

Japan's Possible Acquisition of Long-Range Land-Attack Missiles and the Implications for the U.S.-Japan Alliance

Summary of a February 2021 Conference

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About These Conference Proceedings

The security environment in Northeast Asia is rapidly worsening. To better understand how this situation is affecting the debate in Japan over how to deter Chinese coercion and what role Japanese counterstrike capabilities and the U.S.-Japan alliance might play, the RAND Corporation organized a virtual conference on February 23, 2021. Caroline Kennedy, who served as the U.S. Ambassador to Japan from 2013 to 2017, gave a keynote address on “The Importance of the U.S.-Japan Alliance,” in which she observed that one of the key issues that defined her years in Tokyo was the importance of deepening defense cooperation. Following this, Satoru Mori of Hosei University and Jeffrey W. Hornung of RAND offered remarks on why and how Japan might develop and acquire counterstrike capabilities and what the implications might be for the U.S.-Japan alliance. Following the conference, Hornung, Mori, and Mori’s coauthor, Shinichi Kitaoka of the University of Tokyo, submitted the conference papers presented in this volume.

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Introduction

Scott W. Harold, Senior Political Scientist, RAND Corporation

The growth of Chinese military power over the past three decades is raising questions about the state of deterrence in the Indo-Pacific, particularly about the military capabilities Japan needs and how to best evolve Japan's defense strategy within the overall framework of the U.S.-Japan alliance. One of the most widely discussed questions among defense thinkers in Japan is whether Japan needs to procure long-range, conventional land-attack precision-guided munitions (PGMs) to preserve deterrence with the People's Republic of China (PRC). If so, what types of platforms and weapon systems would be ideal? To strike what targets and with what concept of operations (CONOP) or in support of what theory of victory? Is a Japanese approach to deterrence based on retaliatory kinetic military operations against China plausible, given the latter's substantially greater size and nuclear arsenal? If Japan does choose to develop and field such capabilities in support of an approach to deterrence premised not only on denial but also counterstrike capabilities, would this be likely to work? Noted Western defense experts and academics have already indicated deep skepticism of symmetric approaches to defense and deterrence.¹ And if Japan does adopt such an approach, what implications would this carry for the U.S.-Japan alliance—especially considering that the traditional model of a *shield and spear* alliance relationship has given the United States an ability to manage escalation in a conflict with China and that this approach would appear likely to undercut that?

To explore these questions, the RAND Corporation convened a virtual conference that brought together Japanese and U.S. defense experts in February 2021, and these conference proceedings capture the insights that they developed in their two presentations and the subsequent papers that they submitted. This volume seeks to contribute to a growing debate in U.S. and Japan defense policy by exploring the types of capabilities that Japan might procure, the concept of employment for such capabilities, and the ways these capabilities could fit within the U.S.-Japan alliance.

Widespread agreement exists among Indo-Pacific security specialists that China poses an increasingly serious military threat to Japan and the U.S.-Japan alliance, both from its ambitions in the East China Sea to absorb the Senkaku Islands and from its threat to absorb Taiwan, by force if necessary.² Additionally, the PRC is opposed to the U.S. alliance network in general and has been increasingly hostile toward the U.S.-Japan

¹ Eric Heginbotham and Richard J. Samuels, "Active Denial: Redesigning Japan's Response to China's Military Challenge," *International Security*, Vol. 42, No. 4, May 2018.

² International Crisis Group, *Dangerous Waters: China-Japan Relations on the Rocks*, Brussels, Belgium, Asia Report No. 245, April 8, 2013; James Dobbins, Andrew Scobell, Edmund J. Burke, David C. Gompert, Derek Grossman, Eric Heginbotham, and Howard J. Shatz, *Conflict with China Revisited: Prospects, Consequences, and Strategies for Deterrence*, Santa Monica, Calif.: RAND Corporation, PE-248-A, 2017; Michael E. O'Hanlon, *The Senkaku Paradox: Risking Great Power War over Small Stakes*, Washington, D.C.: Brookings Institution Press, 2019; Brendan Taylor, *Dangerous Decade: Taiwan's Security and Crisis Management*, Abingdon, United Kingdom: Routledge, 2019.

alliance in particular.³ Beijing's growing power and assertiveness have spurred debates in the United States over how to compete with China and preserve military deterrence;⁴ similar debates have been ongoing in Japan.⁵ In responding to Beijing's growing assertiveness, Tokyo has pursued internal strengthening, tightened alliance coordination with the United States, and reaffirmed its commitment to a free and open international order based on laws and institutions.⁶

Still, recognizing China as a great power competitor and adjusting grand strategy to compete with it are one thing; building a set of military capabilities and operational concepts to do so is an entirely separate matter, especially in light of China's substantial investments in its armed forces. Since the late 1990s, China has been modernizing its military at an extremely rapid rate—a trend that has continued throughout the 2010s even as China's overall rate of economic expansion began to slow (see Figure 1.1).⁷

This military modernization drive has been characterized by the buildup of a deep magazine of ground-launched conventional missiles, the world's largest navy and coast guard by ship count, and an increasingly advanced air force ever more frequently operating at a distance from China's shores and frequently intruding into Japan's Air Defense Identification Zone.⁸

In tandem with its improving military capabilities, China has adjusted its defense strategy to focus on *near seas defense* and *maritime rights protection*, concepts referring to Beijing's aspirations to claim Taiwan, the Senkaku Islands, and various features inside its self-proclaimed (and legally invalidated) Nine-Dash Line in the South China Sea, occasioning increasing tensions with its neighbors, among them Japan.⁹

Although past studies have explored China's gray zone challenge to the U.S.-Japan alliance, it is possible that the allies will face a more conventional attempt by China to seize outright the territories that Chinese

³ Adam P. Liff, "China and the US Alliance System," *China Quarterly*, Vol. 233, March 2018.

⁴ White House, *National Security Strategy of the United States of America*, Washington, D.C., December 2017; Kurt M. Campbell and Ely Ratner, "The China Reckoning: How Beijing Defied American Expectations," *Foreign Affairs*, March/April 2018; U.S. Department of Defense, *Indo-Pacific Strategy Report: Preparedness, Partnerships, and Promoting a Networked Region*, Washington, D.C., June 1, 2019; Kurt M. Campbell and Jake Sullivan, "Competition Without Catastrophe: How America Can Both Challenge and Coexist With China," *Foreign Affairs*, September/October 2019.

