently to high-intensity warfare, particularly as the protracted war in Ukraine has continued to transform the character of combat. The MOD itself recognizes this need. Discussions within the Promotion HQ for Transformation of Defense Capabilities have repeatedly referred to the war in Ukraine when addressing "new ways of warfare" and preparations for prolonged conflict.[3] Without adequate capabilities for such contingencies, Japan risks falling into an increasingly unfavorable position as crisis escalates.

Against this backdrop, the force structure developed under the next Three Strategic Documents should retain the flexibility to respond to a wide range of contingencies while placing particular emphasis on preparedness for high-intensity scenarios. The discussion below therefore assumes a limited war arising from a Chinese amphibious invasion of Taiwan proper—the highest-intensity conflict that could plausibly occur in East Asia—combined with spillover attacks against the Senkaku Islands and Japan's Nansei Islands. The analysis proceeds with the assumption that such a conflict could emerge by the early 2030s in roughly the following form.

In attempting to unify Taiwan by force, China would seek to eliminate threats from the surrounding air and maritime domains in order to conduct operations safely, while attacking forces approaching the operational area. Because the Senkaku Islands and the Nansei Islands fall within this operational space, the PLA would seek in the opening phase of the conflict to neutralize JSDF units deployed on these islands and could invade some of them. At the same time, it would conduct sustained attacks using missiles, drones, and other means against bases and critical infrastructure on Okinawa and the Japanese main islands. The purpose would be to prevent JSDF units based on the main islands from resupplying or reinforcing the Nansei Islands, conducting operations to retake occupied islands, or

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[2] The following think tank studies have examined scenarios in which a maritime blockade escalates into high-intensity conflict. Markus Garlauskas, "Aquatic Tiger: How long-range submarine drones could play a role in a Taiwan conflict," Atlantic Council, March 20, 2026, https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/aquatic-tiger-how-long-range-submarine-drones-could-play-a-role-in-a-taiwan-conflict/; Mark F. Cancian, Matthew F. Cancian, Eric Heginbotham, "Lights Out? Wargaming a Chinese Blockade of Taiwan," CSIS, July 31, 2025, https://www.csis.org/analysis/lights-out-wargaming-chinese-blockade-taiwan.

[3] Japan Ministry of Defense, The Promotion HQ for Transformation of Defense Capabilities, "New Ways of Warfare and Emerging Challenges in the Russia's Aggression Against Ukraine," December 18, 2025, https://www.mod.go.jp/en/d_policy/defense-capability-transformation/images/3rd_18-dec-2025a.pdf.

supporting Taiwan. In addition, China would seek to sever SLOCs using missiles, nuclear-powered attack submarines (SSNs), unmanned underwater vehicles (UUVs), and other capabilities to undermine the war-sustaining capacity of both Japan and Taiwan and prevent the arrival of major U.S. reinforcements.

How should the JSDF respond to such a contingency? The central question is where Japan should place the objective of its response. One option would be for the JSDF, in addition to defending Japanese territory, to work with U.S. and Taiwanese forces to prevent the PLA from crossing the Taiwan Strait and landing on Taiwan's main island. A second option would be for Japan to concentrate on defending its own territory, focusing on the Nansei Islands and on securing maritime and air superiority in the Philippine Sea, thereby making a Chinese invasion of Taiwan more difficult and encouraging Beijing to abandon the operation. Under the first option, Japan would need to determine what capabilities would be required not only for the latter set of missions but also to support more offensive U.S. operations from the flank.

Which approach Japan should adopt would depend heavily on the scale and nature of anticipated U.S. support. If the scale, form, and timing of U.S. involvement were clear, Japan's operational concept could converge to a considerable degree around a single approach. If those assumptions remain ambiguous, however, Japan must prepare for a much broader spectrum of possibilities, ranging from fully integrated U.S.-Japan operations to a response conducted primarily by Japan itself.

A complete absence of U.S. support is difficult to envision. The Trump administration's National Defense Strategy, released in January 2026, emphasized the importance of establishing a strong denial posture along the First Island Chain.[4] The more significant problem, therefore, is growing uncertainty over the degree, form, and timing of U.S. support: whether it would involve the full deployment of major forces from Hawaii and the continental United States, or instead remain limited largely to support from U.S. Forces Japan in a manner designed to minimize U.S. costs and risks.

For example, if the U.S. government judged the risks to be excessive, it might leave much of the fighting around Taiwan and the Nansei Islands to Japan. It might also oppose Japanese counterstrike operations using U.S.-made Tomahawk cruise missiles because of escalation concerns and restrict or suspend the provision of data necessary for their employment.[5] Costs and shortages of materiel could impose further constraints. The U.S. military has historically underinvested in missile procurement, and after expending large numbers of missiles in the war with Iran, it may face serious war-sustaining challenges in a protracted conflict with China.[6] Such factors would likely push the scale and objectives of U.S. operations in a more restrained direction.

Japan may also need to revise its assumptions about the materiel and munitions support it could expect from the United States. Because the U.S.

[4] U.S. Department of War, "2026 National Defense Strategy; Restoring Peace Through Strength for a New Golden Age of America," January 23, 2026, 4, https://media.defense.gov/2026/Jan/23/2003864773/-1/-1/0/2026-NATIONAL-DEFENSE-STRATEGY.PDF.

[5] Authors' interview with a former senior government official, April 21, 2026; Rintaro Inoue "Will Japan Have the Political Resolve to Use Counterstrike?" *The Washington Quarterly* 47, no. 4 (Winter 2024): 45–61.

[6] Seth G. Jones, "Is the United States Prepared for a War with China?" CSIS, May 12, 2026, https://www.csis.org/analysis/united-states-prepared-war-china.

military may need to prioritize its limited missile inventories for its own forces, it could be reluctant to provide emergency transfers to the JSDF. Indeed, participants in past bilateral tabletop exercises between the U.S. and Japanese naval services have noted that, when the JMSDF asked the U.S. Navy whether ammunition and spare parts could be provided, no clear answer was provided.[7]

Given these uncertainties, Japan's basic approach to force development under resource constraints should be to build a posture that allows the JSDF to defend Japanese territory on a sustained basis even if U.S. support proves more limited than expected. At the same time, the force should retain sufficient flexibility to transition rapidly to combined U.S.-Japan operations if Japan succeeds in triggering deeper U.S. involvement and encouraging the United States to play a more active role in the defense of Taiwan. Such operations could include anti-surface warfare around Taiwan, IAMD, and the transport of supplies to Taiwan.

2 What Is Sustained Denial?

What kind of defense capabilities are required to achieve this objective? The 2022 Three Strategic Documents emphasized building deterrence that makes adversaries recognize that unilateral changes to the status quo by force, including invasion from abroad, would be difficult to achieve,[8] and argued that this would require defense capabilities focused on an adversary's capabilities and ways of warfare.[9]

The importance of this approach, often described as a "denial strategy,"[10] is unlikely to change. At the same time, Japan must adapt to recent changes in the character of warfare. As discussed in Chapter 1, two major developments since the formulation of the previous strategy have been the unexpectedly prolonged war in Ukraine and the outbreak of the war in Iran. The phenomena observed in these conflicts will require further examination before definitive lessons can be drawn. One lesson, however, is already widely recognized: an effective way for a smaller state to resist invasion by a major power is to prevent the conflict from ending quickly and instead draw the attacker into a prolonged war of attrition that exceeds its initial expectations.[11]

Two elements are particularly important for achieving this. First, the defender must impose asymmetric costs on the adversary. A smaller state fighting from a strategically defensive position must be able to sustain combat without exhausting itself, while eroding the invading major power's willingness to continue the war, its military capabilities, and ultimately its broader national power at a faster rate than its own.

The recent case of Iran illustrates the importance

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7 Rintaro Inoue, "Nihon no bōei sangyō wa yūji ni oite mo kinō suru no ka" [Can Japan's Defense Industry Function in a Contingency?], *IOG Commentary*, Institute of Geoeconomics, December 25, 2025, https://instituteofgeoeconomics.org/research/2025122502/.

8 Government of Japan, "National Defense Strategy," December 16, 2022, 8.

9 Ibid., 4.

10 Ken Jimbo, "Japan's future security lies in a 'denial and competition' strategy," *Geoeconomics Briefing*, Institute of Geoeconomics, December 26, 2022, https://instituteofgeoeconomics.org/en/research/2023012643437/.

11 Japan Ministry of Defense, The Promotion HQ for Transformation of Defense Capabilities, "Direction of Defense Capability Transformation (3)," April 20, 2026, 2, https://www.mod.go.jp/en/d_policy/defense-capability-transformation/images/7th_20-apr-2026a.pdf.

of this approach. Iran reportedly protected its missile and drone forces from U.S. and Israeli precision-guided strikes through an extensive tunnel network, allowing it to preserve roughly 70 percent of its missiles even around two and a half months after the outbreak of hostilities.[12] Although tunnel construction itself entails significant costs for the Iranians, the United States reportedly spent approximately $29 billion on the war, a substantial portion of which appears to have been devoted to destroying Iranian missiles and drones on the ground.[13] The cost-effectiveness of tunnel-based protection requires further examination, but the case at least suggests that such measures can provide the defender with an effective means of preserving limited military resources during a protracted conflict.[14]

Iran also succeeded in imposing asymmetric costs on the United States through offensive operations. By employing large numbers of inexpensive Shahed one-way attack drones with long-range flight capability, Iran forced Gulf states and U.S. forces to expend interceptor missiles that, in some cases, cost 60 to 70 times as much per engagement.[15] Iran also gained an asymmetric advantage in production and replenishment lead times. Shahed drones can reportedly be produced within approximately three months at most, whereas PAC-3 interceptors require around 42 months to manufacture.[16] This means that, unless a conflict lasts for several years, Iran can continue replenishing its offensive systems while the United States largely draws down finite interceptor inventories, allowing the relative disadvantage of the United States to accumulate over time. For states relying on air defense systems, therefore, the introduction of low-cost interceptors that can be produced rapidly is an urgent requirement.

Second, defense capabilities must continuously evolve in order to remain effective. War is inherently competitive. It is therefore not enough simply to develop countermeasures against an adversary's attacks; forces must also identify the adversary's vulnerabilities and develop ways to exploit them. In a protracted conflict, the ability to adapt and evolve faster than the opponent can become decisive. This dynamic is particularly evident in the war in Ukraine, where drones have assumed an exceptionally important battlefield role. Ukraine has sought to exploit Russian vulnerabilities while reducing its own exposure by continuously and rapidly updating software, communications methods, electronic warfare countermeasures, and operational techniques. For some types of drones,

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[12] Adam Entous, Maggie Haberman and Jonathan Swan, "U.S. Intelligence Shows Iran Retains Substantial Missile Capabilities." *The New York Times*, May 12, 2026, https://www.nytimes.com/2026/05/12/us/politics/iran-missiles-us-intelligence.html.

[13] "US war in Iran has cost $29 billion so far, Pentagon says," *Reuters*, May 12, 2026, https://www.reuters.com/world/middle-east/us-war-iran-has-cost-29-billion-pentagon-says-2026-05-12/.

[14] Rintaro Inoue, "The Case for Underground Defense: Japan's Military Lessons from the Iran War," *Geoeconomics Briefing*, Institute of Geoeconomics, July 14, 2026, https://instituteofgeoeconomics.org/en/research/2026071401/.

[15] Farah Stockman, "Iran's Drones Cost a Fraction of the U.S. Weapons Shooting Them Down," *The New York Times*, March 4, 2026, https://www.nytimes.com/2026/03/04/business/iran-shahed-drones-missiles-us-war.html.

[16] "Understanding the short life cycle of a Shahed UAV," Conflict Armament Research, June 2023, https://storymaps.arcgis.com/stories/52ea258acfe8485684e527a8e809c821; Mark F. Cancian, Chris H. Park, "Last Rounds? Status of Key Munitions at the Iran War Ceasefire," CSIS, April 21, 2026, https://www.csis.org/analysis/last-rounds-status-key-munitions-iran-war-ceasefire#h2-the-seven-critical-munitions.

these adaptation cycles have reportedly become as short as a matter of days.[17] Russia, however, has been adapting in parallel, meaning that Ukraine has not been able to establish an uncontested advantage.[18] The Ukrainian experience demonstrates that failure to evolve more rapidly and effectively than the adversary can result in a rapid deterioration of one's battlefield position.

Japan's new defense strategy should therefore seek to deter high-intensity conflict by building the capacity to endure and fight through a protracted war, drawing on these lessons from Ukraine and Iran. This report refers to the approach that combines a denial strategy with preparation for prolonged warfare and attrition as "sustained denial."

3 How Sustained Denial Would Be Conducted

Based on the scenario outlined above, Japan's defense under a strategy of sustained denial would primarily take the form of three campaigns. The first would be the defense of the Nansei Islands. Even before the situation escalates to an armed attack, JSDF units would maneuver and deploy to the Nansei Islands. Once hostilities begin, they would continuously conduct multidomain denial operations, including the closure of key straits, air denial, and the prevention of amphibious landings. Even if these forces suffered substantial attrition from enemy attacks, their continued presence would itself raise operational risks for the adversary and constrain its freedom of action in the surrounding air and maritime domains. Protection of these forces and ensuring their ability to continue fighting would therefore be critical. This would require a combination of active defenses, such as interception, and extensive use of passive measures designed to preserve operational endurance, including decoys, concealment and camouflage, hardening and underground facilities, and dispersed deployment.

Forces operating from Okinawa, the Japanese main islands, and ships deployed in the Philippine Sea, as well as forces stationed at overseas operational bases beyond the adversary's effective missile range, would conduct land-attack and anti-surface strikes using stand-off defense capabilities. Given the missile and other threats posed by China, however, these forces would be only relatively safer than those deployed in the Nansei Islands and would still remain vulnerable to attack. Concentrating capabilities on a small number of platforms or bases could therefore result in severe losses from a single strike. Forces operating from rear areas must also adopt distributed concepts of operation, supported by measures such as underground facilities and decoys.

Okinawa and the Japanese main islands would also need to serve as continuing logistics hubs for forces deployed across the Nansei Islands. Yet air and maritime superiority around these islands would likely remain contested, exposing resupply operations themselves to considerable risk. Logistics would therefore have to be conducted

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[17] Jake Epstein, "Ukraine's interceptor drones are being upgraded all the time to keep pace with Russia's changing tactics," *Business Insider*, February 4, 2026, https://www.businessinsider.com/ukrainian-interceptor-drones-constantly-upgraded-keep-pace-with-russian-tactics-2026-2.

[18] Holly Williams, Erin Lyall, "Ukraine uses drone innovation to help level battlefield in war with Russia," *CBS News*, March 29, 2026, https://www.cbsnews.com/news/ukraine-drone-innovation-helps-level-battlefield-war-with-russia-60-minutes-transcript/.

as contested logistics,[19] designed from the outset around dispersion and resilience.

The second campaign would be sustained IAMD over Okinawa and the Japanese main islands. As numerous think-tank tabletop exercises examining a Taiwan contingency have suggested, China would likely conduct large-scale missile attacks in the opening phase of a conflict with the aim of neutralizing Japan's airpower on the ground. Ground facilities across Japan, including radar sites, could also become targets, as seen in recent wars.[20] The critical infrastructure supporting these facilities—including electricity, energy supplies, communications, and water—would likewise be likely targets.[21] These threats would not be limited to high-end, sophisticated missiles. They could also be combined with large numbers of low-cost, mass-producible one-way attack drones, reflecting the logic of "precise mass."[22] Japan would therefore need to build a sustainable defensive posture capable of protecting a much larger number of facilities through a layered and diverse mix of interception systems.

The third campaign would be the defense of Japan's SLOCs, which is indispensable to sustained denial because it enables continued imports of energy and other resources as well as support from allies and like-minded countries. As of 2026, China possesses missiles capable of striking surface targets approximately 4,000 kilometers from its coastline and operates six SSNs, with three more expected to enter service in 2027 and additional growth thereafter.[23] Japan would therefore need to protect its SLOCs on a sustained basis against both Chinese missile and submarine attacks.

With respect to airborne threats, allied naval vessels arriving in the theater should, in principle, provide for their own defense, while merchant shipping could be protected through regional IAMD arrangements developed with allied and partner forces. Undersea threats pose a more difficult problem. Once Chinese SSNs break out into the vast Philippine Sea or Pacific Ocean, detecting and tracking them becomes considerably more difficult. Ideally, they would be detected and destroyed in the East China Sea or near the First Island Chain using destroyers and manned and unmanned patrol aircraft. In practice, however, this may be unrealistic because Japan and its allies may not retain sufficient air and maritime superiority in these areas.

Japan must therefore develop a defense-in-depth posture based on the assumption that some submarines will penetrate the First Island Chain. In the East China Sea, UUVs and seabed sensors would

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[19] Mike Jernigan, "An Everyman's Guide to Contested Logistics," The Heritage Foundation, October 16, 2025, https://www.heritage.org/sites/default/files/2025-10/BG3936.pdf.

[20] Evan Hill, Jarrett Ley, Alex Horton, et al., "Iran has hit far more U.S. military assets than reported, satellite images show," *The Washington Post*, May 7, 2026, https://www.washingtonpost.com/investigations/2026/05/06/iran-us-bases-satellite-images/; Bora Erden, Leanne Abraham, "At Least 17 U.S. Sites Damaged in War with Iran, Analysis Shows," *The New York Times*, March 11, 2026, https://www.nytimes.com/interactive/2026/03/11/world/middleeast/iran-us-military-bases-strikes-map.html.

[21] Mihoko Matsubara, *Ukuraina kigyō no shitō [Ukrainian Companies' Desperate Struggle]* (Tokyo: Sankei Shimbun Publications, 2025).

[22] Michael C. Horowitz, "Battles of Precise Mass: Technology Is Remaking War and America Must Adapt," *Foreign Affairs*, October 22, 2024, https://www.foreignaffairs.com/world/battles-precise-mass-technology-war-horowitz.

[23] Mike Brookes, "Testimony of RADM Mike Brookes, Part of Your World: U.S.-China Competition Under the Sea," U.S.-China Economic and Security Review Commission, March 2, 2026, https://www.uscc.gov/sites/default/files/2026-03/RADM_Brookes_Testimony.pdf.

provide early warning. Around the First Island Chain, various types of mines would be used to create an undersea denial layer. If enemy submarines succeeded in breaking through these defenses, Japan would need to establish a wide-area surveillance network in the Philippine Sea using a mesh-type seabed sensor network and UUVs, combined with interception by submarines and anti-submarine attacks by maritime patrol aircraft operating in areas where air superiority can still be maintained.

4 Force Development with an Emphasis on Sustainability

To conduct these campaigns, the overall direction for force development set out in the 2022 Three Strategic Documents remains broadly relevant. This includes "disrupt and defeat invading forces over long distances," centered on stand-off defense and IAMD; "ensure asymmetric advantages" through cross-domain operations, the use of unmanned systems, and stronger command-and-control and information-related capabilities; and to "operate in a swift as well as persistent manner," supported by rapid deployment capabilities, civil protection, and war-sustaining capacity.[24] Given the changes in the international and military environment, however, this approach must now evolve substantially toward placing far greater emphasis on sustainability.