⁵ Scott W. Harold, *Regional Responses to U.S.-China Competition in the Indo-Pacific: Japan*, Santa Monica, Calif.: RAND Corporation, RR-4412/4-AF, 2020; James Manicom, *Bridging Troubled Waters: China, Japan, and Maritime Order in the East China Sea*, Washington, D.C.: Georgetown University Press, 2014; Sheila A. Smith, *Intimate Rivals: Japanese Domestic Politics and a Rising China*, New York: Columbia University Press, 2015; Sheila A. Smith, *Japan Rearmed: The Politics of Military Power*, Cambridge, Mass.: Harvard University Press, 2019.

⁶ Onodera Itsunori, "Strengthening Japan's Defense Force," *Asia-Pacific Review*, Vol. 20, No. 2, 2013; Jeffrey W. Hornung, "Japan's Growing Hard Hedge Against China," *Asian Security*, Vol. 10, No. 2, June 2014; Ministry of Foreign Affairs of Japan, "Japan's Security Policy," webpage, June 12, 2019.

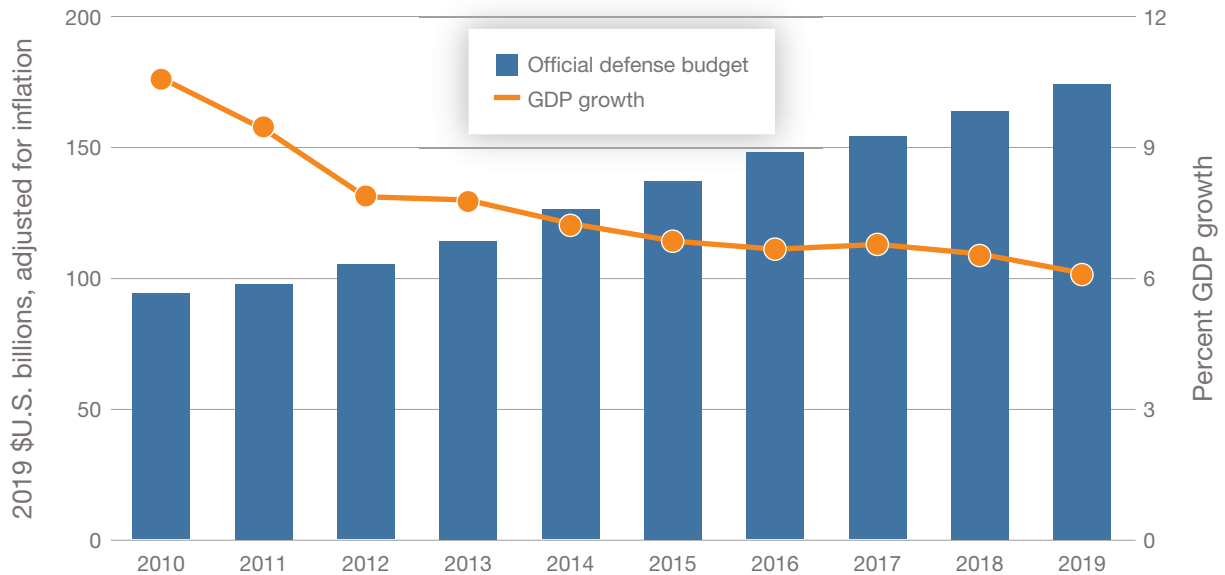
⁷ U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China: 2020 Annual Report to Congress*, Arlington, Va., 2020.

⁸ ChinaPower, "How Are China's Land-Based Conventional Missile Forces Evolving?" Center for Strategic and International Studies, September 21, 2020; Peter Dutton, Andrew S. Erickson, and Ryan Martinson, eds., *China's Near Seas Combat Capabilities*, Newport, R.I.: U.S. Naval War College China Maritime Studies Institute, No. 11, February 2014; Mark R. Cozad and Nathan Beauchamp-Mustafaga, *People's Liberation Army Air Force Operations over Water: Maintaining Relevance in China's Changing Security Environment*, Santa Monica, Calif.: RAND Corporation, RR-2057-AF, 2017; Edmund J. Burke, Timothy R. Heath, Jeffrey W. Hornung, Logan Ma, Lyle J. Morris, and Michael S. Chase, *China's Military Activities in the East China Sea: Implications for Japan's Air Self-Defense Force*, Santa Monica, Calif.: RAND Corporation, RR-2574-AF, 2018.

⁹ M. Taylor Fravel, *Active Defense: China's Military Strategy Since 1949*, Princeton, N.J.: Princeton University Press, 2019; Jennifer Rice and Erik Robb, *The Origins of "Near Seas Defense and Far Seas Protection"*, Newport, R.I.: China Maritime Studies Institute, U.S. Naval War College, Report No. 13, February 2021.

FIGURE 1.1

China, Official Defense Budget, 2010–2019 (in constant 2019 U.S. dollars)



SOURCE: U.S. Department of Defense, 2020.

NOTE: GDP = gross domestic product.

Communist Party leaders covet.¹⁰ As China's military grows more capable, the PRC's leaders might feel that they can accept greater risk in attempting to assert their claims to Taiwan or the Senkaku Islands, steps that would put China in a position of directly threatening the security of Japan and the national interests of the United States. In response, American and Japanese specialists explored various options for countering China's advancing military capabilities to preserve deterrence.¹¹ One of these options is Japan acquiring conventional land-attack PGMs to hold at risk stationary targets, such as Chinese missile bases and air and naval facilities; this option and its implications for the U.S.-Japan alliance are explored in greater depth in the chapters that follow.

Overview of the Proceedings

In Chapter Two, Satoru Mori of Hosei University and Shinichi Kitaoka of the University of Tokyo argue that the continued development of China's military capabilities is likely to render Japan's deterrence by denial strategy insufficient, imposing costs on defenders even as the deterrent value of joint Japan-U.S. defenses

¹⁰ Scott W. Harold, Yoshiaki Nakagawa, Junichi Fukuda, John A. Davis, Keiko Kono, Dean Cheng, and Kazuto Suzuki, *The U.S.-Japan Alliance and Deterring Gray Zone Coercion in the Maritime, Cyber, and Space Domains*, Santa Monica, Calif.: RAND Corporation, CF-379-GOJ, 2017; Scott W. Harold, Koichiro Bansho, Jeffrey W. Hornung, Koichi Isobe, and Richard L. Simcock, II, *U.S.-Japan Alliance Conference: Meeting the Challenge of Amphibious Operations*, Santa Monica, Calif.: RAND Corporation, CF-387-GOJ, 2018.