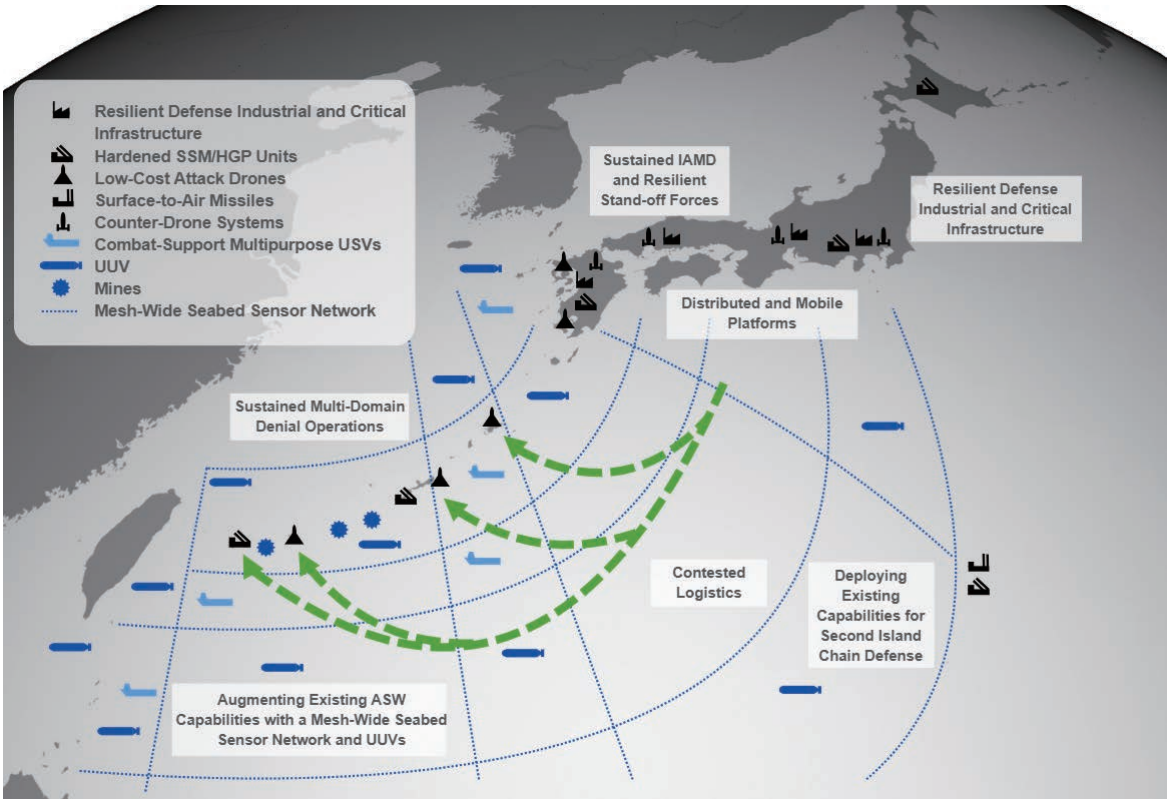


Figure 4 Illustration of New Capabilities and Forces Required to Achieve Sustained Denial (created by the author)

[24] Government of Japan, "Defense Buildup Plan," December 16, 2022, 1.

1. Disrupting and Defeating Invasion Much Earlier and at Greater Distance

Compared with the Medium Term Defense Program formulated in 2018, the 2022 Defense Buildup Program placed greater emphasis on developing long-range kill chains composed of shooters, sensors, and the networks that connect them, with the aim of enhancing the effectiveness of stand-off defense capabilities and integrated air and missile defense (IAMD). For land-attack and anti-surface strike missions, Japan has sought to increase operational flexibility by introducing a diverse range of stand-off missiles and launch platforms, while also developing satellite constellations, unmanned systems, and target-observation munitions as sensor capabilities. In the area of IAMD, Japan has also pursued improvements in sensor capabilities and the development of new interceptors with an eye toward countering hypersonic glide weapons, while planning to acquire new network systems to enable interception at greater distances. Research on non-kinetic means of countering small unmanned systems has also advanced. These efforts should continue and be further strengthened.

From the perspective of achieving sustained denial, however, Japan's force-development efforts to date face three major challenges. The first is the limited survivability of sensors. Airborne warning and control system (AWACS) aircraft and fixed radar sites, both of which play central roles in IAMD, are particularly vulnerable to destruction.[25] The Japan Air Self-Defense Force (JASDF) currently operates four AWACS aircraft, but they are highly vulnerable while on the ground. As demonstrated by the destruction of a U.S. Air Force E-3 on the ground in Saudi Arabia, large aircraft are exposed to attack while parked at their bases.[26] Moreover, as China fields longer-range air-to-air missiles, AWACS are becoming increasingly vulnerable even when operating in rear-area airspace that would previously have been considered relatively safe.[27]

Radar sites are similarly vulnerable. Because they are large and fixed installations, they present attractive targets and are highly likely to be attacked in the opening stages of a conflict. Both Ukraine and Iran have, in fact, succeeded in destroying adversary radar sites.[28] To mitigate this risk, the JASDF and JGSDF have long operated mobile radars. Such systems are useful, but unless they have rapid deployment capability, they ultimately remain vulnerable in much the same way as fixed radar sites.[29]

Second, the shooters themselves face similar vulnerabilities. Existing aircraft and destroyers could

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[25] Satellite imagery has also confirmed that the Chinese military has used a mock-up resembling the E-767 aircraft operated by the JASDF as a target in missile-strike training. See, "Chūgoku, AWACS-gata no Kūkū Jieitai-ki mokei o hakai: Misairu kunren ka" [China Destroys AWACS-Shaped Model of JASDF, Possibly for Missile Training], *Nihon Keizai Shimbun*, July 15, 2022, https://www.nikkei.com/article/DGXZQOUC144B50U2A710C2000000/.

[26] Matthew Cox, "What Options Does the Air Force Have for E-3 Taken Out by Iran?" *Air and Space Forces Magazine*, April 2, 2026, https://www.airandspaceforces.com/air-force-damaged-e-3-iran-options/.

[27] Harrison Kass, "China's J-10 Fighter Might Come with a New Missile Soon," *National Interest*, May 18, 2026, https://nationalinterest.org/blog/buzz/chinas-j-10-fighter-might-come-with-new-missile-soon-hk-051826.

[28] Xiaodon Liang, "Ukraine Strikes Russian Early-Warning Radars," Arms Control Association, July 2024, https://www.armscontrol.org/act/2024-07/news/ukraine-strikes-russian-early-warning-radars.

[29] Joseph Trevithick, Tyler Rogoway, "Iranian Attacks on Prized Missile Defense Radars Are a Wake-Up Call," *The War Zone*, March 7, 2026, https://www.twz.com/news-features/iranian-attacks-on-critical-missile-defense-radars-are-a-wake-up-call.

suffer substantial losses in the opening stages of a conflict, potentially preventing them from making full use of their capabilities in a high-intensity fight.[30] In recent years, China has rapidly expanded its constellation of Earth-observation satellites, increasing the frequency with which satellites can image the same area.[31] As a result, the risk of detection, tracking, and attack is increasing not only for aircraft undergoing refueling or maintenance on the ground, but also for surface vessels while underway. In the latter case, some analysts suggest that even ships carrying large numbers of missiles could be destroyed before exhausting their magazines.[32] Concentrating firepower in a small number of large shooters or bases therefore creates significant vulnerabilities in a high-intensity environment. Such assets could be neutralized before a conflict becomes protracted, creating major gaps in Japan's overall defense posture.

As a more survivable shooter for stand-off missiles, the 2022 Three Strategic Documents identified submarines equipped with vertical launch systems (VLS), and the MOD has been conducting research on such platforms since FY2026. These submarines would offer significant advantages in attack efficiency because they could strike from unexpected directions and at unexpected times. They would also be less vulnerable to retaliatory attacks because they could remain submerged and withdraw from the area after launch. In that sense, they would be well suited to a protracted, high-intensity conflict. At the same time, however, such submarines could face significant constraints in mobility and would compete for resources with the JMSDF submarine fleet's primary mission of securing undersea superiority. If undersea superiority were lost as a result, their principal advantage—survivability—could itself be undermined.

Third, particularly in IAMD, Japan will need to shift toward lower-cost interceptors while substantially increasing both the number of interceptors and the number of units capable of employing them. As noted above, the current military environment requires preparation not only for high-end threats such as ballistic and hypersonic missiles, but also for the mass use of inexpensive low-end strike systems such as attack drones. Moreover, the range of potential targets is likely to extend beyond JSDF facilities to critical infrastructure of various kinds. Yet JSDF's current defensive inventory remains heavily weighed up to expensive high-end systems that are difficult to procure in large numbers, and the existing force structure is not sufficient to protect the growing number of potential targets.

R&D is under way on lower-cost interception methods, including high-power laser systems, but such systems may not be fully effective under certain conditions, including adverse weather. In this respect, the interceptor drones now being used in Ukraine offer a useful reference point. However, while they may be effective against relatively slow-moving targets such as Shahed-type drones, it remains uncertain how well they would perform in

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[30] Cancian, "The First Battle of the Next War: Wargaming a Chinese Invasion of Taiwan," 88.

[31] "Chūgokugun no teisatsu eisei, 'chū-kidō' mo un'yō shi kanshi nōryoku ga ōhaba kōjō: Yomiuri bunseki, 'Beigun ni taisuru yūisei kakuho' ga nerai ka" [Chinese Military Operates Reconnaissance Satellites in Medium Earth Orbit, Significantly Enhancing Surveillance Capabilities: Yomiuri Analysis Suggests Aim Is to Secure an Advantage over U.S. Forces], *Yomiuri Shimbun*, April 5, 2026, https://www.yomiuri.co.jp/politics/20260404-GYT1T00351/.

[32] Greenway, "TIDALWAVE: Strategic Exploitation and Sustainment in a U.S.-China Conflict," 18.

East Asia, where large numbers of faster, relatively inexpensive missiles could also be employed.[33] Simply importing the interceptor drones used in Ukraine may therefore prove insufficient.

What Japan requires instead is an interception system that preserves the core concept behind these drones—low cost and the ability to be employed in large numbers—while adapting it to the broader range of airborne threats likely to be encountered in Japan's surrounding region.

2. Securing Asymmetric Advantages

The 2022 Three Strategic Documents emphasized the importance of "securing asymmetric advantages." The concept refers to deterring or countering a more powerful adversary by employing different and more cost-effective means. To achieve this, the MOD has emphasized cross-domain capabilities in areas such as space, cyber, and the electromagnetic spectrum; faster decision-making through the use of AI; and unmanned assets that can operate continuously over long periods at relatively low cost while reducing personnel losses.[34] These efforts can serve as force multipliers for stand-off defense capabilities and IAMD. Given the structural constraints on the resources Japan can devote to defense compared with China, the importance of placing asymmetry at the core of Japan's defense strategy will only increase.

Many of the initiatives pursued by the MOD to date, however, are areas in which China is already ahead. Moreover, capabilities such as unmanned systems, cross-domain operations, and AI are no longer exceptional advantages, but increasingly baseline requirements of modern warfare. Unless the JSDF can employ them effectively, it risks falling further behind the PLA. Japan must therefore not only expand quantitatively the asymmetric capabilities it has already been developing, including cross-domain operations and unmanned assets, but also identify distinctive advantages arising from Japan's own circumstances that China would find difficult to exploit, and build new forms of asymmetric advantage around them.

The most important means of doing so is likely to be exploiting geography. In general, defenders can use terrain to construct defensive positions that allow them to resist an attacker with fewer forces. This is particularly important for Japan given its numerical disadvantages. Since 2010, the JSDF has sought to exploit geographic characteristics, including by deploying ground-launched anti-ship missiles across the Nansei Islands to create a "Nansei wall."[35] Yet Japan has not fully exploited the potential of its geography. Iran, by contrast, has protected parts of its missile and drone forces from U.S. attacks by concealing them in tunnels and other facilities in mountainous terrain.[36] Drawing on such examples, the JSDF should make more extensive use of underground facilities and terrain in order

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[33] Vitaliy Goncharuk, "Cheap Missiles, Not Drones, Will Win the Next Air War," *War on the Rocks*, May 4, 2026, https://warontherocks.com/cogs-of-war/cheap-missiles-not-drones-will-win-the-next-air-war/.

[34] Government of Japan, "National Defense Strategy," 18–19.

[35] Kōji Sugimoto, *Nihon no Bōei Seisaku: Reisen-go no 30-nen to Genzai [Japan's Defense Policy: Thirty Years After the Cold War and the Present]* (Sakuhinsha, 2025), 93–94.

[36] Warren P. Strobel, John Hudson, Ellen Nakashima, "U.S. intelligence says Iran can outlast Trump's Hormuz blockade for months," *The Washington Post*, May 7, 2026, https://www.washingtonpost.com/national-security/2026/05/07/cia-intelligence-iran-trump-blockade-missiles/.

to impose asymmetric costs on China in a high-intensity conflict.

Four approaches to exploiting geography are particularly relevant. First, forces deployed to the Nansei Islands should make maximum use of the asymmetric characteristics of island geography. Chinese forces conducting an invasion would find it difficult to conceal aircraft and surface vessels, whereas JSDF units conducting defensive operations—such as ground-launched anti-ship missile units deployed on islands—could use tunnels for concealment and protection. Destroyers could similarly make use of island terrain to mask their positions. Moreover, whereas a surface combatant could be rendered combat-ineffective by a single successful hit, the destruction of one launcher in a ground-launched anti-ship missile battery would not necessarily disable the entire unit. Vehicles and launchers are also relatively easier to repair and replace than warships, allowing shorter recovery times.

Islands also offer significant advantages for the employment of undersea and seabed assets. Rather than dispatching minelayers or Mogami-class frigates from distant bases to conduct mining operations, Japan could employ unmanned minelaying craft from island bases, potentially enabling more flexible and sustained mine warfare. The short physical distance between minefields and shore-based facilities could also make the use of controlled mines with underwater communications more practical. Similarly, although cable landing points supporting seabed sensor networks toward the Nansei Islands are currently thought to be limited, Japan should consider increasing their number and developing a more distributed and resilient mesh-type wide-area seabed sensor network.[37]

Second, Japan should expand the use of underground facilities for ground forces and installations in rear areas. Launchers for ground-based stand-off missiles, command posts, and parts of the defense industrial base could be concealed in tunnels and operated through such networks.

The advantage provided by hardening and underground facilities, however, is not permanent and is likely to erode over time. Fixed infrastructure cannot readily adapt when an adversary changes its methods of warfare or when the character of combat evolves, and vulnerabilities can therefore accumulate as a conflict continues. Even underground facilities can be neutralized once their vulnerable points are identified.[38] Japan should therefore maintain strict operational security while also ensuring that the JSDF itself retains the ability, during wartime, to extend tunnel networks and continually modify the physical configuration of underground facilities.

Third, Japan should exploit the vast undersea domain surrounding the country. As China operates an increasing number of satellites, the surface maritime domain is becoming progressively more transparent, and China has already fielded capabilities able to strike U.S. and Japanese vessels operating within roughly 4,000 kilometers of the Chinese mainland. As a result, the undersea domain is increasingly becoming the only maritime environment in which Japanese forces can retain a meaningful degree of concealment.[39] Japan must therefore develop

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[37] This is based on the fact that the two acoustic surveillance stations located in Nansei region are in Okinawa and Kagoshima.

[38] Jon Harper, "Going Underground: The U.S. Government's Hunt for Enemy Tunnels," *National Defense*, January 2, 2018, https://www.nationaldefensemagazine.org/articles/2018/1/2/going-underground-the-us-governments-hunt-for-enemy-tunnels.

[39] Authors' interview with a former senior government official, April 9, 2026.

ways of warfare that make maximum use of its advantages underwater. In addition to undersea intelligence collection and anti-surface strike, Japan should explore new operational concepts such as underwater transport as part of contested logistics.

This advantage cannot, however, be taken for granted. China is believed to have deployed large numbers of seabed acoustic sensors in the East China Sea since the 2010s, and much of the area may already have become a contested undersea domain between China and allied forces.[40] In wartime, moreover, Japan and the United States would likely find it difficult to operate maritime patrol aircraft over the East China Sea, increasing the likelihood that China could establish undersea superiority there.

In the Philippine Sea, Japan and the United States are still likely to retain a relative advantage because of the greater distance from the Chinese mainland. China, however, has conducted extensive undersea surveys around Taiwan, Guam, and other areas using multiple oceanographic research vessels, accumulating the environmental data necessary to improve its undersea warfare capabilities.[41] Chinese SSNs and UUVs are therefore likely to expand their activities in these waters in the future.

As Chinese SSNs improve in performance, increase in number, and operate farther from the mainland, Japan must prepare for the possibility that, at the outbreak of a conflict, some will already be deployed in the Philippine Sea. As noted above, even if an SSN is detected in such a vast area, Japan currently has limited means of maintaining continuous contact. Once track is lost, determining its subsequent position and behavior becomes extremely difficult, creating a major risk to Japan's ability to exploit the undersea domain for national defense. To avoid such a situation, Japan must establish a large-scale seabed sensor network in the Philippine Sea ahead of China and preserve information superiority in the undersea domain. At the same time, it should develop capabilities to disrupt Chinese undersea surveillance networks.

Fourth, Japan should secure strategic depth for its airpower by making use of the territories of allies and like-minded countries. Airpower is highly dependent on fixed bases, while air bases within Japan are vulnerable to Chinese missile attack. Even Chitose Air Base in Hokkaido, relatively distant from the Taiwan Strait, lies only about 1,000 kilometers from Chinese territory. To mitigate this vulnerability, Japan should disperse elements of its airpower to allied and partner countries that offer greater strategic depth and, when necessary, employ them in long-range strike operations. Japan has rapidly deepened security cooperation with like-minded countries in recent years, and the political and institutional conditions required for such distributed operations are gradually taking shape.

3. Operating Rapidly and Persistently

The 2022 Three Strategic Documents called for strengthening rapid deployment capabilities, expanding airport and port infrastructure to improve logistics, modernizing supply hubs, enhancing civil protection, increasing munitions stockpiles—

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[40] Lyle J. Goldstein, "China's 'Undersea Great Wall'," *National Interest*, May 16, 2016, https://nationalinterest.org/feature/chinas-undersea-great-wall-16222.

[41] Pete McKenzie, "China is mapping the ocean floor as it prepares for submarine warfare with the US," *Reuters*, March 24, 2026, https://www.reuters.com/investigations/china-is-mapping-ocean-floor-it-prepares-submarine-warfare-with-us-2026-03-24/.

including through the construction of additional ammunition depots—and hardening facilities. These efforts have produced some progress. In light of the current strategic environment, however, they remain insufficient and require substantial revision.

First, hardening facilities is an urgent priority. Although this was emphasized in the 2022 Three Strategic Documents, the budget allocated to measures such as placing major headquarters underground amounted to only around one-tenth of the funding devoted to replacing existing facilities such as barracks.[42] As a result, substantive progress in hardening has remained limited. As the scenario outlined above suggests, large-scale attacks on ground facilities are highly likely in the opening stages of a conflict. Japan must therefore expand aircraft shelters, place a broader range of facilities—not only headquarters—underground, and strengthen runway repair capabilities.[43] Resilience measures should also extend beyond defense installations themselves to the critical infrastructure required to keep bases functioning, including electricity, fuel, and water supplies, as well as to the defense industrial base.

Second, Japan's current logistics system is not designed to sustain operations in a contested theater. Transport ships, transport aircraft, and other capabilities developed to date have primarily been intended to improve mobility and deployment before the outbreak of an armed attack, rather than to sustain continuous resupply under high-threat conditions.[44] Japan must therefore urgently develop contested logistics, particularly in the maritime domain, based on the assumption that logistics and resupply operations will be subject to enemy interference and attack. This will require further dispersal of logistics hubs, multiple redundant supply routes, and transport networks employing large numbers of diverse unmanned platforms. Japan should also improve its ability to provide spare parts at the front while reducing transportation requirements by prepositioning mobile additive-manufacturing systems and similar equipment across the Nansei Islands in peacetime.

Third, Japan must reconsider its approach to munitions stockpiles. Because the 2022 Three Strategic Documents did not anticipate the need to prepare for a protracted war, required stockpile levels were calculated on the assumption of a short sharp war.[45] Ammunition depots and related infrastructure have therefore also been developed on the basis of this assumption. If Japan is to prepare for a protracted conflict, however, the amount of ammunition required will increase further,

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42 "Rensai 'Shiritai: Bōei shisetsu no kyōjinka' (1): Sōgaku 4-chō-en no bōeiryoku seibi keikaku, chiiki kensetsugyō no kyōryoku fukaketsu" [Series "Understanding the Resilience of Defense Facilities" (1): ¥4 Trillion Defense Buildup Program Requires Cooperation from Regional Construction Firms], *Kentsū Shimbun*, December 18, 2025, https://digital.kentsu.co.jp/cntts/spcntt/01KGK4KM3CF76A8QPVWJ1927N0.

43 Timothy A. Walton, Thomas H. Shugart, "Concrete Sky: Air Base Hardening in the Western Pacific," Hudson Institute, January 7, 2025, https://www.hudson.org/arms-control-nonproliferation/concrete-sky-air-base-hardening-western-pacific-timothy-walton-thomas-shugart.