¹¹ Toshi Yoshihara, *Going Anti-Access at Sea: How Japan Can Turn the Tables on China*, Washington, D.C.: Center for a New American Security, September 2014; Rebecca Heinrichs, Tom Karako, Masashi Murano, Brad Roberts, and Nobushige Takamizawa, "Pushing Back Against Chinese and North Korean Missile Threats: Strengthening the U.S.-Japan Deterrence Strategy and Joint Missile Defense Posture," video, YouTube, July 23, 2020.

erodes.¹² For this reason, they argue, acquiring an enhanced capacity for deterrence by counterstrike is necessary.¹³ They argue for Japan acquiring a moderate-sized portfolio of sea, air, and land-launched, fixed-target land-attack cruise, ballistic and hypersonic missiles that, in tandem with Japan's anti-air and anti-ship weapons and its active and passive missile defenses, could be used in combination to deny and impose punitive costs on China were it to strike at or seek to seize Japanese territory, or both. They frame the acquisition of such capabilities as falling entirely within Japan's inherent right to self-defense and note that such a move should be undertaken within the context of a coordinated alliance approach to deterrence with the United States—what they describe in Chapter Two as “a new, combined CONOP and a new, bilateral C2 [command and control] arrangement that would enable the allies to meaningfully employ Japanese counterstrike capabilities together with U.S. Forces.”

They differentiate their proposed approach from *enemy base attack theory*, a justification that some Japanese defense thinkers have promoted in the past. The justification aimed to give Japan a preemption capability if it were to gain intelligence that suggested an impending North Korean missile strike would be carried out by liquid-fueled ballistic missiles that would have to sit vulnerable on North Korean launchpads while they were fueled prior to executing a strike. Recognizing that North Korea and China are both moving toward road-mobile, solid-fueled missiles, Mori and Kitaoka argue instead for a Japanese deterrence strategy premised on striking the infrastructure that China would need to leverage to conduct sustained air and naval operations against Japan far from its shores—China's air and seaports of disembarkation, logistics hubs, radar, and C2 facilities. Such an approach could present substantial challenges for China that it might struggle to overcome because Japan and the United States operating together could execute overwhelming saturation attacks that would likely be sufficient to render People's Liberation Army (PLA) missile defenses ineffective.

In Chapter Three, Jeffrey W. Hornung of RAND notes that, although Japan is certainly within its sovereign rights to acquire and deploy such weapon systems, doing so could carry consequences for the alliance. Observing that much of the focus in Japan's debate over such capabilities has been on “why Japan needs these capabilities and the advantages and disadvantages of possessing ballistic and cruise missiles . . . [or] the legal framework that these capabilities would require,” he states that “[b]roader operational considerations have been addressed only rarely [, and] almost no attention has been paid to the consequences for the U.S.-Japan alliance.” In this, he echoes and reinforces the argument of Mori and Kitaoka that allied coordination is an essential “prerequisite” to ensure that all parties are aligned and not working at cross-purposes.

In particular, Hornung points to four areas where allied defense planners need to ensure that they are fully synchronized: “(1) planning, (2) operations, (3) technology and hardware, and (4) air and missile defense.”

With respect to planning, Hornung also notes in Chapter Three that

[b]ecause Japan has never had such capabilities, no details are provided in existing plans and planning cycles that consider these; new capabilities would require new plans. Washington would need to understand Japan's targeting system, strike doctrine, and objectives for using strike capabilities and, based on

¹² Satoru Mori was an official with the Ministry of Foreign Affairs from 1996 to 2001. Shinichi Kitaoka has served as the President of the Japan International Cooperation Agency (2015 to present), the Deputy Chairman of the Advisory Panel on Reconstruction of the Legal Basis for Security to Prime Minister Abe Shinzo (2014), President of the International University of Japan (2012 to 2015), and Ambassador and Deputy Permanent Representative to the United Nations (2004 to 2006), among other important roles.

¹³ Deterrence by denial aims at dissuading an adversary from conducting an attack by showing that the action will fail to achieve its intended effect owing to the resilience of the defender. By contrast, approaches to deterrence based on punishment seek to dissuade an attacker from acting by threatening reprisals that would result in costs that would outweigh any benefits the attacker gained from a given action. In this case, Mori and Kitaoka have expressly declined to embrace a “punishment” logic and, instead, describe their approach as premised on counterstriking for operational effect.

these, draw Japan into a coordinated alliance plan. This would likely involve alliance agreement on a theory of victory, an OPLAN [operational plan] and CONOP, and joint targeting processes where the allies agree on target lists—including no-strike lists and restricted target lists—and clarify operational responsibilities, as well as when and how these missiles should be used and for what effect.

As to operations, Hornung points out that any new Japanese capabilities

would need to be coordinated with the operational activities of all four services of the U.S. military. These would consist of air, naval, ground, cyberspace, space, and electromagnetic operations; combat search and rescue and personnel recovery; and logistical support. The crowded operational battlespace will challenge the allies' ability to synchronize and deconflict to avoid fratricide. This will put pressure on the allies to achieve much deeper integration of their operational decisionmaking to know where their assets are, where they are going, and how best to generate force.

Regarding technology and hardware, Hornung warns that the more ambitious Japan's long-range strike aims become, the more support it will need in terms of command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) assets to achieve effectiveness. Although Mori and Kitaoka favor architectures that appear to require C4ISR support at the lower end of that spectrum—possibly even within the parameters of what Japan fields or what it has plus some support from the United States—if such an approach expands substantially, it could entail diverting resources away from other key areas of defense spending to ensure effectiveness for the missile forces. As Mori and Kitaoka note, their proposal is deliberately scoped to avoid such complications; Hornung's analysis suggests this is a wise decision that must be kept firmly in mind lest procurement choices lead to ballooning costs and reduced effectiveness.

Finally, to preserve the operational effectiveness of any prospective ground-based Japanese fires that would exist within the threat ring of Chinese sea-, air-, and ground-launched weapons, Hornung notes that Japan will have to devote some resources—possibly a substantial amount—to active and passive force protection or else risk these weapons being targeted themselves. Again, assuming Japan's defense budget is not rapidly expanding to the point where resources are no constraint, such a consideration is worth bearing in mind and would carry implications for how Japan needs to weigh camouflage, concealment, and deception (CCD); special operations forces detachments to defend against adversary special operations forces; hardening; active defenses; and regular and irregular rotations to complicate targeting.

In the concluding chapter, I highlight some of the key issues raised by the authors and explore possible implications for further research.

The Case for Japan Acquiring Counterstrike Capabilities: Limited Offensive Operations for a Defensive Strategy

Satoru Mori, Professor, Hosei University

Shinichi Kitaoka, Professor Emeritus, University of Tokyo

East Asian states prefer to maintain a stable relationship with China, but its growing military power and its increasingly aggressive behavior are raising strong concern in the region. On September 11, 2020, then–Prime Minister Shinzo Abe stated that simply improving Japan’s missile interception capability might not suffice to protect the lives of the Japanese people and suggested that Japan might need to acquire its own strike capabilities.¹ Prime Minister Suga Yoshihide and President Joe Biden issued a joint statement on April 16, 2021, in which they recognized “the importance of deterrence to maintain peace and stability in the region,” and Japan “resolved to bolster its own national defense capabilities to further strengthen the Alliance and regional security.”² To deepen the discussion of how Japan should bolster its national defense capabilities, it is necessary to develop and consider a point-of-departure concept for Japanese strike capabilities in support of an approach to deterrence aimed at dissuading China from armed aggression by holding its ability to sustain strike operations at risk.³

This chapter addresses one aspect of China’s military rise—the looming airborne threats of the PLA. We argue that

1. Japan’s national defense needs to focus on the threat posed by China’s antiaccess and area denial (A2/AD) capabilities.
2. Japan needs to review its traditional approach to deterrence and defense that centers on ballistic missile defense. Japan should maintain but slightly modify its exclusively defensive defense policy and acquire counterstrike capabilities—in addition to interception capabilities—that would be employed in close coordination with the United States if Japan were attacked by a foreign adversary.

¹ Prime Minister’s Office of Japan, “The Statement of the Prime Minister” [“Naikaku Souridaijin Danwa”], Tokyo, September 11, 2020.

² White House, “U.S.-Japan Joint Leaders’ Statement: ‘U.S.-Japan Global Partnership for a New Era,’” Washington, D.C., April 16, 2021.

³ This article builds on our earlier, shorter piece: Shinichi Kitaoka and Satoru Mori, “From Missile Defense to Counterstrike Capability” [“Misairu Boei kara Hangeki Ryoku E”], *Chuo Koron*, April 2021.

By *counterstrike capabilities*, we mean sea, air, and land-launched munitions of cruise, ballistic, and hypersonic varieties that will be used against stationary land-based targets (but not road-mobile targets). Limited counterstrike operations should be carried out in addition to interception operations targeting surface vessels and submarines and the planes and missiles of the PLA. Given China's expanding capability to strike targets in the western Pacific, Japan should qualitatively and asymmetrically enhance its defense capabilities by acquiring counterstrike capabilities and, thereby, improve the survivability and lethality of the Japanese and American Forces in the region.

Before proceeding to the body of the argument, three caveats are in order. First, although we assume that the threat from North Korea will persist into the future, we argue that Japan needs to prioritize responding to the military threat posed by China because of China's sheer magnitude and its increasingly aggressive behavior. The probability of a North Korean armed attack directed at Japan is not high because North Korea's principal objective vis-à-vis Japan is to obtain large sums of "compensation" like the Republic of Korea (ROK) received in 1965, and the risk of a bilateral North Korea–Japan crisis sparking a process of inadvertent escalation is low. This does not mean that Japan can ignore the threat from North Korea; efforts that have been made to counter the North Korean missile threat to date should be maintained and continued as needed in light of evolving North Korean capabilities. However, we argue that the air and missile threat from China is of such a greater order of magnitude that it requires fundamental changes in Japan's traditional approach to missile defense. Japan aspires to enhance a comprehensive air and missile defense architecture that would enable it to carry out active and passive air and missile defense—which essentially corresponds with the U.S. concept of *defensive counterair operations*. We argue that Japan should develop the capabilities for operations against fixed ground targets that would be needed to implement limited offensive counterair operations.

Second, the *enemy base attack theory*, as discussed in Japan, assumes a Japanese preemptive strike on enemy missile bases, but we argue that it is necessary for Japan to have the ability to carry out a counterstrike, or retaliatory action taken after being attacked by an adversary first. *Enemy base attack theory* refers to the idea that Japan should possess the capability to launch preemptive strikes against missile launch sites in enemy territory; the theory has attracted attention in the wake of the Japanese government's decision to cancel the Aegis Ashore missile defense system in June 2020.⁴ However, carrying out preemptive strikes on adversary missile bases is not likely to be feasible or effective—missile units are likely to have already been dispersed during a crisis, and going after time-sensitive mobile missiles on transporter-erector-launchers (TELs) with *strike packages* composed of fighters, bombers, reconnaissance aircraft, and electronic warfare planes (among other systems) would be highly expensive and would dramatically complicate allied coordination. In addition, a Japanese preemptive strike would invite a diplomatic controversy because it would allow the adversary to declare that Japan initiated hostilities, justifying any further attacks on Japan as retaliatory strikes when in fact they had been planned as a first strike. This would potentially complicate Japan's ability to win support from the wider international community.

Third, as we envision them, Japanese counterstrike capabilities should be acquired by, introduced to, and employed by the Japan Self-Defense Forces (SDF) in full consultation with the United States. Such capabilities should be embedded in a new, combined CONOP and a new bilateral C2 arrangement that would enable

⁴ The Liberal Democratic Party's (LDP's) missile defense assessment team submitted a report to then–Prime Minister Shinzo Abe in August 2020. The report did not use the term *enemy base attack capability* but recommended that Japan should consider acquiring the capability to prevent enemy missiles from being launched inside enemy territory. The chairman of the LDP missile defense assessment team, former two-time Minister of Defense Representative Itsunori Onodera, and other members of parliament, such as ex-foreign minister Fumio Kishida, have expressed support for exploring this idea. "Exclusively Oriented Defense 'No Longer Viable Today'" ["Senshu Boei Jidai ni Awanai"], *Jiji Press*, April 14, 2021; "LDP Mr. Kishida 'Enemy Base Attack Capability Should Be Examined'" ["Jimin Kishida-shi 'Tekikichikokekinoryoku no hoyukento wo'"], *Nikkei*, April 2, 2021.

the allies to meaningfully employ Japanese counterstrike capabilities together with U.S. forces. Although we mention the need for a new bilateral C2 arrangement here because of its importance, the issue is of such magnitude that it will require a separate treatment. We underscore that U.S. consent and approval is a prerequisite for all aspects of the proposed Japanese counterstrike capabilities that we describe later.

With these basic precepts in mind, we first illustrate the PLA air and missile threats and then point out the limits of Japan's existing air and missile defense system. Following that discussion, we identify major missing elements of a more comprehensive defense architecture, elaborate the rationale for counterstrike capabilities, outline a proposed phased introduction of expanded counterstrike capabilities, and conclude by addressing issues and questions to be resolved before moving forward.