44 For example, the transport vessels assigned to the JSDF Maritime Transport Group and civilian vessels operated under Private Finance Initiative (PFI) arrangements have relatively large signatures due to their physical characteristics and possess only very limited defensive capabilities. It would therefore be unrealistic to operate them in areas where control of the sea and air remains contested.

45 Authors' interview with a former senior government official, April 21, 2026.

necessitating substantial expansion in both the number and storage capacity of ammunition depots. Yet given that local opposition to the construction of such facilities has already emerged, further expansion of domestic storage infrastructure could become increasingly difficult.

Japan should therefore also consider establishing ammunition depots and missile maintenance facilities in allied and partner countries.[46] At the same time, missiles and drones will require continuous and rapid modification and capability improvements through software updates, component changes, and other measures. Large stockpiles alone will therefore be insufficient. Japan must establish a system capable of continuously replenishing, modifying, and upgrading these systems during wartime.[47]

As discussed above, the deterioration of the strategic environment, the continuing expansion of China's conventional military capabilities, and growing uncertainty over the nature of U.S. support all require the JSDF to prepare much more seriously than before for high-intensity, protracted warfare. If the approach embodied in the 2022 Three Strategic Documents can be characterized as a denial strategy, Japan must now develop that strategy into one capable of sustaining denial even under conditions of continuous enemy attack.

This will require more than simply expanding munitions stockpiles. Japan should harden and increase the resilience of its kill chains, develop ways of warfare that make greater use of terrain, strengthen the resilience of facilities, establish logistics systems capable of operating under disruption, and further disperse and increase the mobility of its forces. The objective should be to build a defense posture capable of withstanding high-intensity attacks and continuing to fight even under adverse conditions.

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[46] Rintaro Inoue, "Japan and Australia need a broad defence treaty," *The Strategist*, ASPI, April 9, 2026, https://www.aspistrategist.org.au/japan-and-australia-need-a-broad-defence-treaty/.

[47] Charles Clover, Sylvia Pfeifer, Laura Pitel, Christopher Miller, "Can drones be stockpiled? Europe wrestles with weapons dilemma," *Financial Times*, February 26, 2026, https://www.ft.com/content/b5ee2129-8f6f-493b-aa33-c593f3c5bb6a?syn25a6b1a6=1.

Chapter 4

Redesigning JSDF Capabilities and Force Structure

Hirohito Ogi, Kuniharu Kakihara, and Kota Umeda

Chapter 3 presented sustained denial as the operational concept needed to make the trigger architecture effective and outlined how Japan could continue fighting even in a high-intensity environment. At the core of this concept is the requirement for Japan to preserve its denial capabilities from the opening stages of a conflict and sustain them for a meaningful period of time. By doing so, Japan would reduce the adversary's prospects of achieving a rapid victory while creating conditions in which deeper allied involvement could be progressively induced as the conflict continues.

Such an operational concept, however, cannot function unless it is supported by an appropriately designed force structure and force composition. Achieving sustained denial therefore requires a shift away from the traditional incremental accumulation of individual capabilities toward a force design centered on dispersion, resilience, and sustainability, while also enabling allied involvement to deepen progressively through the geographic expansion of the theater.

Against this background, this chapter examines how the JSDF's force design and force structure should be revised in order to translate the operational concept presented in Chapter 3 into concrete military capabilities.

1 Transforming Land-Based Forces as the Core of Sustained Denial

Since the establishment of the JSDF in 1952, Japan's defense posture has developed primarily around the territorial defense of the homeland, a mission centered on the JGSDF. With an authorized strength of approximately 150,000 personnel, the JGSDF remains the largest of the three services. During the Cold War, it served as a major element of deterrence against the Soviet Union, particularly in Hokkaido. After the Cold War, however, the decline of the northern threat—and, especially since the 2010s, the growing importance of defending the Nansei region in response to China's maritime expansion—substantially reduced the relative importance of large-scale ground combat capabilities. As a result, successive post-Cold War defense policy documents have continued to call for reductions in JGSDF personnel and force structure, with rationalization and streamlining focused particularly on tank and artillery units.

The 2022 Three Strategic Documents further reduced the relative importance of traditional land forces designed to defeat an invading enemy within Japanese territory by explicitly adopting the objective of "disrupt[ing] and defeat[ing] invasion much earlier and at places further afield"—in effect, building a posture of forward denial.[1] If China were to launch a large-scale invasion of Taiwan and the conflict were to spill over into Japan, it would be

[1] Cabinet Decision, "National Security Strategy," December 16, 2022, 19, https://www.cas.go.jp/jp/siryou/221216anzenhoshou/nss-j.pdf; Cabinet Decision, "National Defense Strategy," December 16, 2022, 9, https://www.cas.go.jp/jp/siryou/221216anzenhoshou/boueisenryaki.pdf; Hirohito Ogi, "Enpō Soshi e no Senryaku Tenkan to Henkaku Tojō no Jieitai: Senryaku San Bunsho Chūmokuten no Kaisetsu" [The Strategic Shift Toward Forward Denial and the JSDF in Transition: Key Points of the Three Strategic Documents], Institute of Geoeconomics, December 22, 2022, https://instituteofgeoeconomics.org/research/2022122242594/; Hirohito Ogi, "Evolving Japan-US command and control cooperation for forward denial," United States Studies Centre, The University of Sydney, November 20, 2023, https://www.ussc.edu.au/evolving-japan-us-command-and-control-cooperation-for-forward-denial.

critically important for Japan to possess the ability to strike China's invading air and maritime forces, as well as the operational infrastructure supporting them within Chinese territory, at an earlier stage and at greater distance. Japan's ability to deny China the sustained execution of such operations would make it more difficult for Beijing to create a fait accompli through a short war and would thereby strengthen deterrence. A passive posture that waits for enemy forces to enter Japanese territory before defeating them cannot provide the same degree of credible deterrence.

At the same time, as discussed in the preceding chapters, China's increasingly sophisticated A2/AD posture, centered on precision-strike capabilities, has also significantly reduced the ability of manned ships and aircraft operating in the surrounding region to sustain operations over time. This development has increased the importance of ground-launched long-range missiles that can exploit complex terrain to reduce their detectability while conducting strikes, as well as attritable drones designed on the assumption that some will be neutralized by the adversary. In other words, two trends are occurring simultaneously: the declining importance of forces employed on land for traditional ground combat, and the growing importance of forces employed from land against targets in the air and maritime domains.

1. Expansion of Missile and Drone Forces

Ground-based long-range missiles will continue to occupy an important place in achieving the "asymmetric advantages" emphasized in the 2022 Three Strategic Documents. As many of those involved in formulating the documents have acknowledged, one of their central pillars was the introduction of stand-off defense and counterstrike capabilities. Yet, in contrast to the emphasis placed on these capabilities, the force-development targets set out in the Defense Buildup Program remained relatively modest.

To be sure, developing new capabilities generally requires considerable time for R&D, expansion of production capacity within the defense industrial base, and education and training at the unit level. It is therefore difficult to expand new types of units on a large scale immediately, and force restructuring must proceed gradually as new equipment completes development and enters service. The same applies to the development and introduction of long-range missiles. Even after accounting for these practical constraints, however, the current force-development targets remain too limited.

Development of the improved Type 12 Surface-to-Ship Missile, now designated the Type 25 Surface-to-Ship Missile, was approved by a Cabinet decision in December 2020. Mass production began in FY2023, and the missile was introduced into the 5th Surface-to-Ship Missile Regiment at Camp Kengun in the Kumamoto Prefecture at the end of FY2025.[2] Mass production and initial deployment of the Hyper-Velocity Gliding Projectile for island defense, now designated the Type 25 Hyper-Velocity Gliding Projectile, proceeded on a similar schedule. The system was deployed to Camp Fuji at the end of FY2025, with deployments to Camp Kamifurano

[2] Japan Ministry of Defense, "Bōeiryoku Bapponteki Kyōka no Shinchoku to Yosan: Reiwa 8 Nendo Yosan no Gaiyō" [Progress in the Fundamental Reinforcement of Defense Capabilities and the Budget: Overview of the FY2026 Budget], April 2026, https://www.mod.go.jp/j/budget/yosan_gaiyo/fy2026/yosan_20260408.pdf.

in Hokkaido and Camp Ebino in the Miyazaki Prefecture planned for FY2026.[3]

The Defense Buildup Program sets force-structure targets for the following decade. It calls for increasing the number of surface-to-ship missile regiments from five to seven, while establishing two battalions equipped with Hyper-Velocity Gliding Projectiles for island defense and two long-range guided-missile units equipped with hypersonic guided missiles. Viewed against deployments already made since the adoption of the 2022 Three Strategic Documents, however, the program appears largely to preserve the current number of surface-to-ship missile regiments while incrementally replacing older Type 88 and Type 12 systems with the Type 25. Two new surface-to-ship missile regiments have already been established at Katsuren in Okinawa and Yufuin in Oita. Likewise, the Hyper-Velocity Gliding Projectile units at Kamifurano and Ebino are expected essentially to account for the two planned battalion-sized units. Although development and initial production of additional systems—including new precision-guided land-attack and anti-ship missiles and hypersonic guided missiles—are expected to continue, no concrete plans have yet been announced for additional missile units beyond the two units intended to operate the hypersonic guided missile.

China, by contrast, is already estimated to possess around 1,000 ground-based launchers for short- and intermediate-range long-range missiles, with approximately 3,050 missiles in inventory.[4] Even after Japan completes its current force buildup, a gap of more than five to one may therefore remain between the two countries.[5] If the purpose of Japan's stand-off defense capabilities is to obtain an asymmetric advantage over an adversary, implementation of the current plan would risk leaving China, rather than Japan, with the greater asymmetric advantage.

This does not mean, of course, that missile launchers would necessarily fire directly at one another. Anti-ship missiles would be used against enemy naval vessels, while land-attack missiles would be directed against important military targets within enemy territory. Even so, Japan must possess sufficient quantitative capacity to neutralize or significantly degrade those targets. The precise degree of numerical advantage required to achieve this objective is debatable, but it is difficult to argue that it can be achieved while Japan remains far behind its adversary in scale.

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[3] Japan Ministry of Defense, "Kokusan Sutando Ofu Misairu no Sōki Seibi-tō ni Tsuite" [On the Early Deployment of Domestically Produced Stand-Off Missiles and Related Measures], August 29, 2025, https://www.mod.go.jp/j/press/news/2025/08/29c.html.

[4] US Department of War, "Military and Security Developments Involving the People's Republic of China," December 2025, 71, https://media.defense.gov/2025/Dec/23/2003849070/-1/-1/1/ANNUAL-REPORT-TO-CONGRESS-MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA-2025.PDF.

[5] Assuming that one surface-to-ship missile regiment (comprising four companies) has sixteen launchers, seven regiments would have a total of 112 launchers. If a high-velocity gliding projectile unit is assumed to have an organizational structure similar to that of a Multiple Launch Rocket System (MLRS) unit, each battalion could be equipped with eighteen launchers, for a total of thirty-six launchers in two battalions. If long-range guided missile units are organized in the same manner, two battalions would likewise be equipped with a total of thirty-six launchers. Combined, these would amount to 184 launchers, less than one-fifth of China's total. The estimate of eighteen launchers per MLRS battalion is based on the fact that a total of ninety-nine launchers were procured for five battalions, each comprising three companies, plus one training unit (company). See Japan Ministry of Defense, "Kore made no Yosan no Gaiyō" [Overviews of Past Budgets], annual editions, https://www.mod.go.jp/j/budget/yosan_gaiyo/index.html.

Addressing this problem will require a substantial expansion of the JGSDF's ground-launched long-range cruise-missile forces. In particular, rather than limiting missile formations to regiment- or battalion-sized units, as currently envisaged, Japan should establish multiple brigade-sized missile formations, broadly comparable in scale to the missile brigades of the PLA Rocket Force.

In addition, given the improving air-defense capabilities of China and other neighboring countries, and the desirability of greater striking power for deterrence purposes, Japan should begin full-scale domestic development not only of cruise missiles but also of conventionally armed anti-ship ballistic missiles.[6] Japan should also consider deploying or rotationally stationing anti-ship missile and surveillance units on the Ogasawara Islands and other locations along the Second Island Chain. The sale of ground-launched anti-ship missiles to the Philippines should likewise be considered in order to enable the deployment of anti-ship strike forces capable of constraining the passage of Chinese naval vessels through the Bashi Channel.

The same problem applies to the force-development targets for drones, which the government has emphasized as an important lesson from the war in Ukraine and other recent conflicts. The current Defense Buildup Program calls for the establishment of two unmanned-system units, each in JGSDF and JMSDF. The JMSDF has selected the U.S.-made MQ-9B SeaGuardian for this role, while the JGSDF system remains undecided. In addition, the JASDF operates the RQ-4B Global Hawk through a reconnaissance squadron established before the 2022 Three Strategic Documents. The JGSDF has also introduced several foreign-made attack drones for testing, in addition to the smaller ISR drones it has operated for some time, and such systems are expected to play a central role in the multilayered coastal defense concept known as SHIELD, announced by the MOD in 2025.

Thus, drone introduction has gradually advanced across all three services since the adoption of the 2022 Three Strategic Documents. Yet it remains unclear how each service intends to integrate drones into its force structure, and the creation of dedicated drone formations has progressed only marginally. This contrasts sharply with developments elsewhere. Ukraine established a dedicated military service for unmanned systems in 2024, while Russia has been moving in a similar direction. The U.S. Navy, meanwhile, established Task Force 59 under the Fifth Fleet in 2021 as a dedicated organization for experimenting with and operating maritime unmanned systems. Against this background, the JSDF's integration of drones into force design and organizational structure has lagged behind both the emphasis placed on them in the Three Strategic Documents and the pace at which the systems themselves are being procured.

Several options are available. First, the JGSDF could establish dedicated formations such as drone brigades or regiments. Second, it could create a new arm for unmanned systems alongside traditional branches such as infantry and armor, and then integrate drone capabilities into divisions and brigades alongside other arms and equipment. Third,

[6] Although the Type 25 high-velocity gliding projectile is a type of ballistic missile, it is a surface-to-surface missile. Moreover, no program to develop a ballistic missile with a conventional ballistic trajectory has been announced to date.

existing branches such as infantry and artillery could operate new drones according to their type and function, extending the current organizational model rather than creating new formations.

Different militaries are experimenting with different approaches to integrating drones into their force structures, and the JSDF should likewise remain flexible and draw on foreign precedents. At a minimum, however, current conflicts such as the war in Ukraine demonstrate that drones have already become an indispensable component of modern military power. They should therefore be treated as systems capable of replacing, in whole or in part, traditional functions performed by rifles, mortars, aircraft, and other platforms in both fires and the ISR that supports them, while providing greater three-dimensional reach and accepting attrition as an inherent feature of their employment.

At the same time, Japan should maintain the low-cost and attritable characteristics of such systems while increasingly employing drones as ground-based anti-ship strike assets, as Iran has already done in recent conflict. This would allow the JGSDF's traditional compact combined-arms formations, designed primarily for ground combat, to evolve into broader cross-domain combined-arms forces capable of conducting maritime denial.

Finally, from the perspective of sustaining denial in wartime, Japan could consider a limited reestablishment of the tunnel excavation units that have previously been abolished.[7] Such units would provide the JSDF with the ability to modify and expand preplanned hardened facilities and positions flexibly during a conflict. This could help protect staging and assembly areas used by missile and drone units before launch and improve their overall survivability.

2. Reducing Legacy JGSDF Units

Achieving the transformation outlined above will require substantial reductions in existing legacy force structures. Given the severity of Japan's security environment, there is little reason to reduce the overall size of the JSDF, including the JGSDF. Yet, assuming that demographic decline will continue to worsen recruiting conditions over the medium to long term, reductions in legacy units will be unavoidable if Japan is to incorporate new capabilities such as missile and drone forces.

Despite this, the JGSDF's 15 divisions and brigades, developed during the latter stages of the Cold War to respond to the Soviet threat, as well as tank and artillery units directly subordinate to the regional armies, have largely been maintained in their existing form. The principal exception is the planned upgrade of the 15th Brigade in Okinawa to division status.

In this regard, the 2022 Three Strategic Documents effectively reclassified all 15 divisions and brigades as maneuver units to be deployed to the Nansei Islands and other areas during a contingency, including the seven divisions and brigades that had been categorized under the 2018 National Defense Program Guidelines as regionally

[7] Tunnel excavation units were maintained by the JGSDF after the Cold War with the aim of using terrain to conceal surface-to-ship missiles and other systems and thereby enhance their survivability. They were subsequently abolished, probably because they lacked transportability and responsiveness as the Nansei Islands came to be envisaged as a principal area of operations. However, now that long-range missiles and long-range drones make it possible to project firepower from areas outside the Nansei Islands, conditions are increasingly in place for operating such systems without presupposing maritime transport.

deployed forces—in effect, reserve forces not expected to deploy immediately to the front. This reclassification was made without substantial debate and is difficult to reconcile with the previous force-planning framework. Several factors appear to have contributed to this outcome, including the organizational interests of the JSDF, resistance from local governments hosting units, and the practical difficulty of rapidly transforming the force on a large scale because personnel belong to different branches.

The interaction of these factors has produced a force structure that, as the former senior officials discussed in Chapter 1 observed, remains largely an extension of the previous trajectory. The collective interests and organizational norms that favor preservation of existing structures have therefore created a gap between the new objectives established by the 2022 Three Strategic Documents and the force structure required to achieve them, impeding capability development in priority areas.

The next Three Strategic Documents should address this force-structure gap much more decisively. Specifically, Japan should substantially reduce existing divisions, brigades, tank units, and artillery formations—by at least 20 to 25 percent—and redirect the resulting resources, particularly personnel and organizational capacity, toward a major quantitative expansion of ground-launched missile forces, which will be central to achieving asymmetric advantage.[8] The remaining formations should also incorporate drone capabilities in the manner discussed above.

The JGSDF must therefore fundamentally redefine its purpose: from an organization structured primarily to fight on land, within Japanese territory, into one designed increasingly to project firepower from land into the maritime and air domains.

2 Transforming a Maritime Strategy That Has Lagged in Asymmetric Adaptation

The 2022 Three Strategic Documents identified securing "asymmetric advantages" as one of the key priorities for capability development.[9] Yet the JMSDF's force requirements for wartime operations remain centered on surface combatants and fixed- and rotary-wing patrol aircraft that are vulnerable to anti-ship and air attack, indicating that major transformation has lagged. The underlying reason is the conservative character of JMSDF force development. This stands in contrast to the JGSDF, which, despite the challenges discussed in the previous section, has begun to shift its operational concept substantially from territorial defense toward operations against maritime targets.[10] Two principal factors help explain this tendency.

First, the JMSDF's conservatism is in many respects the inverse of the historically important role it has played in Japan's defense. In the postwar development of the JSDF, expansion of the JMSDF was initially given the lowest priority. Compared with the JGSDF, which was responsible for

[8] This is a rough estimate based on the additional personnel that would likely be required for a force structure capable of maintaining at least 1,000 launchers, using the size of a surface-to-ship missile regiment as the baseline.

[9] Cabinet Decision, "National Defense Strategy," 8–9.

[10] Parts of this section draw, with additions, deletions, and revisions, on Hirohito Ogi, "Kaijō Jieitai no Genjō to Kadai: Kaiji wa Senryoku Sekkei o Daitan ni Henkaku seyo" [The Current State and Challenges of the JMSDF: The JMSDF Should Boldly Transform Its Force Design], *Sekai no Kansen [Ships of the World]*, no. 1053 (Kaijinsha, 2025): 117–121.

territorial defense, and the JASDF, which was tasked with air defense of the homeland, the JMSDF placed particular emphasis on protecting SLOCs through ASW in the Pacific and elsewhere in order to facilitate the arrival of U.S. naval reinforcements.[11] As a result, until the late 1970s, the JMSDF's role in Japan's defense was generally regarded as secondary.