The Growing Threat of PLA Missiles and Military Aircraft

As noted earlier, the growth of China's military spending and its ability to use that spending to generate increased military power over the past three decades has been impressive. According to Japan's Ministry of Defense, the nominal size of China's announced national defense budget grew approximately 44-fold in the past 30 years and more than doubled over the past decade.⁵ The PLA has been strengthening its military capability across the board and increasing its ability to operate in the space and cyberspace domains and in the electromagnetic spectrum.⁶ It has also made organizational reforms to advance its ability to wage joint operations and to mobilize private resources through the Military-Civil Fusion Development Strategy to further enhance their military capabilities.⁷

For Japan, the most-serious military threats arise from the prospect of a crisis over the Senkaku Islands or Taiwan in which the Chinese leadership decides to use force—possibly in the form of invasion. There are different views about the immediate likelihood of those crises erupting, but as of this writing, trends in Chinese behavior are not reassuring. China continues to take unilateral revisionist actions and coerce other states that rebuke Chinese policy and claims on various issues. If China were to attack U.S. Forces, Japan (USFJ) and Japanese territory in the event of a major crisis—such as an invasion of Taiwan or the Senkaku Islands, or both—China could use a diverse set of military means, such as waging cyberattacks against networks of the SDF and USFJ and launching air and missile attacks against U.S. bases in Japan and the western Pacific, as well as SDF bases.⁸ Table 2.1 lists the weapons China could employ.

⁵ Japan Ministry of Defense, *Defense of Japan 2020*, Tokyo, 2020b, p. 60.

⁶ U.S. Department of Defense, 2020, pp. 38–91.

⁷ Japan Ministry of Defense, 2020b, p. 61. On China's military-civil fusion, see Marcel Angliviel de la Beaumelle, Benjamin Spevack, and Devin Thorne, *Open Arms: Evaluating Global Exposure to China's Defense-Industrial Base*, Washington, D.C.: Center for Advanced Defense Studies, 2019. Experts have also pointed out the limits of the military-civil fusion effort: Elsa B. Kania and Lorand Laskai, *Myths and Realities of China's Military-Civil Fusion Strategy*, Washington, D.C.: Center for a New American Security, January 2021.

⁸ See, for example, Toshi Yoshihara, "Chinese Missile Strategy and the U.S. Naval Presence in Japan: The Operational View from Beijing," *Naval War College Review*, Vol. 63, No. 3, Article 4, Summer 2010; Thomas Shugart and Javier Gonzalez, *First Strike: China's Missile Threat to U.S. Bases in Asia*, Washington, D.C.: Center for a New American Security, June 2017; Todd South, Philip Athey, Diana Stancy Correll, Stephen Losey, Geoff Ziezulewicz, Meghann Myers, and Howard Altman, "What War with China Could Look Like," *Military Times*, September 1, 2020; Jeffrey W. Hornung, "The United States and Japan Should Prepare for War with China," *War on the Rocks*, February 5, 2021. See also Roger Cliff, *China's Military Power: Assessing Current and Future Capabilities*, New York: Cambridge University Press, 2015; Eric Heginbotham, Michael Nixon, Forrest E. Morgan, Jacob L. Heim, Jeff Hagen, Sheng Tao Li, Jeffrey Engstrom, Martin C. Libicki, Paul DeLuca, David A. Shlapak, David R. Frelinger, Burgess Laird, Kyle Brady, and Lyle J. Morris, *The U.S.-China Military Scorecard: Forces, Geography, and the Evolving Balance of Power, 1996–2017*, Santa Monica, Calif.: RAND Corporation, RR-392-AF, 2015; Ian Easton, *The Chinese Invasion Threat: Taiwan's Defense and American Strategy in Asia*, Arlington, Va.: Project 2049 Institute, 2017.

TABLE 2.1
PLA Rocket Force Systems

| System | Type | Warheads | Propellant | Deployment Mode | Max Range (km) |
|--------------------|------|-----------------------------------|------------|-------------------|----------------|
| CSS-3/DF-4 | ICBM | Nuclear | Liquid | Rollout to launch | 5,500+ |
| CSS-4/DF-5 | ICBM | Nuclear | Liquid | Silo | 12,000–13,000 |
| CSS-7/DF-11 | SRBM | Conventional | Solid | Mobile | 300–600 |
| CSS-6/DF-15 | SRBM | Conventional | Solid | Mobile | 600–850 |
| CSS-11/DF-16 | SRBM | Conventional | Solid | Mobile | 800–1,000 |
| CSS-5/DF-21 | MRBM | Nuclear and conventional variants | Solid | Mobile | 1,500–1,750+ |
| CSS-5 Mod-5/DF-21D | ASBM | Conventional | Solid | Mobile | 1,500+ |
| DF-26 | IRBM | Nuclear and conventional variants | Solid | Mobile | 4,000 |
| CSS-10/DF-31 | ICBM | Nuclear | Solid | Mobile | 7,200–11,200 |
| CJ-10 | GLCM | Conventional | Solid | Mobile | 1,500+ |

SOURCE: U.S. Defense Intelligence Agency, *China Military Power: Modernizing a Force to Fight and Win*, Washington, D.C., 2019, p. 93.

NOTE: ASBM = anti-ship ballistic missile; GLCM = ground-launched cruise missile; ICBM = intercontinental ballistic missile; IRBM = intermediate-range ballistic missile; MRBM = medium-range ballistic missile; SRBM = short-range ballistic missile.

China poses a variety of types of military threat, but the buildup of the PLA's offensive theater air and missile capabilities—commonly referred to as part of its A2/AD or *counter-intervention* suite of tools—is particularly alarming for Japan. China's IRBMs and MRBMs, including the DF-26 (estimated maximum range of 4,000 km) and DF-21 (estimated maximum range of 1,750 km), are particularly noteworthy.⁹ The PLA fields approximately 200 IRBM launchers and 200 missiles as well as approximately 150 conventional MRBM launchers and more than 150 missiles.¹⁰ The PLA has also deployed approximately 600 SRBMs, such as DF-11, DF-15, and DF-16, and 200 SRBM launchers.¹¹ The U.S. Department of Defense estimates that China has more than 1,250 Intermediate-Range Nuclear Forces (INF)-class ground-launched ballistic missiles and GLCMs with ranges between 500 and 5,500 km.¹²

With regard to cruise missiles, the PLA Air Force (PLAAF) is equipped with CJ-10s (estimated maximum range of 1,500 km), which are capable of being launched from its H-6 bombers, and supersonic cruise missiles, CJ-100/DF-100. The PLA has also fielded approximately 100 GLCM launchers and 300 missiles for standoff precision strikes.¹³ In addition, at its 2019 military parade, China displayed the DF-17, a hypersonic glide vehicle (HGV), and has also tested the Xingkong-2, which it publicly described as a hypersonic waverider

⁹ Japan Ministry of Defense, 2020b, p. 61.

¹⁰ U.S. Department of Defense, 2020, p. 59.

¹¹ U.S. Department of Defense, 2020, p. 59.

¹² U.S. Department of Defense, 2020, pp. ii, vii. The United States had been complying with the INF Treaty until August 2019, so it does not currently have INF-class missiles—it currently fields only one type of conventional ground-launched ballistic missile with a range of 70 to 300 km and no GLCMs. Shugart and Gonzalez, 2017, p. ii.

¹³ U.S. Department of Defense, 2020.

vehicle.¹⁴ The PLA is also mass-producing fourth-generation fighters, such as the J-11B, J-16, and J-10. It has been reported that China's fifth-generation Chengdu J-20 air superiority fighters are being deployed to operational PLAAF units, while the Shenyang J-31 multirole stealth fighter is also under development.¹⁵

Furthermore, China is also rapidly developing a wide variety of unmanned aerial vehicles (UAVs). These apparently include a high-altitude, high-speed reconnaissance UAV and the GJ-11 stealth attack UAV. Additionally, it has been reported that the PLA has formed a UAV unit devoted to attack missions. China is also exploring swarm technology to employ small, low-cost UAVs to gain a quantitative advantage.¹⁶

These air and missile forces are relevant for threatening not only Taiwan but also Japan and the United States. The range of the DF-21 covers the entire Japanese archipelago and large areas of the Philippines and India; the DF-21D variant, which China tested against a target at sea, can allegedly target U.S. carriers operating in the western Pacific.¹⁷ The PLA has also been conducting live-fire missile exercises against mock targets that appear to be training for attacks on U.S. bases at Kadena, Yokosuka, and Misawa.¹⁸ In the event of an armed attack by China, Chinese military action at the onset of the conflict could involve attacks in the cyber, electromagnetic, and space domains; it could also involve ballistic missile attacks on USFJ and SDF bases in Okinawa and Honshu and U.S. bases, airfields, and ports in Guam. This would likely be followed by Chinese bombers and cruise missiles attacking air defense radars, military aircraft on the ground, and ships at ports. All these actions would force Japan to heavily expend its missile defense interceptors at the outset of the conflict and yet likely still sustain significant damage.

The Limits of Japan's Traditional Missile Defense System

As illustrated in the previous section, Chinese airborne threats to Japan are increasingly complex and diverse. Ballistic missiles equipped with multiple, maneuverable warheads, high-speed and longer-range cruise missiles flying depressed trajectories, and stealth and multirole aircraft are quantitatively expanding and increasingly complicating the requirements for the SDF to defend Japan.

As of early 2022, Japan's defenses against SRBMs, MRBMs, and IRBMs are based on a two-tier missile defense system that consists of a midcourse interception by the Aegis SM-3 interceptor and a terminal phase interception by the Patriot Advanced Capability-3 (PAC-3) point defense missile system.¹⁹ As for cruise missile defense, the Ground Self-Defense Force (GSDF) uses Type 03 medium-range surface-to-air missiles (SAMs) and Type 11 short-range SAMs, while the Air Self-Defense Force (ASDF) uses base-defense SAMs. The Maritime Self-Defense Force (MSDF) uses the SM-2, the Evolved Sea Sparrow Missile, the At-Sea Rolling Airframe Missile (or SeaRAM, an anti-ship missile defense system), and the Phalanx close-in weapon system.

Japanese ballistic missile defenses have served their purpose to defend against ballistic missile threats from North Korea, but there are limits to the effectiveness of the existing approach when it comes to defending against the growing PLA air and missile threat. First, Japan's vulnerability to saturation attacks will only increase if Japan continues to go down the path it has been on. Even as of early 2022, the number of air

¹⁴ U.S. Department of Defense, 2020, p. 56.

¹⁵ Japan Ministry of Defense, 2020b, p. 67.

¹⁶ Japan Ministry of Defense, 2020b, p. 68.

¹⁷ Joseph Trevithick, "Chinese Long-Range Ballistic Missiles Struck Moving Ship in South China Sea: Report," *The Drive*, November 16, 2020.

¹⁸ Shugart and Gonzalez, 2017, pp. 4–9; Thomas Shugart, "Has China Been Practicing Preemptive Missile Strikes Against U.S. Bases?" *War on the Rocks*, February 6, 2017.

¹⁹ Japan Ministry of Defense, 2020b, p. 6.

defense assets and munitions is not sufficient to meaningfully counter saturation attacks by Chinese theater offensive missiles. Even if Japan kept up with the scheduled building of MSDF destroyers equipped with the Aegis system and the planned upgrade of the Patriot systems, and even if it acquired directed energy weapons and railguns, Chinese missiles are likely to outnumber and, ultimately, overwhelm Japan's missile defenses.²⁰

Second, the difficulty of countering technologically disruptive offensive missiles is increasing as well. Intercepting incoming missiles with irregular trajectories, depressed flight paths, and HGVs and hypersonic cruise missiles (HCMs) is deemed either extremely difficult technologically or potentially impossible for the foreseeable future. Developing countermeasures will take time and is likely to incur very high costs. The alternative to the Aegis Ashore will probably be deployed sometime in the later 2020s. However, by then, the PLA will likely be operating hypersonic weapons, low-flight missiles with irregular trajectories, and UAVs so numerous that it would be difficult to counter these threats simply by expanding the existing missile defense system.

Third, the cost-exchange ratio for offense and defense is highly unfavorable to the defender in the area of missile defense. A single Chinese offensive missile is much cheaper than a Japanese interceptor, so China is able to impose high costs on an already-limited Japanese defense budget, and this could grow worse with the passage of time.

Finally, as noted earlier, although the existing missile defense system has been both necessary and effective when North Korean missiles were the principal threat to Japanese security, the increasing quantity and quality of Chinese theater offensive missiles requires Japan to shift the focus of its attention to meet this looming threat. The reality is that the existing missile defense system, which relies solely on midcourse and terminal phase interception, is not viable when countering Chinese ballistic missile threats. Merely expanding the existing system would only allow China to continue widening its offensive advantage. Consequently, China would become increasingly confident in its ability to overwhelm Japan's missile defense at the outset of a conventional conflict; this would fuel the erosion of the conventional deterrence capabilities of both Japan and the Japan-U.S. alliance and, therefore, increase the risk of China resorting to force.