This changed from the 1980s onward, as the Soviet threat in the Far East expanded across the wider Western Pacific. The JMSDF came to be regarded as a key element of Western defense on the Far Eastern front of the Cold War, moving from a peripheral to a central position in Japan's defense posture. After the end of the Cold War and a period in which Japan faced no clear primary threat, it was again the JMSDF that came to be most heavily relied upon as China gradually expanded its maritime presence from the 2000s onward. The intensification of tensions over the Senkaku Islands and Taiwan after 2011 further ensured that the JMSDF's importance remained high in defending the Nansei Islands, which are surrounded by the sea. Yet the enduring centrality of the JMSDF since the 1980s has also encouraged continued reliance on traditional ways of naval warfare.

Second, because the defense of the Senkaku Islands became an urgent priority from the 2010s onward, the JMSDF developed a force posture optimized for dealing with and deterring China across the spectrum from peacetime to gray-zone contingencies. One example is the introduction of Mogami-class frigates and Sakura-class patrol vessels, which offer greater maneuverability and reduced crewing requirements and thereby support a larger and more continuous maritime surveillance presence.[12] The JMSDF's retention of a large number of maritime patrol aircraft for maritime surveillance also reflects, in part, the legacy of the Cold War-era force of approximately 100 P-3Cs. Similarly, modifications to the Izumo-class destroyers to enable F-35B operations were undertaken with a strong awareness of their utility for presence operations intended to support deterrence in peacetime.[13]

Given the realities of Japan's security environment over the past fifteen years, these were necessary capability investments. A maritime defense posture weighed heavily toward peacetime and gray-zone operations, however, imposes significant constraints in a high-intensity contingency. Most importantly, it results in limited survivability within China's A2/AD network. Surface combatants lacking sufficient protection against enemy missiles, and maritime patrol aircraft that possess virtually no organic self-defense capability, are unlikely to be able to sustain high-intensity maritime operations in

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[11] Shingo Yoshida, *Nichibei Dōmei no Seidoka: Hatten to Shinka no Rekishi Katei [The Institutionalization of the Japan-US Alliance: The Historical Process of Its Development and Deepening]* (Nagoya University Press, 2012), chap. 5; Shingo Yoshida, "'51 Taikō' Ka no Bōeiryoku Seibi: Shīrēn Bōei o Chūshin ni, 1977–1987-nen" [Defense Buildup Under the 1976 National Defense Program Outline: With a Focus on Sea-Lane Defense, 1977–1987], *Kokusai Anzen Hoshō [International Security]* 44, no. 3 (December 2016): 35–53.

[12] Cabinet Decision, "Heisei 26 Nendo Ikō ni Kakaru Bōei Keikaku no Taikō ni Tsuite" [National Defense Program Guidelines for FY2014 and Beyond], December 17, 2013, 20, https://www.cas.go.jp/jp/siryou/131217anzenhoshou/ndpg-j.pdf; Cabinet Decision, "Chūki Bōeiryoku Seibi Keikaku (Heisei 31 Nendo–Heisei 35 Nendo) ni Tsuite" [Medium Term Defense Program (FY2019–FY2023)], December 18, 2018, 5, https://www.cas.go.jp/jp/siryou/pdf/h3135cyuukiboueiryoku.pdf.

[13] Kōji Sugimoto, *Nihon no Bōei Seisaku: Reisen-go no 30-nen to Genzai [Japan's Defense Policy: Thirty Years After the Cold War and the Present]* (Sakuhinsha, 2025), 201–213.

areas such as the East China Sea, east of Taiwan, or south of Okinawa.

Third, the strong assumption that Japan would operate jointly with the U.S. Navy appears to have exposed the JMSDF directly to the effects of uncertainty and disruption in U.S. naval force development. The U.S. Navy itself has long benefited from the historical success of carrier strike groups in establishing sea control and projecting power, thereby helping sustain a U.S.-centered international security order since the Second World War. This success contributed to delays in making a fundamental shift away from carrier-centered operations in response to China's growing naval power and A2/AD capabilities.

In recent years, the U.S. Navy has sought to address this problem through the concept of Distributed Maritime Operations (DMO), which aims to employ large numbers of unmanned vessels while enabling effective combat operations within contested threat environments. Yet the unmanned vessels on which the concept places considerable reliance remain in development and testing and have not yet matured into fully operational capabilities.[14] At the same time, the weakening of the U.S. shipbuilding base has made it difficult to expand the manned fleet. The Navy also urgently needs to clarify key elements of the DMO concept itself, including how to transition from command-and-control arrangements designed around concentrated employment of manned warships toward genuinely distributed command structures.[15]

The introduction of the Trump administration's "Golden Fleet" concept has added further uncertainty. It has become increasingly unclear whether the U.S. Navy's future force design will prioritize an asymmetric denial posture tailored to operations against China or instead move back toward a model centered more heavily on global power projection.[16]

Under these conditions—where U.S. naval doctrine itself remains unsettled and where it is increasingly uncertain whether the U.S. Navy can be relied upon to provide sufficient reinforcements to compensate for the JSDF's numerical disadvantages—the JMSDF appears to face growing uncertainty in designing its own force as a partner navy. The next Three Strategic Documents will need to resolve this problem.

1. Substantially Expanding Asymmetric Maritime Capabilities

In maritime operations conducted in contested environments under China's A2/AD threat, traditional surface forces are increasingly unlikely to operate effectively. Even if Japan were to adopt its own version of DMO, a denser Chinese space-based maritime surveillance network could make even numerous small vessels deployed in dispersed formations increasingly vulnerable to detection and tracking. Moreover, the anti-ship drone attacks

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[14] Ronald O'Rourke, "Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress," RL32665, Congressional Research Service, March 2025; Ronald O'Rourke, "Navy Large Unmanned Surface and Undersea Vehicles: Background and Issues for Congress," R45757, Congressional Research Service, updated March 2025.

[15] Dmitry Filipoff, "Distributed Maritime Operations: Solving What Problems and Seizing Which Opportunities?," Atlantic Council, July 2024.

[16] Rintaro Inoue, "Toranpu Seiken 'Ōgon Kantai' Kōsō de Shōjiru Taichū Yokushi no 'Kūhaku': Nihon wa Nani o Ninau no ka" [The "Gap" in Deterrence Against China Created by the Trump Administration's "Golden Fleet" Concept: What Role Should Japan Play?], *Shinchōsha Foresight*, April 23, 2026, https://www.fsight.jp/articles/-/52044.

carried out by the Houthis since 2023 and by Iran during the 2026 war are likely to further erode the effectiveness of such DMO concepts.

Given these realities, it would be prudent for the primary responsibility for anti-ship strike operations around the East China Sea and the Nansei Islands to shift to land-based JGSDF units. Surface vessels such as Mogami-class frigates and Sakura-class patrol vessels, whose missions emphasize surveillance and monitoring, should principally be regarded as assets for deterrence operations in peacetime and gray-zone situations. They could also be used against maritime militia and similar forces should such actors employ large numbers of drones or participate directly in hostilities.[17] That said, there may still be a role for Mogami-class frigates and comparable vessels in high-intensity conflict if they can be given a meaningful degree of air-defense capability and operated in a sufficiently distributed manner to reduce the risk of being detected and neutralized by coordinated attacks. With this possibility in mind, Japan could consider developing several mission-specific variants with more narrowly defined roles and modularized strike, air-defense, and sensor packages.

Operations at sea within the adversary's threat envelope will also require the early and large-scale introduction of unmanned surface vessels (USVs) and unmanned underwater vehicles (UUVs). Small USVs in particular should be viewed not only as strike platforms, but also as attritable carriers of long-range sensors for the early detection of hostile drones and other threats. Larger unmanned platforms, meanwhile, should be designed to support manned warships, requiring new concepts for their integrated employment and command and control.

Japan could also explore cross-domain maritime-air unmanned systems that remain dormant underwater as UUVs and, when required, launch anti-ship or land-attack drones from capsules into the air to achieve surprise.[18] Mine-laying capability should also be incorporated. Given the limited number of manned submarines available, UUVs should be treated as an indispensable means of achieving undersea superiority.

At the same time, although personnel shortages will remain a major constraint, Japan should seek to expand the current force of 22 manned submarines by adopting crew-reduction designs unconstrained by precedent. Since the 2022 Three Strategic Documents have already committed Japan to developing and introducing VLS-equipped submarines, the JMSDF is moving toward a two-tier submarine force: larger submarines whose primary mission is the employment of stand-off missiles through VLS, and conventional submarines whose principal mission remains ASW.[19] If the overall fleet were kept at 22 boats, the result would effectively be a reduction in ASW capacity. Some increase in fleet size is therefore unavoidable. Japan should use this requirement as an opportunity to pursue further manpower reductions in submarine design and thereby strengthen ASW capacity in real terms.

China's ability to pass through the Bashi

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[17] Under the law of armed conflict, civilians shall not be made the object of attack. However, when civilians directly participate in hostilities, including by conducting attacks, this does not preclude their being attacked as military objectives.

[18] It may be difficult to regard these systems as the principal means of anti-ship strike capable of replacing surface ships or submarines, but they could potentially play a complementary role in combination with land- and air-based assets.

[19] Authors' interview with a former senior government official, April 9, 2026.

Channel and operate across the wider Pacific also creates risks not only for the Nansei Islands but for Japan's Pacific-facing territory, including the main islands. To respond flexibly and avoid being forced into a reactive posture, Japan will still require survivable surface forces capable of operating effectively in the Pacific. This will require consideration of further expanding the Aegis-equipped fleet beyond the planned 12-ship force—up from the current eight—as well as assigning additional submarine forces to this mission.

Finally, to employ Japan's limited defense resources effectively, Japan must improve its ability to track hostile maritime forces while also fielding assets capable of restricting their freedom of maneuver. Two measures are particularly important. First, Japan should establish a mesh-type seabed sensor network along the Bashi Channel and the Second Island Chain, with multiple cable landing points to reduce the risk that the system could be disabled by severing a small number of connections. Second, given China's own large-scale development of UUVs, Japan should begin developing underwater counter-drone systems capable of disabling the propulsion systems of hostile UUVs.

2. Reducing Surface Combatants and Maritime Patrol Aircraft

In contrast to the expansion of capabilities discussed above, Japan should make substantial reductions in general-purpose destroyers with limited air-defense capability. In doing so, there is no compelling need to preserve the current force structure of 54 destroyers. Similarly, maritime patrol aircraft units, including P-1 squadrons that form the core of peacetime maritime surveillance and ASW, need not remain fixed at the current nine-squadron structure and should also be reduced.

The continued retention of these capabilities could be justified on the grounds of gray-zone response or SLOC defense in wartime. However, if Japan is to establish clear priorities in resource allocation and maximize the operational effects of its defense investments, force development will require sharper choices and greater concentration of resources on the capabilities that matter most.

3 Transforming Airpower into a Concentric-Ring Structure

Since its establishment, the JASDF has treated air defense of the Japanese homeland as its paramount mission. Its relative lack of interest in missions such as maritime air defense and anti-ship strike has at times drawn criticism from the other services.[20] As a result, JASDF force development has traditionally emphasized capabilities suited to peacetime airspace defense, particularly fighter aircraft optimized for air-to-air combat. Resource allocation has reflected this orientation as well. Because key positions have long been dominated by fighter pilots, capability areas that compete with manned aircraft for resources—such as unmanned systems—have tended to lag behind.[21]

This emphasis on air-to-air combat also means that the JASDF has not always pursued capabilities for offensive missions, including anti-ship strike, or for supporting combat operations in

[20] See, for example, *Ōga Ryōhei (Moto Kaijō Bakuryōchō) Ōraru Hisutorī [Oral History of Ryōhei Ōga, Former Chief of Staff, JMSDF]*, vol. 1 (National Graduate Institute for Policy Studies, 2005), 123–132.

[21] Authors' interview with a former senior government official, April 9, 2026.

other domains with sufficient urgency. This overly restrained posture is, in part, a negative consequence of the JASDF having enjoyed priority access to procurement funding within Japan's defense budget since its establishment.[22]

However, once the 2022 Three Strategic Documents established "to disrupt and defeat invasion much earlier and at places further afield" as an operational objective, the JASDF's excessively defensive approach to force development also became subject to change. To be sure, the acquisition of air-launched anti-ship and land-attack missiles such as the JSM, JASSM, and the air-launched variant of the Type 25 Surface-to-Ship Missile is already strengthening the JASDF's ability to support ground and maritime combat. Yet these efforts remain insufficient. Japan should develop a concentric-ring structure of airpower in which capabilities extend progressively outward from the defense of the homeland, enabling the JASDF to conduct a wider range of offensive missions across increasingly distant areas.

Airpower also has a distinctive role that sets it apart from other defense capabilities. It can function not only as a means of delivering strikes, but also as a trigger for deeper allied involvement by geographically expanding the theater of operations. In other words, how and where airpower is deployed carries not only military significance, but also political and strategic significance: it can help define the level of escalation and induce and institutionalize greater allied involvement.

1. A High-Low Mix Air Defense Posture as the Core of Homeland Air Defense

Homeland air defense will remain at the core of the JASDF's defense concept. From this perspective, maintaining fighter forces of sufficient scale and a robust network of ground-based air-defense radars will remain essential. At the same time, recent conflicts, including the war in Ukraine, have underscored the importance of ground-based air-defense missiles. Japan should therefore expand the size of its advanced air-defense missile forces, including domestically developed systems, in close coordination with the JGSDF.

Japan must also strengthen its ability to counter saturation attacks by long-range drones such as the Shahed. This will require the development of low-cost and attritable air-defense capabilities that can offset an adversary's cost-imposition strategy, including AI-enabled anti-aircraft guns and larger numbers of counter-drone drones capable of intercepting hostile unmanned systems.[23]

At the same time, preserving Japan's own airpower while accelerating the attrition of enemy air forces will require stronger passive protection for aircraft, which are most vulnerable while parked on the ground. Measures should include expanding aircraft shelters, increasing runway-repair capacity, dispersing aircraft through greater joint use of U.S. military air bases and civilian airports, and acquiring decoys on a large scale.

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[22] *Suzuki Akio Ōraru Hisutorī: Moto Kōkū Bakuryōchō [Oral History of Akio Suzuki: Former Chief of Staff, JASDF]* (National Institute for Defense Studies, Japan Ministry of Defense, 2011), 186.

[23] Hirohito Ogi, "Dorōn Seizō Sensō: Ukuraina Sensō ni Okeru Mō Hitotsu no Senjō" [The Drone Manufacturing War: Another Battlefield in the War in Ukraine], *CISTEC Jānaru [CISTEC Journal]*, no. 222 (April 2026): 73–81.

2. Stealth Airpower and the Space Domain as Key Enablers in Contested Areas

As discussed above, the expansion of China's A2/AD network has substantially reduced the effectiveness of surface combatants in maritime operations. The same trend applies to air power. At the same time, stealth aircraft can still retain meaningful operational utility in contested environments. Fighter aircraft such as the F-35 and the future GCAP platform should therefore continue to be emphasized as principal assets for anti-ship strike, particularly when equipped with long-range missiles, and should be expanded beyond currently planned levels.

Maintaining radar coverage in contested environments also requires reducing excessive dependence on airborne warning and control system (AWACS) aircraft, which may become increasingly vulnerable. Japan should therefore diversify the platforms carrying radar sensors, including through the use of unmanned aircraft. It could also consider mounting such sensors on USVs, as discussed in Section 2 of this chapter. Together, these capabilities would form the next concentric ring beyond homeland air defense, supporting stand-off offensive operations.

Space-based ISR capabilities are another critical element. The JASDF has rapidly expanded the size of its dedicated space organization, currently the Space Operations Wing, but its activities have so far focused primarily on space domain awareness and monitoring. Resource constraints are one factor, but this also reflects the fact that the JASDF has not yet treated space-based support for ground and maritime operations as a core mission.[24] This approach is an extension of the service's long-standing emphasis on air-to-air combat and reflects an institutional tendency to avoid more offensive roles, which should be corrected as quickly as possible.

The transition to a renamed "Japan Aerospace Self-Defense Force" from FY2026 should provide an opportunity for the JASDF to take a leading role in developing Japan's ISR satellite constellation. The objective should extend beyond simply improving intelligence collection. Japan should build an effective targeting capability to support stand-off defense operations while also improving the resilience of the constellation itself. Establishing near-real time targeting against moving maritime targets, for example, would require the operation of at least several hundred Earth-observation satellites, together with a system that seamlessly integrates their data throughout the entire kill chain supporting stand-off defense capabilities.

Redundant and resilient communications will likewise be indispensable as an operational foundation for sustained denial. Japan should therefore move quickly to improve the resilience of the *Kirameki* X-band communications satellites currently operating in geostationary orbit. While work on successor satellites has already begun, Japan should consider deploying large numbers of small communications satellites in low or medium Earth orbit and combining them with geostationary systems in order to ensure the functionality of the satellite communications architecture as a whole. As the JSDF increasingly disperses its forces and relies more heavily on unmanned systems, communications demand across all three services will rise sharply. Depending on mission requirements, Japan should therefore also make greater use of commercial

[24] Authors' interview with a former senior government official, March 30, 2026.

satellite communications.

Even substantial improvements in the redundancy and resilience of these space systems, however, cannot eliminate their inherent vulnerability in high-intensity conflict. Japan must therefore consistently design redundancy across domains, ensuring that the loss or degradation of space-based capabilities can be compensated for by capabilities in other domains.

At the same time, China's own ISR satellite constellations and satellite communications are indispensable to the effectiveness of its A2/AD system. Disrupting these capabilities would directly improve the survivability of Japan's maritime forces. From this perspective, the JASDF should introduce units dedicated to electromagnetic counter-space operations. Japan should develop a posture in which small, mobile counter-satellite jamming systems can be deployed in large numbers and maneuvered across both land and maritime environments to disrupt an adversary's ISR and communications capabilities.

3. Rotational Employment of Stand-Off Defense Capabilities from Overseas Operational Bases

Finally, the outermost ring of this concentric structure would consist of a broader stand-off defense posture. As discussed in Chapter 2, the trigger strategy built around overseas operational bases is intended to encourage progressively deeper allied involvement through Japan's conventional denial operations and, in doing so, strengthen U.S. extended deterrence. Although its ultimate purpose is to reinforce the credibility of U.S. deterrence by punishment, the Japanese actions that serve as the trigger would themselves take the form of denial operations designed to reduce the feasibility of an adversary's military campaign.

What is important here is that such denial operations would serve not only tactical and operational purposes, but also a broader strategic function by expanding the geographic scope of the theater and thereby inducing greater allied involvement. Overseas operational bases would therefore contribute not only to survivability and operational endurance, but also to expanding the spatial scope of escalation and making allied involvement progressively more difficult to reverse.

Airpower is particularly well suited to this role. By exploiting its long range and flexible deployment options, airpower can connect bases inside and outside Japan and serve as a principal means of linking different parts of the theater. Japan's land, maritime, and air forces based on Japanese territory would remain the foundation of the defense posture. For airpower in particular, however, rotational operations from overseas bases could offer an effective means of increasing survivability while also making deeper U.S. involvement easier to induce.

Implementing this concept would require a capability analogous to that provided by bombers: substantial payload combined with long range. One way to achieve this would be to adapt transport aircraft to carry and launch large numbers of long-range missiles, similar to the U.S. military's "Rapid Dragon" concept for palletized missile launch from transport aircraft.[25] Such long-range, high-capacity anti-ship missile platforms would themselves become high-value targets for enemy precision strikes. Japan

[25] Andrew S. Lim and James D. Fearon, "The Conventional Balance of Terror: America Needs a New Triad to Restore Its Eroding Deterrence," *Foreign Affairs* (May/June 2025), https://www.foreignaffairs.com/united-states/conventional-balance-terror-lim-fearon.

should therefore consider rotating them not only among domestic bases but also through air bases in allied and like-minded countries such as the United States and Australia, both to improve survivability and to encourage deeper allied involvement.

Such overseas operational bases would have significance beyond the immediate military benefits of greater survivability and operational persistence. By geographically expanding the conflict and creating the possibility that military operations could directly affect multiple countries, they could generate stronger incentives for allies to become more directly involved. This kind of flexible force deployment would also be important for preserving operational initiative against a Chinese navy that is expanding its activities into the Pacific.

These operations should therefore be understood as more than simple force dispersal. They should form part of a broader system of phased escalation management. In the initial stages of a conflict, Japan would conduct denial operations primarily from its own territory. As the situation developed, strikes from overseas operational bases could be incorporated progressively, allowing the geographic expansion of the theater and the deepening of allied involvement to occur in parallel.

In this sense, the rotational employment of airpower from overseas operational bases could function as an "activation trigger" for the deterrence mechanism through the alliance—a mechanism for inducing deeper allied involvement—and should be regarded as a central component of the overall trigger architecture.

4 Transforming the Command-and-Control Structure

Modern operations involving missiles, drones, AI, and the space and cyber domains require military organizations to process large volumes of information rapidly and with a high degree of sophistication. At the same time, AI also has the potential to make operational command and control more efficient. Ukraine, for example, has already employed a command-and-control support application known as the "Delta system" in its war against Russia. The United States is also reported to have used AI-enabled intelligence analysis systems developed by companies such as Palantir during the war with Iran.

Japan should likewise incorporate AI into JSDF command and control to accelerate and improve the efficiency of decision-making. Yet technological adoption alone will not transform military effectiveness. Organizational structures must also be adapted to match the capabilities of new technologies.

From this perspective, highly vertical and hierarchical command-and-control structures, particularly those still evident within the JGSDF, will need to be reconsidered, as the introduction of AI could make some existing functions redundant. More specifically, Japan should strengthen the headquarters functions of the Joint Operations Command and frontline units, while rationalizing the organization and functions of intermediate headquarters such as the regional army headquarters and division and brigade headquarters. The ultimate objective should be a less hierarchical and more

distributed command structure.[26]

The 2022 Three Strategic Documents were highly significant in that they encouraged investment in capabilities Japan had not previously possessed, most notably counterstrike capabilities. Yet the priority areas identified in those documents have not been sufficiently reflected in subsequent JSDF force design and force structure. Realizing the intended capability improvements will therefore require fundamental transformation across all three services.

This cannot be achieved through higher defense spending alone. It will also require a change in organizational mindset—away from the tendency to preserve existing structures through organizational inertia and toward a willingness to restructure forces in line with new operational requirements.

[26] Hirohito Ogi, "Nihon no Bōei Bun'ya ni Okeru AI Katsuyō no Genzaichi" [The Current State of AI Utilization in Japan's Defense Sector], Institute of Geoeconomics, June 2025, https://instituteofgeoeconomics.org/research/2025052801/ (Japanese translation of Hirohito Ogi, "Per Tōkyō L'Ai Non Cambia Ancora La Guerra," *Limes* [May 2025]).

Chapter 5

Foundations for War-Sustaining Production Capability

Rintaro Inoue and Yuki Goto

Sustained denial cannot be achieved simply by stockpiling ammunition, missiles, and spare parts in peacetime. No matter how large such stockpiles may be, they will eventually be depleted in a protracted conflict, making continuous replenishment indispensable. Moreover, given the possibility that the character of combat could change rapidly, Japan must also be able to continuously modify existing equipment and develop new systems. All of this must be sustained even while the defense industrial base, the critical infrastructure that supports it, and Japan's SLOCs are subject to disruption or attack.

Building robust war-sustaining capacity cannot be accomplished through self-help alone. Ukraine, for example, has reportedly sustained its war effort by producing roughly 60 percent of its defense equipment domestically while relying on support from like-minded countries for the remaining 40 percent.[1] Japan will likewise need to combine efforts to strengthen its domestic defense industrial base with closer cooperation with allies and like-minded countries.

1 The Role Expected of the Defense Industry in Wartime

In a protracted conflict, the defense industry would be required to perform a wide range of functions.

First, it would need to repair equipment damaged either through mechanical failure or enemy attack. In wartime, equipment can be expected to operate under considerably heavier loads than in peacetime. Components are therefore likely to wear out or break down at a faster rate than during routine training and exercises. Combat damage may also generate demand for repairs to components and systems that would not ordinarily require such work in peacetime.

Meeting these repair requirements may in some cases require defense companies to dispatch engineers close to the front. Ships and aircraft can, if still operable, generally be sent to the rear area for repair under their own power. By contrast, vehicles carrying ground-launched anti-ship or surface-to-air missiles deployed across the Nansei Islands would require transport aircraft or ships. In a high-threat environment where air and maritime superiority cannot be assured, such an approach may not be realistic. It will therefore be necessary not only to deliver spare parts to the Nansei Islands, but also to enable defense-industry personnel themselves to conduct repairs close to forward operating areas.

Second, the defense industry would need to surge production of ammunition, missiles, and drones. Israel increased interceptor-missile production by roughly fivefold after the Hamas attack of October 2023.[2] In response to the Russo-Ukrainian war, Europe similarly expanded annual production of 155 mm artillery shells from approximately 170,000 rounds before the war to around two million rounds by the end of 2025.[3] If Japan is to achieve sustained denial, it will need

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[1] Dmytro Basmat, "Nearly 60% of Ukrainian forces' weapons domestically produced, Zelensky says," *The Kyiv Independent*, September 7, 2025, https://kyivindependent.com/nearly-60-of-ukrainian-forces-weapons-domestically-produced-zelensky-says/.

[2] Rintaro Inoue, "Nihon no bōei sangyō wa yūji ni oite mo kinō suru no ka" [Can Japan's Defense Industry Function in a Contingency?], *IOG Commentary*, Institute of Geoeconomics, December 25, 2025, https://instituteofgeoeconomics.org/research/2025122502/.

[3] Kateryna Denisova, "Europe boosts artillery ammunition production sixfold in 2 years, NATO chief says," *The Kyiv Independent*, September 28, 2025, https://kyivindependent.com/europe-boosts-ammunition-production-sixfold-in-2-years-nato-chief-says/.

comparable surge-production capacity. At present, however, Japan's defense industry faces difficulties expanding production even in response to rising peacetime demand because of labor shortages and constraints on capital investment.[4] As a result, it lacks the excess capacity required for emergency production surges. Large-scale investment in missile-related production facilities has begun in recent years.[5] Yet China is also strengthening its manufacturing base in this field, meaning that Japan will still need further investment and additional expansion of production capacity.[6]

Third, Japan must secure the ability to modify equipment rapidly. As the war in Ukraine has demonstrated, equipment and systems may need to be updated quickly in response to changing battlefield conditions. This requirement is particularly important for Japan because much of its defense equipment has little or no combat experience, meaning that operational problems and areas for improvement are likely to become apparent once it is used in actual combat. Japan therefore needs a system capable of implementing modifications rapidly. Continuous updates will also be required when an adversary develops countermeasures against existing systems. In Ukraine, units and defense companies have worked in very close proximity, in some cases enabling modifications and improvements on a daily basis. By contrast, the relationship between the JSDF and Japanese defense companies is currently far less integrated.

Fourth, the defense industry would need to continue developing new systems. Introducing "game-changing" capabilities capable of altering the course of a conflict cannot be achieved solely through modifications to existing equipment. New equipment and systems will also need to be developed, meaning that defense companies must be able to continue R&D during wartime. Japan is not necessarily at a disadvantage in this regard, given the relatively large number of countries with which it could cooperate on defense R&D. The central challenge is whether Japan can develop and field new capabilities more rapidly than China.

Fifth, the defense industry would be expected to reactivate retired equipment placed in long-term storage, or mothball status. Beginning in FY2025, the MOD launched a trial program to place approximately 30 Type 74 tanks, several Type 90 tanks, and around ten Multiple Launch Rocket System (MLRS) vehicles into long-term storage, with the possibility of expanding the program to additional equipment in the future.[7] The defense industry would likely be responsible for maintaining

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[4] Hirohito Ogi and Rintaro Inoue, *From Decline to Surge: The Defense Industry in the Era of Excess Demand* (Institute of Geoeconomics, October 2025), https://instituteofgeoeconomics.org/en/research/2025102402/.

[5] "5-ruikei teppai de bōei sōbi yushutsu, gaikōryoku no sasae ni: IHI wa misairu buhin zōsan" [Abolishing the Five Categories Expands Defense Equipment Exports, Supporting Japan's Diplomatic Power; IHI Boosts Missile Component Production], Nihon Keizai Shimbun, April 21, 2026, https://www.nikkei.com/article/DGXZQOUC146I30U6A410C2000000/.

[6] Tamara Qiblawi, Gianluca Mezzofiore, Thomas Bordeaux, Yong Xiong, and Lou Robinson, "'A new arms race': Satellite images, maps and records reveal huge surge in China's missile production sites," *CNN*, November 7, 2025, https://edition.cnn.com/2025/11/07/world/china-missile-production-expansion-revealed-satellite-images-intl-invs.

[7] "Bōeishō, 74-shiki sensha nado 'taieki sōbihin' o yūji ni sonaete hokan e: Chōkika demo keisen nōryoku o tamotsu nerai" [Defense Ministry to Store Retired Equipment, Including Type 74 Tanks, for Contingencies to Sustain Warfighting Capacity in a Prolonged Conflict], Sankei Shimbun, September 14, 2024, https://www.sankei.com/article/20240914-4RQD7VIGPROSXJLNYNJMUOYRPY/.

these systems, replacing components, carrying out modernization upgrades, and restoring them to operational status when required.

2 Risks Facing the Defense Industrial Base and Critical Infrastructure

Defense industry naturally plays an indispensable role in wartime and would therefore be highly likely to become a target. Japan's defense industrial base is particularly vulnerable because it lacks strategic depth: much of it is located within roughly 1,000 kilometers of the Chinese mainland and thus within range of Chinese missiles and drones. In addition, a considerable number of Japanese defense companies are located adjacent to JSDF bases. Even if the defense industrial base itself were not directly targeted, such facilities could still be damaged or destroyed as collateral effects of attacks on nearby military installations.

For the defense industry to continue functioning reliably in wartime, at least four conditions must be met. First, production facilities must be protected. Second, companies must be able to retain the personnel needed to keep factories operating even in hazardous conditions. Third, critical infrastructure such as electricity and communications must remain functional. Fourth, SLOCs must be maintained. At present, however, Japan remains seriously deficient in all four areas.

1. Vulnerability of Manufacturing Facilities

Defense generally consists of two broad approaches: active defense and passive defense. Active defense includes measures such as surface-to-air missiles and ground forces. Defense companies located in southern Hokkaido, the Kanto region, the Tokai region, and northern Kyushu may receive some degree of protection from airborne threats through JASDF air-defense missile units and JGSDF air-defense artillery units.[8] Factories located elsewhere, however, are relatively more vulnerable. Destroyers, for example, are reportedly supported by a supply chain comprising approximately 8,300 companies.[9] Some of these firms are likely to manufacture critical components at facilities located outside the coverage of existing air-defense missile systems. Such companies could therefore become chokepoints within the broader defense supply chain.

Nor is there publicly available information confirming that defense industrial facilities are designated as critical facilities requiring protection.[10] There is consequently no guarantee that they would receive priority protection from the JSDF against sabotage by special operations forces or similar

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[8] It should be noted that simply being located within an air and missile defense coverage area does not mean that every facility will automatically be protected. In practice, priorities must be established among assets to be defended, given the limited availability of interceptor missiles and other constraints on defensive forces.

[9] Japan Ministry of Defense, *Bōei hakusho Reiwa 5 nenban [Defense of Japan 2023]*, 2023, 411.

[10] Article 129 of the Enforcement Order of the JSDF Act specifies facilities that may be used by the JSDF as designated facilities under its control. These include automobile factories; shipyards, limited to docks and slipways; port facilities, limited to berthing facilities and associated cargo-handling facilities; facilities for the maintenance of aircraft or aircraft equipment, provided that they are located within or adjacent to an airfield; and facilities for refueling automobiles, ships, and aircraft. Whether these facilities would be given priority for protection by the JSDF, however, is a separate question. A facility's eligibility for use by the JSDF does not necessarily mean that limited air-defense and security resources would be allocated to its protection as a priority during a contingency.

threats. Given that the JGSDF would be expected to deploy a significant number of units to the Nansei region during a contingency, while already facing chronic personnel shortages in peacetime, even facilities currently designated as critical may not necessarily be provided with sufficient protection.

Passive defense, by contrast, includes dispersal, concealment, hardening, and strategic depth. Countries whose defense industrial bases are already exposed to attack have sought to protect their production capacity through such measures. In Ukraine, defense companies have dispersed, concealed, hardened, and relocated production facilities underground or farther from the front in order to preserve their ability to continue production. The country reportedly has approximately 450 companies involved in unmanned systems, creating a distributed industrial structure in which attacks on individual factories have only limited effects on the overall production base.[11] Production facilities for Ukrainian long-range missiles have likewise been increasingly concealed and moved underground.[12]

Israel has adopted similar passive-defense measures. Although there have been no confirmed cases of direct attacks on Israeli defense-industry factories, efforts to improve resilience have continued. Some facilities have moved production lines underground or added double-layered exterior walls, while companies have also sought to improve the security of the broader supply chain by relocating suppliers away from frontline areas.[13] Iran has likewise succeeded, to some extent, in protecting its drone-production base from U.S. air strikes by moving manufacturing facilities underground.[14]

Japan, however, has not historically required its defense industry to prepare for wartime operations. As a result, defense companies have generally not undertaken hardening measures beyond those legally required in peacetime for facilities storing energetics. Since the adoption of the 2022 Three Strategic Documents, MOD has begun strengthening the resilience of JSDF facilities, but these efforts have so far been limited to selected installations such as command posts and do not extend to defense industrial facilities.

2. Working Conditions Under Direct Threat

Given that production facilities are likely to become targets and that adequate protective measures are not currently in place, defense-industry employees could be exposed to substantial personal risk. If a contingency became imminent and the likelihood of attacks on production facilities increased, some employees could choose to leave their jobs. Even if they did not, they could seek safer working conditions through collective bargaining by labor unions, exercising rights guaranteed under the Constitution. Defense-industry employees are civilians and are not legally obligated to comply

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[11] "Zelensky: Around 450 drone companies currently operating in Ukraine," *Ukrinform*, February 8, 2026, https://www.ukrinform.net/rubric-defense/4089134-zelensky-around-450-drone-companies-currently-operating-in-ukraine.html.

[12] Jonathan Beale, "In this secret missile factory, Ukraine is ramping up its domestic arms industry," *BBC*, December 18, 2025, https://www.bbc.com/news/articles/c1dz6wgn2w9o; Abone Oi, "Ukraine unveils top-secret underground missile plant," *M5 Magazine*, February 11, 2025, https://defence.m5dergi.com/one-cikan/ukraine-unveils-top-secret-underground-missile-plant/.

[13] Inoue, "Nihon no bōei sangyō wa yūji ni oite mo kinō suru no ka."

[14] Bill Hutchinson, "What to know about Iran's low-cost, long-range Shahed drones wreaking havoc in the Middle East," *ABC News*, March 14, 2026, https://abcnews.com/International/irans-low-cost-long-range-shahed-drones-wreaking/story?id=130995895.

with government orders. The MOD and the JSDF therefore have no effective means under the current system to prevent such developments. As a result, Japan could face serious difficulties retaining the workforce needed to sustain defense production in wartime.

One existing legal mechanism for compelling civilians to perform certain duties is Article 103 of the JSDF Act, which allows work orders to be issued to medical, civil-engineering, and transportation personnel. Simply adding defense-industry workers to the scope of this provision, however, would not necessarily resolve the problem. The provision applies only in so-called "Paragraph 2 areas" during an armed attack situation—areas in which the JSDF is not deployed. Yet, as noted above, many defense factories are located adjacent to JSDF bases, making it difficult to classify such areas as places where the JSDF is not operating. Moreover, in a situation involving missile attacks or sabotage by special operations forces, much or all of Japan could plausibly be designated as a JSDF operational area, or a "Paragraph 1 area."

Ordering civilians to work in such areas would mean requiring them to operate in hazardous conditions. This would in turn imply a need to provide allowances, compensation, and even forms of social recognition comparable to those granted to JSDF personnel. Such arrangements would go well beyond the traditional framework of Article 103.

Even if the law were amended to permit work orders in Paragraph 1 areas, there would still be no guarantee that all defense-industry employees would comply or that factories could continue operating at peacetime levels or above. Nor would compelling individuals to undertake dangerous work against their will necessarily be realistic or effective. Because work-order systems ultimately depend on personnel performing their duties actively and responsibly, the willingness and initiative of the individuals concerned remain essential.

The government itself has acknowledged limits to coercion in this context. It has argued that even if penalties were introduced to compel compliance, they might not produce sufficient effectiveness and could, in some circumstances, even interfere with JSDF mission execution. This concern was one reason why no penal provisions were attached to work orders for medical, civil-engineering, and transportation personnel when Japan established its contingency legislation in 2002.[15]

3. Challenges Facing Critical Infrastructure

Even if the security of defense industrial facilities and their workforce can be ensured, that alone will not solve the problem. Like other manufacturing sectors, the defense industry depends heavily on critical infrastructure such as electricity, gas, water, and communications. As the wars in Ukraine and Iran have demonstrated, however, infrastructure itself becomes a major target in protracted conflicts. In Ukraine, energy facilities such as power plants have been subjected to concentrated attacks, while

[15] Japan Ministry of Defense, "Q&A (Buryoku kōgeki jitai taisho kanren san hōan)" [Q&A on the Three Bills Related to Responding to Armed Attack Situations], https://www.mod.go.jp/j/presiding/law/yujihousei/q-a.html.

in the Iran war, oil-related facilities and data centers have also been targeted.[16] Japan must therefore strengthen the protection and recovery capacity of critical infrastructure alongside the defense industrial base itself.[17]

Nuclear power plants, petrochemical complexes, water facilities, national government facilities, and communications infrastructure are already designated as critical facilities, suggesting that at least some protective measures are in place. Yet threats such as drones have expanded rapidly in recent years and were not fully anticipated by traditional approaches to infrastructure protection. This raises questions over whether the JSDF can effectively protect more than 135 critical facilities nationwide.[18] It is also unclear whether Japan has adequate arrangements for rapidly restoring such facilities after attack, whether organizations such as fire services are prepared to operate under continued enemy attack, or whether mechanisms exist to prioritize the restoration of power grids and communications networks that support the defense industrial base.[19]

Sustained denial therefore requires not only the protection of the defense industry itself, but also a comprehensive system for protecting and rapidly restoring the critical infrastructure on which defense production depends.

3 Risks to Sea Lines of Communication

Maintaining SLOCs are vital to Japan's ability to sustain a protracted conflict. This is necessary not only to secure the energy and food required to support the citizen, but also to sustain the defense industrial base and ensure the continued operation of JSDF destroyers, aircraft, vehicles, and other equipment, all of which depend on uninterrupted access to energy resources.

The environment surrounding SLOCs defense has changed substantially since the Cold War. Iran's de facto closure of the Strait of Hormuz in 2026 demonstrated how drones, anti-ship missiles, and GPS jamming are fundamentally altering how SLOC can be disrupted. Mines have traditionally been one of the principal tools for sea denial, but once laid they are difficult to remove, making their use a relatively high-threshold option even for the actor employing them. By contrast, drones, anti-ship missiles, and GPS jamming can be used with much greater flexibility in terms of timing and intensity.

Moreover, it has become no longer necessary to attack ships directly to create a major effect on maritime traffic. Simply creating credible expectations that missiles may strike a particular area or that mines have been laid can significantly disrupt shipping. Under such conditions, shipping companies will naturally seek to avoid exposing

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[16] Shubham Kalia, Aditya Soni, Mrinmay Dey, "Amazon cloud unit's data centers in UAE, Bahrain damaged in drone strikes," *Reuters*, March 2, 2026, https://www.reuters.com/world/middle-east/amazon-cloud-unit-flags-issues-bahrain-uae-data-centers-amid-iran-strikes-2026-03-02/.

[17] For the case of Ukraine, see Matsubara, *Ukuraina Kigyō no Shitō*.

[18] "Daikibo tero, Rikujō Jieitai no saiyūsen bōgo '135 shisetsu' ga hanmei" [135 Facilities Identified as the JGSDF's Highest-Priority Sites for Protection against Large-Scale Terrorism], *Yomiuri Shimbun*, November 29, 2004, https://web.archive.org/web/20041129035103/http://headlines.yahoo.co.jp/hl?a=20041129-00000101-yom-pol.