The Need for a More Comprehensive Defense Architecture

If China becomes increasingly confident that its arms buildup, including its investment in advanced air power and missile forces, will enable it to achieve its strategic objectives, such as the invasion of Taiwan or the Senkaku Islands, the risk of war will increase. To preserve deterrence, China must be convinced that, even if it tried to inflict devastating damage upon Japan and the United States to achieve its goals, its offensive strike capabilities would not be effective enough to achieve victory, and China would suffer an allied counter-offensive that would be too costly to be worth risking. As this suggests, Japan and the United States will need to continue to adopt a defensive strategy focused on deterrence by denial but will also need capabilities that convey an ability to strike key PLA targets. In short, to deny China any prospect of achieving its strategic goals through large-scale air and missile strikes, Japan and the Japan-U.S. alliance will need to pursue both passive defense and active defense.

For passive defense, the resilience of various aspects of Japan's infrastructure needs to be substantially improved. To prepare for contingencies, Japan should reinforce its SDF facilities and infrastructure (e.g., fuel and munition depots, radar facilities, and communication networks, such as land lines). Japan should also construct systems for backup and redundancy to prepare for degradation or loss of the primary system. Runway

²⁰ The SDF plan to upgrade the current PAC-3 system to the PAC-3 Missile Segment Enhancement during the 2020s, which would make it capable of countering ballistic and cruise missiles and aircraft.

repair capabilities should be strengthened, and CCD should also be used regularly. These passive defense measures might not be dramatic, but they are essential in limiting damage caused by any Chinese attack.

With regard to active defense, the goal should be to deny China persistent air and maritime superiority and to asymmetrically curtail and disrupt its systematic warfighting capability. The ways to achieve these ends are twofold.

First, Japan needs the ability to intercept incoming airborne threats and naval vessels and submarines. This would constitute what might be called a *downstream denial* capability, which would entail the maintenance of the existing missile defense system. Passive defense and interception together constitute Japan's existing Comprehensive Missile Defense architecture—corresponding to the U.S. Defensive Counterair doctrine—and should certainly be maintained.²¹

Second, beyond these capabilities, Japan needs to acquire the ability to launch counterstrikes in response to a Chinese armed attack against Japan to degrade the military facilities that would sustain the PLA's offensive operations. The details of this *upstream denial* capability will be explained in further detail, but, in short, they would be aimed at fixed targets and would not be used to track, target, and strike mobile targets because that would necessitate the construction of a highly expensive capacity to develop strike packages.²² Instead, a Japanese counterstrike using standoff munitions should be directed at critical fixed military targets, such as air and naval bases, materiel and fuel depots, radar sites, communication nodes, and theater command headquarters.

When considering additional strike capabilities, there are two general categories Japan could choose to pursue: (1) strike packages with bombers and electronic warfare planes, and (2) standoff missiles. The former option is quite costly and would take a long time to field. Therefore, we regard the latter route as preferable. Ideally, to constitute an effective strike at static targets in the Chinese coastal area, we believe it is necessary for a system to meet the following conditions: The weapon platform or weapon must have a range longer than 1,500 km and either

1. sufficient penetration power to overwhelm adversary active missile defenses
2. hypersonic speeds capable of evading and penetrating such defenses.

Although it is true that Japan already possesses some limited ability to conduct a counterstrike against adversary targets at range, we regard these capabilities as insufficient for deterrence or operational purposes. For example, at the time of this writing, Japan fields or is in the process of procuring both the Joint Strike Missile (JSM) and the Joint Air-to-Surface Standoff Missile–Extended Range (JASSM-ER). The publicly known range for the JSM is only 300 km, and the weapon is not hypersonic; the range for JASSM-ER is slightly more than 900 km and it is likewise not hypersonic. Thus, although both JSM and JASSM-ER constitute strike capabilities, they do not meet the criteria mentioned in the previous section.

Among various missile system options, MRBM and hypersonic weapons are better than Tomahawks in terms of efficacy of strike capabilities in that the latter perform relatively poorer in terms of speed, penetrability and impact, but the advantage of Tomahawks would be that they could have a cost-imposing effect on China if released in significant numbers from various platforms. Thus, we argue for a phased introduction of all three weapon types based on the timing of the weapons' availability.

²¹ Toshi Yoshihara identified elements of a possible antiaccess strategy by Japan that included submarine warfare, mine warfare, flotilla defense, and shore-based maritime strikes that capitalize on Japan's maritime geography, as well as hardening and dispersal. Toshi Yoshihara, *Going Anti-Access at Sea: How Japan Can Turn the Table on China*, Center for a New American Security, September 2014.

²² For a similar view that we generally endorse, see Masashi Murano, "The Modality of Japan's Long-Range Strike Options," *Texas National Security Review*, Policy Roundtable: The Future of Japanese Security and Defense, October 1, 2020a.

Of the 50,000 military facilities, bases, and other general facilities that might be of potential military value, approximately 70 percent are apparently located within 400 km of the coastal area of China. Although many of them are allegedly hardened, they are not invulnerable to missile attacks. If Japan is able to acquire and deploy a variety of missile types with ranges of more than 2,000 km, these coastal targets would come within the range of these weapons.²³ China is still in the process of testing and developing its own domestically developed missile defense systems but has already developed the HQ-9 and HQ-12 SAMs. In addition, at the time of this writing, China is developing the HQ-19, which is reportedly capable of countering MRBMs.²⁴ In addition, it has purchased Russian-made S-300 and S-400 systems, which are also reportedly capable of countering MRBMs.²⁵ These trends imply that there is a need for Japan and the United States to gain the ability to wage saturation attacks through ballistic missiles to further impose costs on China by compelling it to invest more in defensive than in offensive systems. It also implies that Japan and the United States will need to acquire and deploy hypersonic weapons on various platforms that are capable of penetrating Chinese missile defense.

In any case, for China to maintain air and maritime superiority and achieve its strategic goals during a military operation in the East China Sea, critical military facilities that support China's offensive operations need to remain connected and operate collaboratively to form kill chains and sustain its invasion forces, so rendering certain fixed critical nodes of the kill chain dysfunctional would debilitate China's overall warfighting capacity.²⁶

Beyond Interception to Counterstrike

Past debates over how the United States should cope with China's A2/AD capabilities have focused on the risks of escalation associated with conducting strikes on the Chinese mainland and on the costs of military programs necessary to develop and field the U.S. weapon systems necessary to execute such operations.²⁷

²³ Masashi Murano, "U.S. Defense Strategy and Force Posture in the Post-INF Era" ["Post-INF Jidai no Beikoku no Koku-bousenryaku to Senryokutaisei"], in Satoshi Morimoto and Sugio Takahashi, eds., *The New Missile Arms Race and Japan's Defense [Aratana Misairu Gunkaku Kyousou to Nihon no Boei]*, Tokyo: Namiki Shobo, 2020b, p. 291; Masashi Murano and Yoko Iwama, "Thinking About Deterrence for Japan and Stability in Asia," Hudson Institute, October 15, 2021; Thomas G. Mahnken, Travis Sharp, Billy Fabian, and Peter Kouretsos, *Tightening the Chain: Implementing a Strategy of Maritime Pressure in the Western Pacific*, Washington, D.C.: Center for Strategic and Budgetary Assessments, 2019.