[19] Yū Koizumi, "Ukuraina sensō to sangyō nōryoku: Jūkōgyōryoku to inovēshon o meguru tatakai" [The War in Ukraine and Industrial Capacity: The Contest over Heavy Industrial Capacity and Innovation], Research Institute of Economy, Trade and Industry (RIETI), May 14, 2026, https://www.rieti.go.jp/jp/events/bbl/26051401_koizumi.pdf.

crews to severe danger, while insurers may suspend the provision of war-risk coverage. In this sense, physically preventing every vessel from transiting a SLOC is no longer necessary to disrupt maritime traffic. Modern sea denial is therefore becoming both less costly and easier to implement for the actor seeking to impose it.

Could the Japanese government order merchant vessels to continue operating in wartime to sustain imports of energy and other supplies? There are at least three reasons why this would be difficult.

First is the question of legal authority. Navigation orders under Article 26 of the Marine Transportation Act can be issued to Japanese vessels only in cases where transport capacity becomes insufficient resulting from disasters, accidents, or when public safety is compromised due to cases such as terrorism, political upheaval, or similar circumstances. They do not apply to contingencies defined under Japan's wartime legislation, such as an armed attack situation or a survival-threatening situation.[20]

Second is the issue of international charter-party contracts. Under CONWARTIME 2025, the standard clause developed by the Baltic and International Maritime Council (BIMCO) and widely used in international shipping, a master or shipowner may contractually refuse to enter an area where they reasonably judge a war risk to exist.[21] The clause also permits shipowners to comply with orders or directions issued by a government of the nation under whose flag the vessel sails, or other government to whose laws the owners are subject, or any other government of any state or territory acting with the power to compel compliance with their orders or directions. However, this provision merely protects the shipowner from liability for complying; it does not impose an obligation to obey such an order. In other words, even if the government were to issue a navigation order, a shipping company could still retain contractual grounds for refusing to sail. International practice therefore contains a structural possibility for a shipping company's contractual judgment to prevail over a government order.

Third is the issue of war-risk insurance. When Japanese non-life insurers underwrite war-risk insurance for ships, they transfer much of that risk to overseas reinsurance markets, including the Lloyd's market.[22] If the Joint War Committee (JWC), composed of underwriters from both the Lloyd's and London company markets, designates particular waters as a listed area of heightened risk, vessels operating there may be required to pay additional premiums. If conditions deteriorate rapidly, reinsurers may also terminate coverage at short notice. This could leave vessels operating in the area effectively uninsurable. Since many ships are required under financing agreements to maintain valid insurance coverage, the lapse of such insurance

[20] Regarding navigation orders, refer to the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), 3rd Joint Meeting of the International Maritime Transport Subcommittee and the 10th Maritime Innovation Subcommittee, "Reference Material 4: Secretariat Material (International Maritime Transport Subcommittee)," October 12, 2020, https://www.mlit.go.jp/maritime/content/001375719.pdf.

[21] "War Risks Clause for Time Chartering 2025 (CONWARTIME 2025)," BIMCO, https://www.bimco.org/contractual-affairs/bimco-clauses/current-clauses/war_risks_clause_for_time_charters_2025.

[22] "Nikkei Sompo, Chūtō de no senpaku hokenryō uwanose kakudai he: Iran jōsei mikiwame handan [Japanese Non-Life Insurers Set to Expand Middle East Marine Insurance Surcharges Amid Ongoing Iran Situation]," *Nihon Keizai Shimbun*, March 4, 2026, https://www.nikkei.com/article/DGXZQOUB03APS0T00C26A3000000/.

could also place shipowners in breach of their loan covenants.

During the Strait of Hormuz crisis from late February through March 2026, war-risk premiums reportedly increased fivefold within 48 hours of the U.S.-Israeli strikes on Iran, and there were cases in which existing cover was cancelled and then reoffered at substantially higher rates.[23] However, a survey published by the Lloyd's Market Association in March found that 88 percent of participants in the Lloyd's marine war- risk market remained willing to underwrite hull war risks, indicating that the insurance market itself had not ceased to function.[24]

A similar situation could nevertheless arise in waters surrounding Japan during a conflict. In particular, if fighting became prolonged or expanded geographically, premiums could continue rising beyond levels that shipowners or cargo interests are able to bear. Japan must also prepare for the possibility that repeated attacks on shipping could eventually exhaust the capacity of the private insurance market to absorb war risk.

4 Challenges in Cooperation with Allies and Like-Minded Countries

If Japan's domestic war-sustaining base is exposed to multiple risks, cooperation with allies and like-minded countries will be important for mitigating and dispersing those risks, including through the continued supply of equipment, missiles, and other materiel. In practice, however, multiple hurdles remain.

First, much of Japan's domestically produced defense equipment does not fully conform to NATO Standardization Agreements (STANAGs).[25] Even if European countries were to provide Japan with equipment and ammunition, therefore, there is no guarantee that such materiel could be rapidly brought into operational use. Even ammunition of the same caliber may not necessarily be safe or effective if detailed specifications and performance characteristics differ. Compatibility testing with Japanese-made howitzers and other systems would therefore be required before such ammunition could actually be employed. The same problem applies to missiles. Because sufficient verification has not yet been conducted, it remains unclear whether European-made air-defense missiles, if supplied to Japan, could be readily integrated with and operated from platforms such as JMSDF destroyers.

Second, there is little guarantee that Japan would be able to obtain additional equipment or missile support from the United States. As is widely recognized, the U.S. defense industrial base currently faces serious constraints, and the United States does not necessarily possess sufficient inventories or production capacity for the replacement missiles that the JSDF has assumed might be available through emergency transfers. The Tomahawk cruise

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[23] John Hatzadony, "The Insurance Weapon: How Commercial Risk Logic Became an Irregular Warfare Tool at Hormuz," *Small Wars Journal*, May 13, 2026, https://smallwarsjournal.com/2026/05/13/the-insurance-weapon/.

[24] Kiernan Green, "'The market is behaving as it should': Correcting the record on war risk cover in the gulf," *Insurance Business*, May 12, 2026, https://www.insurancebusinessmag.com/us/news/marine/the-market-is-behaving-as-it-should-correcting-the-record-on-war-risk-cover-in-the-gulf-574920.aspx.

[25] "'STANAG-tō sōbihin no sōgo un'yōsei kōjō' ni kakaru chōsa" [Study on Improving the Interoperability of Equipment through STANAGs and Related Standards], JGSDF Training Evaluation Research and Development Command, December 4, 2023, https://www.mod.go.jp/gsdf/eae/kaikei/eafin/R4koukoku/20231221-MEGS-0480-1.pdf.

missiles that Japan is acquiring, for example, were brought forward as an interim capability pending the deployment of domestically produced long-range missiles. Yet large U.S. expenditures of Tomahawks in the Middle East, combined with insufficient growth in production capacity, have made clear that replenishment for U.S. forces will be prioritized, resulting in significant delays in deliveries to Japan.[26] A similar prioritization would be highly likely in an East Asian contingency, creating the risk that the JSDF would not receive sufficient additional missiles.

The same applies to major equipment. Although the U.S. military maintains a certain number of tanks and combat aircraft in mothball storage, it has only around twenty surface combatants in reserve. Most are either heavily aged Ticonderoga-class guided-missile cruisers or Littoral Combat Ships that are not necessarily well suited to operations in waters surrounding Japan.[27] In any case, as with missile stocks, reactivated equipment would likely be used first to restore U.S. military strength and replace U.S. combat losses. Any transfer to the JSDF would therefore likely occur only after considerable delay.

Serious constraints also exist in transportation capacity. The U.S. Military Sealift Command has experienced a substantial decline in transport capacity because of an aging fleet and severe personnel shortages.[28] The number of U.S. Air Force strategic airlift aircraft has likewise fallen to nearly half its late-Cold War level.[29] There is therefore no guarantee that the United States could provide Japan with large-scale, sustained support on a scale comparable to that provided to Ukraine or Israel.

5 Required Measures

What measures are necessary to strengthen Japan's war-sustaining capacity? The report identifies five priorities.

1. Strengthening the Functional Capacity of the Defense Industry

The priority is to strengthen the defense industry's capacity both for emergency production surges and for rapid modification of existing systems. The latter will be addressed in the next chapter; this section therefore focuses on surge-production capacity.

To enable emergency production increases, Japan must expand manufacturing capacity in peacetime. This capacity should not be optimized solely for peacetime domestic demand. Instead, Japan needs to maintain a degree of excess production capacity in anticipation of wartime requirements. Because maintaining such excess capacity entails additional costs, part of that burden should be offset

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[26] Sōtarō Hata, "Beikoku, Tomahōku nōnyū okure o Nihon ni dentatsu: Saidai 2-nen, Iran de tairyō shōhi" [United States Informs Japan of Delays in Tomahawk Deliveries of Up to Two Years amid Heavy Use in Iran], Asahi Shimbun, May 24, 2026, https://www.asahi.com/articles/ASV5S15GYV5SUHBI00JM.html.

[27] U.S. Navy, "The Official Inventory of US Naval Ships and Service Craft," https://www.nvr.navy.mil/nvr/index.htm; U.S. Navy, "Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for Fiscal Year 2024," March 2023, https://www.govexec.com/media/navy_2024_shipbuilding_plan.pdf.

[28] Josh Luckenbaugh, "JUST IN: Military's Current Sealift, Airlift Strategy 'Suboptimal' for Conflict," *National Defense*, February 11, 2025, https://www.nationaldefensemagazine.org/articles/2025/2/11/militarys-current-sealift-airlift-strategy-suboptimal-for-conflict.

[29] Robert C. Owen, "It's Time to Invest: Enhancing Current and Future U.S. Air Force Airlift," Mitchell Institute for Aerospace Studies, December 2, 2025, https://www.mitchellaerospacepower.org/its-time-to-invest-enhancing-current-and-future-u-s-air-force-airlift/.

in peacetime by capturing overseas demand.

There are, however, limits to how much excess capacity can be sustained through export demand alone. For munitions, missiles, and drones in particular—systems likely to be consumed in large quantities during a conflict—Japan should therefore establish production facilities in advance on the assumption that wartime demand will surge. Such facilities would preferably be operated under a government-owned, contractor-operated (GOCO) model.

These production lines should also be automated and designed to minimize labor requirements wherever possible, so that shortages of personnel do not become a bottleneck to expanding production.[30]

2. Protecting Manufacturing Facilities

Measures to reduce the risks facing the defense industrial base and the critical infrastructure that supports it should be led by the government rather than left to individual companies and should combine both passive and active defense.

Passive defense measures would likely impose costs far beyond what individual companies could reasonably bear. Installing production equipment in underground facilities, for example, would be substantially more expensive than constructing conventional above-ground plants. If defense companies were required to absorb the costs of hardening themselves, those expenses would increase the cost of exporting or transferring Japanese defense equipment in peacetime and could ultimately weaken its international competitiveness. Reduced competitiveness, in turn, would make it more difficult to capture the overseas demand needed in peacetime to sustain excess production capacity. The costs of hardening should therefore, in principle, be borne by the government. The same logic applies to the critical infrastructure that supports the defense industrial base.

Japan must also strengthen its ability to restore facilities rapidly after they are attacked. Organizations responsible for recovery should coordinate closely with the JSDF so that they can operate safely while avoiding or responding to continuing airborne threats. A clear institutional framework will also be needed to determine who bears the costs of recovery. Requiring defense companies themselves to absorb such costs could seriously damage their financial position and, in some cases, prompt them to withdraw from the defense business altogether. To prevent such outcomes, the government should bear the costs of restoring damaged facilities. Israel and Ukraine, for example, provide government support for the recovery of defense companies whose facilities have been attacked.[31]

For active defense, Japan should designate defense industrial facilities as critical facilities requiring protection, while establishing clear

[30] The UK's 2025 Defence Industrial Strategy set out plans to establish a new reserve force composed of personnel with specialist expertise in areas such as advanced manufacturing and software engineering. It also announced plans to work with defense companies and related industries to establish a pipeline of skilled workers capable of supporting a rapid surge in defense production. UK Ministry of Defence, "Defence Industrial Strategy 2025: Making Defence an Engine for Growth," September 8, 2025, 75–76.

[31] Israel Tax Authority, "Compensation Fund," Government of Israel, https://www.gov.il/en/departments/topics/compensation_fund/govil-landing-page; Cabinet of Ministers of Ukraine, "Government Launches War Risk Compensation Mechanism for Business—Yuliia Svyrydenko," Government Portal of Ukraine, October 24, 2025, https://www.kmu.gov.ua/en/news/uriad-zapuskaie-mekhanizm-kompensatsii-voiennykh-ryzykiv-dlia-biznesu-iuliia-svyrydenko.

priorities among them. Critical infrastructure that directly supports defense production should likewise receive priority protection. Japan must also prepare for the possibility that guerrillas or special operations forces operating inside the country could attack such facilities using small drones or other means. Particularly important elements of the defense industrial base should therefore be provided with active defenses against a range of airborne threats.

Most of these protective capabilities need not be permanently deployed in peacetime, as doing so would impose significant costs. In wartime, however, they would need to be deployed rapidly. Japan should therefore establish a posture that can expand smoothly from peacetime to wartime, encompassing not only the necessary equipment but also the personnel required to operate it. From this perspective, the number of SDF reservists and ready reservists should be substantially increased.

3. Securing the Necessary Workforce

A central challenge is how to recruit and retain employees willing to continue working at factories that may come under attack and, in some cases, to conduct repairs near frontline areas. As noted above, there is currently no legal basis for compelling civilian employees to perform hazardous duties. Japan therefore has little choice but to improve workplace safety through measures such as hardening production facilities and constructing shelters, while also establishing a broader support framework that includes hazard pay, compensation schemes, assistance for employees' families, and insurance coverage that remains valid during wartime.

If Japan were to revise its legal framework so that work orders could also be issued to defense-industry personnel in areas where the JSDF is operating, the system would need to be designed on a fundamentally different basis from existing arrangements. Current work-order provisions were conceived primarily for medical, civil-engineering, and transportation personnel operating in relatively safe areas where the JSDF itself is not deployed. Defense-industry personnel, by contrast, could be required to work in environments directly exposed to attack. Any system applied to them should therefore provide substantially greater protection and support than existing work-order arrangements, drawing on the allowances, compensation, and forms of social recognition provided to JSDF personnel.[32]

Even then, Japan may still be unable to secure sufficient personnel in wartime. At the same time,

[32] In the United States, allowances and compensation schemes are in place for civilians working overseas under government contracts. These include danger pay allowances based on the standards applicable to federal government employees, with salary supplements of 15, 25, or 35 percent depending on the level of risk. Compensation is primarily provided through two statutory frameworks. The first is the Defense Base Act (DBA), enacted in 1941, which establishes a workers' compensation system for civilians employed overseas under U.S. government contracts. The second is the War Hazards Compensation Act (WHCA), enacted in 1942. The WHCA was introduced to address concerns that requiring private insurers to bear the full cost of compensation for war-related injuries and deaths could undermine their financial stability. Under this framework, DBA insurers initially pay compensation for injuries or deaths directly attributable to war-related hazards, after which the U.S. government reimburses them for the associated costs. For information on allowances, see "Danger Pay," Office of Human Resources Management, https://www.commerce.gov/hr/practitioners/compensation-policies/general-pay/additional-pay-in-overseas-combat-zones. For information on compensation, see Division of Longshore and Harbor Workers' Compensation, "Defense Base Act," U.S. Department of Labor, https://www.dol.gov/agencies/owcp/dlhwc/lsdba; Office of Workers' Compensation Programs, "War Hazards Compensation Act Procedural Manual," U.S. Department of Labor, https://www.dol.gov/sites/dolgov/files/OWCP/dfec/regs/compliance/DFECfolio/DFECProcedureManual-WHCA(final).pdf.

expecting every defense-industry employee in peacetime to accept the possibility of working under such conditions could make the sector less attractive in the labor market. Japan should therefore make active use of retired JSDF personnel to fill potential workforce gaps. Given their professional and organizational backgrounds, former JSDF personnel may be more prepared to accept wartime working conditions.

Institutionally establishing employment in the defense industry as a viable second career for retiring JSDF personnel could also help alleviate recruitment challenges within the JSDF itself. At the same time, former JSDF personnel require additional education and technical training to transition effectively into manufacturing and maintenance roles. The government should therefore examine how the costs of such education and retraining should be shared with defense companies, with the government taking the lead in establishing the necessary framework.

4. Defending Sea Lines of Communication

Several measures will be required to defend Japan's SLOCs and ensure that they continue to function.

First, Japan will need wide-area surveillance and maritime domain awareness conducted in cooperation with allies and like-minded countries. One way to enable commercial shipping to continue operating when risks along key SLOCs increase is convoy escort by naval vessels. In this regard, the JMSDF has experience in escorting civilian ships against piracy at the Gulf of Aden off Somalia. An example of a commercial shipping escort is Operation Aspides, which is the operation conducted by the European Union in the Red Sea.

In a high-end contingency around Japan, however, the scale and complexity of expected attacks would make convoy escort a substantially different undertaking. If submarine attack is anticipated, for example, modern sonar systems are generally considered to have detection ranges of only around 25 kilometers, implying that escort vessels may need to be positioned at intervals of roughly 10 to 20 kilometers.[33] Given the use of anti-ship missiles and drones against commercial vessels in the Red Sea and the Strait of Hormuz, ships with strong air-defense capabilities would also be required. Convoy escort would therefore demand many naval vessels, which makes it challenging for Japan alone to sustain such operations over long distances and for extended periods.

Japan should therefore complement direct convoy escort with maritime domain awareness designed to help shipping avoid dangerous waters. This would be more effective if conducted not by Japan alone, but as part of a regional effort involving countries such as the United States, Australia, New Zealand, and South Korea.

Second, Japan should establish an information-sharing framework that allows commercial vessels to reroute around areas of active combat and other high-risk waters. Since 2023, attacks on shipping by the Houthis in Yemen have led many vessels to avoid the Red Sea and instead sail around the Cape of Good Hope. In a contingency around Japan, shipping companies would likewise be likely to avoid areas they judged to be excessively dangerous.

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[33] Michael E. O'Hanlon, "Can China Take Taiwan? No one really knows," Brookings Institution, August 5, 2022, https://www.brookings.edu/articles/can-china-take-taiwan-why-no-one-really-knows/.

The government and the JSDF would therefore need to share information rapidly with private-sector shipping companies. Mutual exchange of information on dangerous areas and navigation conditions could help reduce operational risks. NATO already has a framework for naval cooperation with merchant shipping known as Naval Cooperation and Guidance for Shipping (NCAGS).[34] Japan should draw on such models in developing closer cooperation between the JMSDF and commercial shipping companies.

Third, the government should consider providing war-risk insurance or acting as a reinsurer.[35] In the United States, the War Risk Insurance Act was enacted in 1914 during the First World War, leading to the establishment of a War Risk Insurance Bureau within the Treasury Department. Currently, Chapter 539 of Title 46 of the U.S. Code, which carries forward provisions of the Merchant Marine Act of 1936, authorizes the Secretary of Transportation to provide war-risk insurance or reinsurance for merchant vessels and cargo when adequate coverage is unavailable from the private market on reasonable terms.[36] The United Kingdom likewise introduced a government war-risk insurance scheme during the First World War, and legislation remains in force today through the Marine and Aviation Insurance (War Risks) Act 1952.[37]

Although Japan currently has no equivalent system for war-risk insurance, it already has experience with government-backed reinsurance. Earthquake insurance provides one example: under the Act on Earthquake Insurance, the government reinsures policies underwritten by private non-life insurers through a public-private framework. The underlying principle—that the government can use reinsurance to supplement private-market capacity when risks exceed what the market can bear—could also be applied to war-risk insurance. Japan should therefore move quickly to establish an appropriate legal framework, drawing on existing domestic and foreign models.

Fourth, in the longer term, introducing partial unmanned navigation could help reduce risks to crews and make it easier to secure the cooperation of shipping companies. The Nippon Foundation has been advancing the MEGURI2040 autonomous shipping project. In January 2022, the project successfully conducted what it described as the world's first demonstration of autonomous operation by a commercial container ship,[38] and in January

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[34] The NATO Shipping Centre, "Naval Cooperation and Guidance for Shipping (NCAGS)"; Luis Perales Garat, "What the Heck is NCAGS?" Proceedings, United States Naval Institute, March 2017, https://www.usni.org/magazines/proceedings/2017/march/what-heck-ncags; Yukio Okawa, "NCAGS to wa nanika [What is NCAGS?]," JMSDF Command and Staff College, October 9, 2025 ; Yukio Okawa, "Kōkai kiki to Horumuzu kaikyō jōsei - Gendai no kaijō kōtsū hogo no tokuchō to shisa - [The Red Sea Crisis and the Situation in the Strait of Hormuz: Characteristics and Implications of Contemporary Maritime Traffic Protection]," March 30, 2026, JMSDF Command and Staff College.

[35] Proposals regarding government reinsurance were also made within the Liberal Democratic Party amid the 2026 Strait of Hormuz crisis. "Jimintō 'Ene shokuryō yusō ni seifu saihoken wo' Chūtō jōsei kinpaku fumae teigen'an [LDP Calls for Government Reinsurance on Energy and Food Shipments]," *Nihon Keizai Shimbun*, March 11, 2026.

[36] "46 U.S. Code Subtitle V Chapter 539 Part C - WAR RISK INSURANCE," Legal Information Institute, Cornell Law School, https://www.law.cornell.edu/uscode/text/46/subtitle-V/part-C/chapter-539.

[37] "Marine and Aviation Insurance (War Risk) Act 1952," legislation.gov.uk, https://www.legislation.gov.uk/ukpga/Geo6and1Eliz2/15-16/57/enacted.

[38] "World's First Successful Sea Trial of Autonomous Sailing on a Commercial Container Ship Voyage," Mitsui O.S.K. Lines, Ltd., January 25, 2022.

2026 it achieved commercial autonomous operation by a domestic cargo vessel.[39] The project aims for approximately half of Japan's domestic shipping fleet to operate autonomously by 2040.

Significant barriers nevertheless remain, particularly for the transport of hazardous cargoes such as crude oil and liquefied natural gas, which require extremely stringent safety-management systems. Even so, if autonomous-navigation technology continues to advance and is incorporated into some oceangoing vessels, it could eventually provide a wartime option. Crews could, for example, disembark before a vessel enters a combat zone or other high-risk area, after which the ship could proceed autonomously and take crews back aboard closer to Japan for port entry and berthing.

If such a capability became practical, it could help sustain Japan's war effort while also enabling other missions, such as delivering support to Taiwan through a maritime blockade.

5. Cooperation with Allies and Like-Minded Countries

To deepen cooperation with allies and like-minded countries, Japan must first ensure interoperability between domestically produced and foreign-made equipment. For example, European or South Korean-made systems should be integrated into JSDF-specific networks and other systems in peacetime so that their operational compatibility can be tested in advance. Attempting to undertake such integration only after a contingency begins could consume valuable time because of the need for compatibility testing and system-integration work. If supplies of equipment and ammunition from allies and like-minded countries are to contribute meaningfully to Japan's war-sustaining capacity, interoperability must therefore be improved through peacetime testing and training.

Institutional reform will also be necessary. Existing Acquisition and Cross-Servicing Agreements (ACSAs) are essentially designed to facilitate the provision of items and services such as spare parts, ammunition, food, fuel, and logistics support. They do not currently cover the transfer of missiles, even though missiles, like ammunition, are consumable items in wartime.[40]

Japan should also make greater use of the strategic depth available in allied and partner countries. If continued production of Japanese equipment becomes difficult within Japan, arrangements should be established in advance to enable local production in safer overseas locations less vulnerable to attack. For the same reason, Japan should consider storing retired equipment in mothball status and reactivating it overseas as well as domestically.[41] Establishing production and maintenance infrastructure at overseas locations with greater strategic depth and survivability would not only support the rotational deployments

[39] "Nippon Zaidan nado ga jidō unkō no kontena sen 'Level 4', shōyō kamotsu de sekai hatsu [Nippon Foundation and Partners Launch World's First 'Level 4' Autonomous Container Ship for Commercial Cargo]," *Nihon Keizai Shimbun*, January 30, 2026.

[40] Akinori Ishihara, "ACSA no hensen: Nichibei nikokukan kara kakkokukan e" [The Evolution of ACSA: From a U.S.–Japan Bilateral Framework to Multilateral Arrangements], *Kaikankō Senryaku Kenkyū* [JMSDF Command and Staff College Review] 7, no. 2 (January 2018): 95–106.

[41] One reason cited for South Korean defense companies establishing local production facilities overseas is to create greater strategic depth. See, Gordon Arthur, "How South Korea's defense industry transformed itself into a global player," *Breaking Defense*, November 6, 2023, https://breakingdefense.com/2023/11/how-south-koreas-defense-industry-transformed-itself-into-a-global-player/.

discussed in Chapter 2 but also contribute to the sustained wartime operation of Japan's stand-off defense capabilities.

The data infrastructure supporting the defense industry should likewise be geographically dispersed. Japan should consider, for example, locating defense-industry-related data centers in countries with greater strategic depth, such as Australia. During the war in Ukraine, both Ukraine and Russia have conducted physical attacks against each other's data centers, and similar attacks have occurred in the Iran war. Japan must avoid a situation in which the destruction of a single data center results in the simultaneous loss of critical information. Physical and geographically distributed backup systems should therefore be established for defense-related data.

Strengthening Japan's war-sustaining foundation involves far more than simply increasing ammunition stockpiles. From the perspective of self-reliance, it requires protecting the defense industry, its workforce, and the critical infrastructure on which it depends. From the perspective of cooperation with allies and like-minded countries, it requires protecting SLOCs, making use of the geographic depth available in friendly countries, and preparing in peacetime to bring foreign-made equipment rapidly into operational service. Only through such a comprehensive set of measures can Japan secure the war-sustaining capacity required to make sustained denial viable.

Chapter 6

Research and Development for Sustaining New Ways of Warfare

Hirohito Ogi

As drones,[1] AI, and other new forms of warfare have become increasingly prominent in the wars in Ukraine and between the United States and Iran, they have come to be recognized as indispensable for gaining asymmetric advantages and sustaining prolonged wars of attrition. At the first meeting of the government's Council of Experts on Security from the Perspective of Comprehensive National Power, convened in April 2026 to support the formulation of the new Three Strategic Documents, Prime Minister Sanae Takaichi stated that Japan must "draw lessons from Russia's invasion of Ukraine and developments in the Middle East, adapt to new forms of warfare, and prepare for prolonged conflict. Another challenge is to renew the defense industrial base by harnessing advanced technologies and strengthening defense-equipment supply chains so that they can withstand wartime conditions."[2] At a meeting of the Defense Industry Working Group under the Japan Growth Strategy Council, also held in April 2026, the MOD and the Ministry of Economy, Trade and Industry (METI) likewise emphasized the need to establish "a domestic production base capable of rapid mass production."[3] In May of the same year, Defense Minister Shinjiro Koizumi visited a domestic drone manufacturer and again underscored the need to develop an indigenous production base for defense drones.[4]

Because new ways of warfare employing drones and related technologies are closely tied to contemporary wars of attrition and prolonged conflict, the sustained denial strategy proposed in this report cannot be viable unless Japan is able to produce at least a significant share of these capabilities domestically. Yet Japan continues to lag behind major powers such as the United States and China in the introduction of defense drones and AI-enabled defense systems. How, then, can Japan establish the industrial base needed to support new forms of warfare?

In October 2025, the authors focused on the emerging problem of "excess defense demand," identified through interviews with major defense companies and other research, and presented a range of policy recommendations aimed at expanding Japan's defense production base. Those recommendations remain relevant. However, because the analysis centered primarily on interviews with industry, it did not fully capture the expectations and requirements of the JSDF's development and operational communities regarding new capabilities.

This chapter therefore builds on those earlier recommendations while focusing primarily on the development and production of drones and the AI systems required to operate them. It presents proposals for establishing an innovation ecosystem

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1 In this chapter, the terms "drone" and "unmanned aircraft" are used interchangeably.

2 Cabinet Secretariat, "Sōgōteki na Kokuryoku kara Anzen Hoshō o Kangaeru Yūshikisha Kaigi (Dai 1-kai) Giji Yōshi" [Summary of Proceedings of the Advisory Panel on Considering National Security from the Perspective of Comprehensive National Power (First Meeting)], April 27, 2026 (date of meeting), https://www.cas.go.jp/jp/seisaku/boueiryoku_kaigi/sogoteki_dai1/gijiyoushi.pdf.

3 Japan Ministry of Economy, Trade and Industry and Japan Ministry of Defense, "Nihon Seichō Senryaku Kaigi Dai 2-kai Bōei Sangyō WG Jimukyoku Setsumei Shiryō" [Secretariat Briefing Materials for the Second Defense Industry Working Group Meeting of the Japan Growth Strategy Council], April 16, 2026, https://www.mod.go.jp/j/policy/agenda/meeting/defense_industry_wg/pdf/siryou02_01.pdf.

4 Japan Ministry of Defense, "Bōei Daijin Rinji Kisha Kaiken" [Press Conference by the Minister of Defense], May 20, 2026, https://www.mod.go.jp/j/press/kisha/2026/0520a_r.html.

capable of supporting new forms of warfare.[5]

1 Government Efforts to Facilitate Startup Entry

It would not be an exaggeration to say that defense drones are the area in which the government is placing the greatest emphasis as a new segment of the defense industry. One major reason is that Japan still lacks an established domestic base capable of developing and producing defense drones. In addition, unlike traditional large platforms, drones have been used as consumable items in recent conflicts, with one-way attack or loitering munitions in particular employed in much the same way as ammunition. Japan cannot ensure sufficient war-sustaining capacity if it depends on overseas suppliers, even allies such as the United States, for such expendable systems. In a contingency involving Japan, the U.S. military would also likely be involved in some form, creating competition for the same supplies.

The war in Ukraine has also demonstrated an accelerating pace of innovation in both operational methods and hardware, with products reportedly being improved within a matter of weeks based on feedback from the front.[6] Rather than relying solely on centralized procurement, frontline units at the brigade level and below have interacted directly with defense startups and have been given authority over requirements for product modification, procurement, and related decisions.[7] Maintaining a domestic production base is essential if Japan is to achieve similarly flexible and rapid capability improvements.

There is also the issue of supply-chain dependence. Chinese companies are reportedly dominant suppliers of components used in general-purpose drones, and the Defense Industry Working Group discussed above has likewise expressed concern that "many critical components depend on supply from specific countries."[8]

In response, the government has used subsidies under the Defense Production Base Enhancement Act, enacted in 2023, to strengthen supply-chain resilience, while also introducing "fast-track procurement" mechanisms intended to encourage active participation by startups and other new entrants.[9] These mechanisms include a MOD version of the Small/Startup Business Innovation Research (SBIR) program, under which the MOD solicits research themes and contracts simultaneously with multiple companies to conduct proof-of-concept work and other trials; a "Startup Technology Proposal Evaluation Method," which permits discretionary contracts with startups possessing promising technologies; and "agile procurement," in which companies and JSDF units jointly conduct research, development, testing, and related

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[5] Hirohito Ogi and Rintaro Inoue, *From Decline to Surge: The Defense Industry in the Era of Excess Demand* (Institute of Geoeconomics, October 2025), https://instituteofgeoeconomics.org/en/research/2025102402/.

[6] Author's interview with a Ukrainian government official at the DSEI 2025 exhibition venue, May 22, 2025.

[7] Ibid.

[8] Japan Ministry of Economy, Trade and Industry and Japan Ministry of Defense, "Secretariat Briefing Materials for the Second Defense Industry Working Group Meeting of the Japan Growth Strategy Council."

[9] Ibid.

activities.[10]

Startups have also faced difficulties raising capital from venture capital funds because financial institutions investing in those funds sometimes imposed restrictions on investment in defense-related businesses. To ease such constraints, restrictions on investment in weapons-related businesses by the government-affiliated Development Bank of Japan (DBJ) have been lifted.[11]

These government initiatives have gradually created a stronger foundation for startups and other new entrants to develop and propose new defense products. Even so, it would be premature to conclude that Japan now has the institutional conditions needed to build an industrial base capable of supporting new forms of warfare. Regulatory reform, in particular, will be critical to the development and manufacture of drones.

2 Lessons from the JSDF's History of Drone Development

Although it is now rarely discussed, there was a period after the end of the Cold War when the JSDF and the MOD's Technical Research and Development Institute (TRDI, the predecessor of today's ATLA) pursued the indigenous development of drones. The JGSDF introduced rotary-wing unmanned aircraft for reconnaissance and artillery observation, including the Flying Forward Observation System (FFOS) and its successor, the Flying Forward Reconnaissance System (FFRS). The JASDF, meanwhile, worked with TRDI on the R&D of the Tactical Compact UAV (TACOM) and its successor, the Unmanned Aircraft Research System. Although these systems progressed as far as research prototypes or completion of development, the JGSDF's FFOS/FFRS never entered full-scale operational use, while the JASDF's Unmanned Aircraft Research System did not proceed to mass production.

Based on publicly available information and anonymous interviews conducted by the authors with individuals involved at the time, the direct reasons were as follows.

First, the JGSDF's FFOS was equipped with a safety system designed to make the aircraft land automatically if it deviated from its planned route; GPS had not yet been incorporated at the time.[12] However, this safety system itself sometimes interfered with takeoff and flight. The precise cause remains unclear, but possible explanations include overly conservative sensor settings intended to prevent accidents or insufficient systems integration between Fuji Heavy Industries, now SUBARU, which manufactured the aircraft, and the component supplier responsible for the safety system. Although the successor FFRS incorporated numerous technical improvements, expectations among JGSDF officers remained low because of their experience with the FFOS.

For this reason, following the 2011 Great East Japan Earthquake and the Fukushima Daiichi nuclear accident, the JGSDF considered deploying

[10] Acquisition, Technology & Logistics Agency, "Sutātoappu no Katsuyō ni Mukete" [Toward the Utilization of Startups], April 2026, materials for the startup event "Defense Innovation Meeting (DIM)," https://www.mod.go.jp/atla/defense_innovation_meeting/pdf/r080410_startup.pdf.

[11] Japan Ministry of Defense, "Bōei Daijin Kisha Kaiken" [Press Conference by the Minister of Defense], May 19, 2026, https://www.mod.go.jp/j/press/kisha/2026/0519a.html.

[12] Author's interview with a former senior government official, May 12, 2026.

the FFOS/FFRS to conduct reconnaissance around the nuclear plant, but ultimately decided against doing so in order to avoid unforeseen problems.[13] The experience subsequently contributed to the JGSDF's decision to adopt the U.S.-made ScanEagle fixed-wing reconnaissance UAV produced by Insitu.

Second, the JASDF and TRDI succeeded, following research on TACOM, in developing the Unmanned Aircraft Research System, which could be carried by an F-15 and launched when required. By the time development was completed in 2011, however, Japan's Civil Aeronautics Act contained no provisions governing unmanned aircraft, making routine operation and training extremely difficult from the standpoint of air traffic control and related requirements. These constraints contributed to a decision by the JASDF's operational side not to adopt the system, preventing it from proceeding to mass production.[14]

Although aircraft operated by the JSDF are exempt from many regulations applicable to civilian aircraft under Article 107 of the JSDF Act, coordination with the MLIT over air traffic control was still required for safety when operating in airspace used by civilian aircraft. Moreover, during the development stage, the aircraft were operated by private companies, making it impossible to rely on those exemptions. Test flights were conducted in JASDF training airspace over the Sea of Japan and around Iwo To, but the coordination process was complex, and flights outside those two areas were effectively impossible under the Civil Aeronautics Act.[15] Coordination with the Ministry of Internal Affairs and Communications (MIC) over access to the radio-frequency spectrum required for UAV operations also proceeded slowly.

Third, and more fundamentally, before drones demonstrated major battlefield effects in the 2020 Nagorno-Karabakh war and the war in Ukraine beginning in 2022, interest in drones was low across all three services of the JSDF. There was also considerable concern that greater emphasis on drone development could interfere with the operation of manned platforms or create pressure to reduce the number of manned aircraft or overall JSDF personnel.[16] Concrete operational concepts were also lacking.[17]

Fourth, defense R&D budgets were generally insufficient. Expensive manned platforms continued to receive priority in both development and procurement, preventing the accumulation of the development experience needed to improve Japan's technological capabilities.[18]

Fifth, from the industry side, drones were not regarded as attritable systems in the post-Cold War peacetime environment, when the importance of preparing for attritional warfare and sustaining prolonged operations had not yet become a major concern. As a result, even if a drone were developed, there was little expectation of economies of scale

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13 Ibid.; author's interview with a former government official, April 17, 2026.

14 Author's interview with a former government official, April 9, 2026.

15 Ibid.

16 Ibid.; author's interview with a former senior government official, April 27, 2026; author's interview with a senior government official, May 19, 2026.

17 Ibid.

18 Author's interview with a former government official, April 13, 2026; author's interview with a former senior government official, May 12, 2026.

from mass production or of significant contributions to revenue. Major defense primes therefore showed limited interest in drone development, leading the JGSDF and JASDF to approach Fuji Heavy Industries, which held a relatively small share of the defense market. The company itself, however, had little incentive to devote substantial resources to a business with poor profitability.[19]

There was one exception. Based on its experience operating ScanEagle, the JGSDF considered developing a larger UAV for wide-area reconnaissance. In anticipation of this possibility, one major defense prime participated as an observer in operational testing and related activities involving the ScanEagle, which were supported by Insitu and its Japanese distributor. However, when the JGSDF's plan for a larger UAV gradually lost momentum because of budget constraints and other factors, that defense prime's interest also faded.[20]

Many of these problems are now beginning to be resolved. First, interest in drones has grown among JSDF operators, and as the need to strengthen Japan's defense capabilities has become more widely accepted, concerns that drones might lead to reductions in authorized personnel have diminished. On the contrary, as demographic decline and a worsening recruitment environment become long-term structural trends, drones are increasingly indispensable for making the most effective use of limited personnel.

Second, the problems of insufficient R&D funding and weak profitability on the industry side are likely to ease as overall defense spending rises, the government places greater emphasis on drone development, and mass production becomes more viable as drones are increasingly treated as attritable systems.

Third, system-integration capabilities cannot be improved overnight. However, if development programs receive sustained funding and engineers are able to accumulate experience over time, these capabilities can gradually improve.

3 How to Make Regulatory Reform Effective

One problem that remains unresolved, however, is regulation. In particular, rules under the Civil Aeronautics Act could become a major constraint if Japan seeks to develop defense drones domestically. Under the Act, defense unmanned systems would fall either under the category of "unmanned aircraft"—what are commonly referred to as drones—or, in the case of larger and more capable systems, "remotely piloted aircraft." When private companies conduct test flights during development, authorization from the Minister of Land, Infrastructure, Transport and Tourism would likely be required.

The underlying purpose of the Civil Aeronautics Act, however, is to ensure "the safety of aircraft navigation" and, in the case of unmanned aircraft, "the safety of flight." This can create tension when dealing with attack drones and one-way attack systems designed on the assumption that the airframe itself may be expended or deliberately flown into a target, making authorization difficult in some circumstances.

If so, established defense primes developing

[19] Ibid.

[20] Author's interview with a former government official, April 17, 2026.

systems under contract with ATLA and in close coordination with the individual services may still be able to proceed. For startups that have not previously entered the defense sector, however, conducting flight tests of attack drones on their own would be extremely difficult. It may be possible to test such systems with inert payloads rather than explosives, but if the JSDF is ultimately to introduce them, operational testing with actual payloads would still be required at some stage. Such testing would also trigger procedures under the Explosives Control Act.

Under these conditions, even if startups gain easier access to financing and procurement procedures are streamlined, indigenous development of defense drones will remain difficult unless regulatory reform also addresses the testing phase.

Constraints under the Radio Act pose another challenge. Reconnaissance drones and similar systems must often conduct an uplink for flight control while simultaneously receiving positioning data, target information, imagery, and video over limited spectrum. Defense drones may also incorporate frequency-hopping functions to operate in the presence of electronic jamming. These requirements can create the risk that separate links interfere with one another to the point that flight control becomes impossible.[21]

Resolving this problem would require allocating frequency bands commonly used internationally for drone operations. In practice, however, this is difficult because those bands are also used for satellite communications, wireless LANs, and other applications.

At the same time, simply calling for across-the-board deregulation would be counterproductive. The development and operation of defense drones must remain compatible with the safety of civilian aviation, while finite radio-frequency spectrum must accommodate multiple users and purposes. What is needed, therefore, is not blanket deregulation, but narrowly tailored exemptions defined by location and time.

One option would be to designate coastal areas where air traffic and spectrum usage are relatively limited and allow startups and other private companies, under MOD supervision and support, to conduct the tests needed for drone development. Dedicated test ranges for development, operation, and training would also be essential. Japan should identify suitable locations where regulatory exemptions could be applied and establish new test facilities accordingly.

Another option would be to provide opportunities for flight testing at sea using JMSDF vessels or chartered commercial ships. Japan could also make use of military airfields and test facilities in allied and like-minded countries such as Australia, allowing companies to conduct full-scale flight testing overseas.

Such arrangements, however, would be costly once travel expenses and the cost of transporting test equipment are taken into account, making them unrealistic for startups and other small and medium-sized companies to finance on their own. The government should therefore bear much of the cost of testing, while considering the expected cost-effectiveness of the systems concerned.

More broadly, greater use of overseas test facilities could be valuable not only for drones,

[21] Author's interview with a former government official, April 17, 2026.

but also for future systems that emit high levels of directed energy or electromagnetic radiation.

4 Reforming JSDF Operations and Procurement

Promoting the domestic development and production of drones will require more than the regulatory reforms discussed above. It will also require changes on the demand side, particularly in how the JSDF procures and operates such systems.

The performance of defense drones and the ways in which they are employed are evolving extremely rapidly. A system that is state of the art today could be entirely obsolete within a few years. Anticipating this problem, some in Europe, where defense budgets are relatively limited, have expressed caution about procuring large quantities of drones currently in production.[22] One proposed approach is to assemble drones up to the level of their major components but store them without rapidly evolving elements such as sensors and edge AI, which could then be added later. This would require close coordination between government and industry over more flexible approaches to production and procurement.[23]

Such an intermediate approach, however, could create risks and disadvantages for both operators and defense companies. For industry, low-cost drones contribute little to revenue unless they are continuously produced in large quantities, while storing partially completed systems would generate additional costs. For operators, meanwhile, innovation leading to improved performance is unlikely to occur unless drones are actually used, and forces cannot build operational proficiency without employing them routinely in training.

Japan should therefore recognize the rapid pace at which current drones become obsolete while nevertheless procuring them regularly and in large quantities, much as it does artillery ammunition, and allowing operators to consume them through day-to-day education and training. Companies will not devote substantial resources to businesses that generate little revenue, and systems that are not used will not generate innovation. Such an approach would also increase production turnover for high-performance commercial components used in drones, helping stimulate the broader industrial ecosystem surrounding the defense sector, including component suppliers.

At the same time, Japan must avoid repeating the experience of the JASDF's Unmanned Aircraft Research System, in which industry and the development side—the relevant JSDF development organizations and ATLA—invested in a system that the operational side ultimately chose not to adopt. Companies, developers, and operators should therefore all participate as stakeholders from the R&D stage onward. A cyclical, agile development process is essential, allowing operational requirements to be incorporated rapidly through testing, training, and repeated feedback.

Budgetary arrangements will also be necessary to ensure that companies themselves do not have to bear the costs of such rapid capability improvements. Contracts should be flexible enough to cover the costs of frequent, relatively minor

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[22] Author's interview with a senior European military officer, March 26, 2026; author's interview with a European security researcher, March 24, 2026.

[23] Ibid.

changes in specifications.

Moreover, encouraging companies to develop advanced drones and AI will require more than government bridge funding until procurement contracts begin generating revenue—so-called anchor tenancy—and streamlined defense procurement procedures. Japan must also reconsider how prices are calculated within the defense procurement system.

In Japanese defense procurement, products for which no market price exists in the commercial sector are generally priced by adding a certain level of profit and other allowances to costs calculated by ATLA based on estimates submitted by companies. Since FY2023, the previous system of applying a standard profit margin of roughly 7–8 percent has been revised, allowing differentiated profit margins linked to annual evaluations of individual companies. This reform, however, concerns profit margins; it does not fundamentally change the underlying cost-calculation system.

This point is evident from the limited enthusiasm defense companies showed toward drone development for the JSDF after the Cold War. Products with low production costs also generate relatively small profits under the existing pricing system, giving companies little incentive to undertake anticipatory R&D or capital investment on their own initiative.

The policy recommendations presented in the authors' October 2025 report, *From Decline to Surge: The Defense Industry in the Era of Excess Demand*, therefore remain relevant. These include government subsidies for expanding production capacity, policy-based financing, and mechanisms that allow higher-than-normal profit margins to be applied to R&D activities.

At the same time, additional measures are now needed to change the underlying structure of cost calculation itself. In the development of AI-enabled software, including operating systems, for example, there are no material costs of the kind associated with hardware production; the principal costs are the labor costs of engineers and designers. Yet if pricing continues to apply standardized labor rates and hours worked, the resulting price may bear little relationship to the actual performance or value of the product. An engineer capable of producing an innovative design in a short period of time may in fact incur lower labor and design costs than an average engineer who requires substantially longer to produce a less capable design. A uniform pricing system of this kind can significantly weaken incentives for innovation.

Detailed institutional reform is therefore essential, including much greater differentiation in labor rates. Because cost-based pricing ultimately relies on estimates submitted by companies, such reform would also require companies themselves to introduce much greater variation in engineers' compensation according to their capabilities.

Japan's current defense procurement system thus faces a basic inconsistency: policymakers emphasize the importance of rapidly developing AI and AI-enabled drones domestically, yet the detailed institutional arrangements needed to create sufficient incentives for such development remain underdeveloped. It is precisely these implementation-level details that ultimately determine whether meaningful change occurs.

The recommendations presented in this chapter for the domestic development of drones and AI are not intended simply to support and encourage startups. Viewed against the post-Cold War history of

defense R&D in the JSDF, one of Japan's enduring weaknesses has been the chronic shortage of development and testing opportunities, combined with the absence of institutional mechanisms that provide sufficient incentives to both the JSDF and defense companies.

Building an effective innovation ecosystem therefore requires more than simply importing new approaches being pursued in the United States, Europe, or elsewhere. Japan must also examine its own historical experience and identify, from a structural perspective, the persistent problems that have repeatedly constrained defense innovation.

Chapter 7

Conclusion and Policy Recommendations

Hirohito Ogi, Kuniharu Kakihara, Rintaro Inoue, Kota Umeda, and Yuki Goto

1 Summary

It has now been four years since the Japanese government began its fundamental reinforcement of defense capabilities under the Three Strategic Documents adopted in December 2022. The 2022 documents marked a major turning point in Japan's defense policy, including the introduction of counterstrike capabilities and a substantial increase in defense spending.

As this report has shown, however, a significant gap remains between the appropriate but ambitious objective set out in the 2022 documents—"to disrupt and defeat invasion much earlier and at places further afield"—and the concrete capabilities required to achieve it. This gap encompasses the JSDF's force posture, the doctrine needed to support it, the broader social and industrial foundations on which it depends, and the R&D system for defense equipment.

In addition to these unresolved challenges, the strategic environment surrounding Japan—the very environment on which the 2022 documents were based—has changed substantially since they were formulated. China has continued to expand its conventional military capabilities at a rapid pace. At the same time, since the beginning of the second Trump administration, the United States has made little progress in concentrating resources on what it identifies as the priority task of deterring China. Instead, unsustainable military interventions in the Middle East and the Western Hemisphere, together with growing friction with European countries, have increasingly eroded U.S. deterrence in terms of both capability and political will. Meanwhile, there remains no clear prospect of an end to Russia's invasion of Ukraine, nor is there an evident path toward compromise in the conflicts in the Middle East. The combined uncertainty generated by these developments is increasingly undermining the assumptions on which Japan's defense strategy has long depended.

Under these conditions, regional stability and Japan's security cannot be ensured simply by extending traditional concepts of deterrence and existing approaches to force development. In particular, as the military threats posed by revisionist states such as China and uncertainty surrounding the United States increase simultaneously, Japan must strengthen the autonomy of its own defense capabilities in order both to improve its capacity to repel aggression and to encourage greater U.S. involvement.

At the core of this approach should be an asymmetric and sustainable denial capability able to continue defensive operations under enemy threat. By exploiting complex geography—including islands, underground facilities, and the undersea domain—and combining long-range missiles, cost-effective air defense, unmanned assets, distributed forces, and passive defense, such a denial posture could create a temporal buffer against aggression. By imposing attrition on an invading force while buying time, it could also serve as a trigger for deeper U.S. involvement.

At the same time, stand-off airpower operated jointly with allies from overseas operational bases that provide strategic depth should play a complementary role. By drawing the United States more deeply into the conflict while exploiting its own survivability and mobility, such airpower could help Japan retain the initiative in defensive operations.

For these concepts to be more than plans on paper, however, Japan must also strengthen

the resilience and sustainability of its defense industrial base and critical infrastructure; establish arrangements for protecting SLOCs with support from allies and like-minded countries; and build an R&D base capable of supporting and accelerating new forms of warfare employing drones, AI, and related technologies.

2 Policy Recommendations

To translate these concepts into practice, this report presents the following 20 policy recommendations.

A Trigger Strategy and Sustained Denial Strategy to Strengthen Extended Deterrence

1. As an overarching strategy, Japan should shift from high-value, concentrated defense capabilities toward distributed and asymmetric capabilities that can provide an advantage in long-term strategic competition. To this end, Japan should redesign the JSDF's force structure so that it can contribute to the cumulative attrition of an enemy over time, achieve sustained denial, and help induce U.S. involvement within the framework of the Japan-U.S. alliance.
2. To strengthen the credibility of extended deterrence, Japan should make greater use of strategic depth to improve the survivability of its defense capabilities and the sustainability and initiative of its operations. To this end, Japan must establish mechanisms through which the JSDF's initial response to an armed attack can smoothly trigger U.S. involvement. Specifically, Japan should develop overseas operational bases for JSDF transport aircraft and other platforms capable of carrying large numbers of low-cost, long-range missiles. These "long-range multipurpose weapon carriers" should be operated in wartime as part of an "Allied Depth Task Force," integrated with U.S. forces and other partners. Japan should also conduct regular rotational deployments and joint training to make this concept operational.
3. These rotational deployments and joint training activities should be designed in a distributed manner. They should be centered on the Japan-U.S. alliance and make use of bases in the United States, while also including deployments to Australia, the Philippines, and other countries. Japan should also hold regular consultations with allies on wartime role-sharing, conditions for transitioning to operations, and doctrine, and should institutionalize these arrangements. At the same time, Japan should promote the creation of a real-time integrated ISR network, the constant sharing of a common operational picture, and the standardization of data links. This process of institutionalization should also be communicated externally as a strategic message.
4. As a core element of a sustained denial strategy, the defense of Japan's Nansei Islands should focus on the limited operational objective of area denial. On this basis, Japan should prioritize active and passive defense, resupply under contested conditions, and stand-off fire support from distant locations, so that forces deployed to the Nansei Islands can continue operating under enemy threat.
5. To conduct sustained denial operations against an adversary with quantitative and qualitative

superiority across multiple domains, Japan should make maximum use of asymmetric advantages. These include AI and unmanned systems, as well as Japan's geographic characteristics: its islands, underground tunnels, the underwater domain, and strategic depth provided by the territories of allies and like-minded countries. In addition to peacetime preparations such as ammunition stockpiles, Japan should establish a system for rapidly modifying and upgrading equipment in response to changes in the character of warfare. To ensure that operations can continue even if some assets are destroyed, Japan should also field large numbers of relatively low-cost platforms that are mobile and easy to disperse, rather than relying on a small number of high-value assets.

Redesigning JSDF Capabilities and Force Structure

6. To narrow the quantitative missile gap with China and acquire asymmetric advantages, Japan should substantially expand the JGSDF long-range missile units to the scale of multiple missile brigades. It should also strengthen their resilience by concealing and protecting these units within underground tunnel networks. Japan should also begin the domestic development of ballistic missiles to increase payload capacity. In addition, it should deploy anti-ship missile units and other forces along the second island chain and export ground-launched anti-ship missiles to the Philippines. These steps would strengthen the ability of Japan and its partners to restrict the passage of Chinese naval vessels through the Bashi Channel.
7. To accelerate the operationalization of drones, Japan should make them an indispensable element of the JGSDF's combined-arms capabilities. This could be done by establishing specialized drone units, creating dedicated branches, or incorporating drones into the standard structure of existing units. To acquire asymmetric advantages at sea and underwater, Japan should also introduce large and small USVs and UUVs at an early stage and on a large scale. These systems should be assigned to diverse roles, including strike, sensing, mine-laying, and counter-satellite disruption. In addition, Japan should consider developing unmanned systems capable of operating across both the underwater and air domains.
8. To use Japan's limited defense capabilities and personnel more effectively, Japan should further reduce personnel requirements for manned submarines while also expanding the fleet size. It should also build a mesh-type, wide-area seabed sensor network to detect enemy underwater assets and begin developing underwater counter-drone systems capable of disabling the propulsion systems of enemy UUVs.
9. To direct personnel and budgets more effectively toward units with capabilities that will be needed in the future, Japan should make bold reductions to existing JGSDF divisions, brigades, and similar units. It should also substantially reduce general-purpose destroyer and fixed-wing patrol aircraft units that would have low survivability under China's A2/AD threat, replacing them with unmanned systems and more survivable platforms such as Aegis-equipped vessels. For relatively new vessels

such as Mogami-class frigates, Japan should consider developing modular variants with more specialized onboard functions, rather than equipping every ship in the same class with the same full range of capabilities.

10. To operate airpower by making use of terrain and strategic depth, Japan should reorganize the JASDF capabilities into three concentric rings. The first ring should consist of a high-low mix air defense system that combines low-cost and expendable capabilities able to counter the enemy's cost-imposition strategy. The second should consist of stealth airpower that can survive in contested areas and deliver effective strikes against the enemy, supported by space-based ISR capabilities. The third should consist of rotationally operated stand-off defense capabilities based at overseas operational bases, including large transport aircraft and other platforms equipped with large numbers of palletized long-range missiles.
11. To preserve airpower against enemy attacks, Japan should strengthen passive defense measures. These should include expanding aircraft shelters, reinforcing runway repair units, dispersing aircraft through the expanded joint use of U.S. military air bases and civilian airports, and acquiring decoys on a large scale. Similarly, to improve the survivability of JGSDF missile units, Japan should also consider a limited revival of tunnel excavation units.
12. In the space domain, Japan should develop its ISR satellite constellation into a system that can provide effective targeting capabilities against moving maritime targets. To achieve this, Japan should substantially increase the number of satellites in the constellation and disperse its ground stations. The project should be led by JASDF, which has a clearer understanding of operational requirements. The next defense communications satellite system should be designed to flexibly support the communications needs of MOD and the JSDF. This should be done by distributing communications satellites across multiple orbits, ensuring redundancy, and making greater use of commercial communications satellite capabilities. In addition, to disrupt an adversary's ISR and communications capabilities in the space domain, Japan should establish a posture that enables small, mobile counter-satellite disruption systems to be deployed on land and at sea in large numbers and with high mobility.
13. To make effective use of AI in command and control, Japan should strengthen the headquarters functions of the Joint Operations Command and frontline units. At the same time, it should rationalize the organization and functions of intermediate headquarters and shift toward a more non-hierarchical, distributed command structure.

Foundations for War-Sustaining Production Capability

14. To prepare for a rapid surge in wartime demand and strengthen emergency production and rapid modification capabilities, Japanese companies should expand excess production capacity by capturing overseas demand during peacetime. The government should also move quickly to establish government-owned, contractor-operated facilities, especially for ammunition,

missiles, and drones, which are likely to be consumed in large quantities during a conflict.

15. To ensure that defense equipment can continue to be produced and repaired even under attack, Japan should strengthen both passive and active defense measures for the defense industrial base and critical infrastructure. Passive measures should include dispersal, undergrounding, and hardening, while active measures should include designation as “important facilities” and the provision of point air defense. Japan should also strengthen the rapid recovery capabilities of key factories. The costs of these measures should be borne by the government.
16. To retain and secure personnel at defense companies and infrastructure facilities that would face a high risk of attack, Japan should first implement the protective measures described above. It should then establish appropriate systems for certain private-sector civilians and employees, drawing on the allowances, compensation, and social recognition provided to JSDF personnel. Japan should also make active use of retired JSDF personnel, who may be better prepared to work in wartime environments due to their professional background and organizational experience. The government should support the education and training needed for retired JSDF personnel to transition into such companies.
17. For securing the SLOCs, Japan should strengthen maritime domain awareness over wider areas in cooperation with allies and like-minded countries. It should also establish a system in which the government provides or reinsures the war-risk insurance needed for maritime transport. In addition, Japan should introduce the technologies and legal frameworks needed to enable unmanned navigation by civilian vessels in high-risk maritime areas.
18. To compensate for vulnerabilities in its defense industrial base, Japan should leverage the strategic depth of allies and like-minded countries to build systems for overseas production, maintenance, storage, and data backup.

Research and Development for Sustaining New Ways of Warfare

19. To promote the domestic development of drones by both existing defense companies and start-ups seeking to enter the market, Japan should establish airfields and test areas where companies can conduct drone flight testing. These should include maritime test areas. At the same time, Japan must ensure compatibility with civilian aviation safety and the commercial use of radio spectrum. Japan also needs a mechanism to rationalize regulations under the Civil Aeronautics Act and the Radio Act within these designated areas. In such cases, the MOD should be able to grant testing permits to companies through the delegation of such authority by the Ministry of Land, Infrastructure, Transport and Tourism and the Ministry of Internal Affairs and Communications. Furthermore, Japan should consider providing opportunities for flight testing at sea through the operation of JMSDF vessels or the chartering of civilian vessels. It could also rent military airfields and testing facilities in the territories of overseas allies and like-minded countries, such as Australia, and

provide companies with testing opportunities there.

20. To create incentives for companies to produce inexpensive, low-margin drones while encouraging product improvement and innovation, the JSDF should procure drones in large quantities and use them as consumables in peacetime training and other activities. This would help generate continuous demand. Japan should also increase opportunities for JSDF operators, development divisions, and companies to work together. Such collaboration would allow them to rapidly advance development and improve capabilities based on lessons from testing and training. Furthermore, to encourage knowledge-intensive software development incorporating AI, companies should review salary levels for the highly skilled engineers needed for such work. Correspondingly, the MOD should revise the way it calculates processing and design costs under its cost-estimation system for determining defense equipment prices.

Conclusion

The new defense strategy proposed in this report—built around sustained denial and mechanisms designed to trigger deeper alliance involvement—could provide an effective response to growing concerns over how Japan should defend itself in circumstances where U.S. support may not be forthcoming, the so-called "Plan B" debate.

"Plan B" should not be understood as mutually exclusive with Japan's traditional defense posture centered on the U.S.-Japan alliance. The alliance remains indispensable in responding to the growing threats Japan faces. At the same time, Japan cannot expect to secure U.S. support without strengthening the autonomy of its own defense capabilities. Japan itself bears the primary responsibility for defending its territory, and enhancing its ability to do so on a sustained basis can also strengthen the credibility of U.S. alliance commitments.

Moreover, given Japan's geographic position—adjacent to revisionist powers such as China, close to democracies such as Taiwan and South Korea, and strategically located at the center of the Indo-Pacific—strengthening Japan's defense capabilities is also essential to regional stability.

The formulation of the next Three Strategic Documents will therefore have implications far beyond Japan's defense policy alone, and the process of formulating them can itself contribute to deterrence. Their ultimate effect, however, will depend on the government's ability to translate the intended defense strategy into concrete policy. Greater attention must therefore be paid to the implementation stage. The policy recommendations set out above have been designed with particular emphasis on specificity and feasibility so that they can have practical effect precisely at that stage.

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Research Areas and Interests

National Security Strategy / Military Strategy / Nuclear Strategy / Space Strategy / International Military Affairs / U.S.-China Relations / Korean Peninsula / Military Innovation



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Research Areas and Interests

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Japan-Australia-US defense relationship / Japanese Defense Strategy and Industry



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Research Areas and Interests

Space Policy / Defense Innovation / Cybersecurity



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Sea Lanes / International Politics / International Security



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