²⁴ U.S. Department of Defense, 2020, p. 52.

²⁵ Apparently, as of this writing, the PLAAF has more than 356 long-range SAMs (180 or more HQ-9 series, 32 S-300PMU, 64 S-300PMU1, 64 S-300PMU2, and 16 S-400), more than 320 medium-range SAMs (120 or more HQ-2 series, 150 HQ-12, and 50 or more HQ-22), and more than 78 short-range SAMs (48 or more HQ-6 series and 30 HQ-7). International Institute for Strategic Studies, *The Military Balance 2019*, London: Routledge, February 2019, p. 262. If PLAAF needed to fire two missiles for each incoming missile from this inventory, it would be able to intercept 377 Japanese and American missiles.

²⁶ China perceives militarized conflict to be a contest between opposing operational systems. See Jeffrey Engstrom, *Systems Confrontation and System Destruction Warfare: How the Chinese People's Liberation Army Seeks to Wage Modern Warfare*, Santa Monica, Calif.: RAND Corporation, RR-1708-OSD, 2018; Kevin McCauley, *PLA System of Systems Operations: Enabling Joint Operations*, Washington, D.C.: Jamestown Foundation, 2017.

²⁷ Elbridge Colby, "Don't Sweat AirSea Battle," *National Interest*, July 31, 2013; T. X. Hammes, "Sorry, AirSea Battle Is No Strategy," *National Interest*, August 7, 2013; Aaron L. Friedberg, *Beyond Air-Sea Battle: The Debate over US Military Strategy in Asia*, London: International Institute for Strategic Studies, 2014; David Gompert and Terrence Kelly, "Escalation Cause: How the Pentagon's New Strategy Could Trigger War with China," *Foreign Policy*, August 3, 2013; David Ochmanek, *Sustaining U.S. Leadership in the Asia-Pacific Region: Why a Strategy of Direct Defense Against Antiaccess and Area Denial Threats Is Desirable and Feasible*, Santa Monica, Calif.: RAND Corporation, PE-142-OSD, 2015; Stephen Biddle and Ivan Oelrich, "Future Warfare in the Western Pacific: Chinese Antiaccess/Area Denial, U.S. AirSea Battle, and Command of the Commons in East Asia," *International Security*, Vol. 41, No. 1, Summer 2016.

Accompanying the U.S. debate over how to respond to China's A2/AD threat, there have also been calls to strengthen the A2/AD capabilities of U.S. allies, most notably Japan.²⁸ As explained in the previous section, our proposed strategy focuses on (1) holding down costs by aiming for limited counterstrike capabilities—foregoing the forces needed to develop and execute strike packages and instead acquiring standoff weapons—and (2) limiting the risks of escalation by focusing on a select set of coastal targets that are critical to sustaining invasion operations. Even with these limitations, if Japanese counterstrike operations are combined with U.S. operations, it will serve the objective of effectively denying China the ability to achieve its goals by disabling the requisite systems for achieving its political objectives. Next, we lay out three key aspects that further define our proposed counterstrike capabilities.

Interception Plus Counterstrike

Japan should acquire counterstrike capabilities beyond an interception capability for the following reasons. First, intercepting missiles, aircraft, and ships is a competition over quantity and mass; China would likely have the advantage, given the scale of its missile inventory and production capacity, so interception operations would likely be partially successful. The PLA would also take measures to minimize the risks posed to their aircraft and ships by degrading as much as possible Japanese and American units capable of intercepting and defeating those aircraft and ships—though this would be a highly challenging task. Thus, competing with China on quantitative terms would lack strategic soundness for Japan. An asymmetric response that would disrupt China's warfighting system is required for an effective denial strategy.

Second, if Japan possesses the ability, alongside U.S. forces, to strike Chinese bases, ports, and various critical nodes and systems supporting the PLA's offensive operations, the alliance would be better able to deny China a sanctuary by degrading its ability to replenish its offensive forces and conduct attacks with little fear of consequence.²⁹ If China strikes at Japanese territory, at USFJ, or at U.S. bases in the western Pacific and if the United States and Japan do not strike back at China, Beijing would likely be encouraged to become even more aggressive. Such a restrained response might be tactically nonescalatory but would allow China to gain operational and, eventually, strategic advantage. Arguments that caution against attacking the Chinese homeland tend to implicitly assume that the United States is operating from a sanctuary or has itself been only minimally harmed, but a potential conventional conflict with China in the future might not, in fact, leave the U.S. any sanctuary. To avoid such an unfavorable situation, Japan and the United States need the ability to undertake proportional counterstrikes.³⁰

²⁸ Terrence K. Kelly, Anthony Adler, Todd Nichols, and Lloyd Thrall, *Employing Land-Based Anti-Ship Missiles in the Western Pacific*, Santa Monica, Calif.: RAND Corporation, TR-1321-A, 2013; Eric Lindsey, *Beyond Coast Artillery: Cross-Domain Denial and the Army*, Washington D.C.: Center for Strategic and Budgetary Assessments, 2014; Sugio Takahashi, *Counter A2/AD in Japan-U.S. Defense Cooperation: Toward "Allied Air-Sea Battle,"* Arlington, Va.: Project 2049 Institute, April 18, 2012; Andrew F. Krepinevich, Jr., "How to Deter China: The Case for Archipelagic Defense," *Foreign Affairs*, March/April 2015; Michael Beckley, "The Emerging Military Balance in East Asia: How China's Neighbors Can Check Chinese Naval Expansion," *International Security*, Vol. 42, No. 2, Fall 2017; Heginbotham and Samuels, 2018.

²⁹ Friedberg, 2014, p. 137. We believe that, while it is difficult to concretely quantify what kind of damage combined U.S.-Japan strike operations on coastal areas could impose on China, it is nonetheless essential to be able to keep degrading the Chinese military means that are necessary for aggression and replenishment (while avoiding countervalue strikes). Such an approach would likely be complemented by other steps aimed at imposing costs via nonmilitary means, such as economic and financial sanctions that, over time, would produce an impact that would be unfavorable to China strategically. Such an approach would not necessarily have to involve countervalue military strikes.

³⁰ The assumptions we make here are that U.S. strike operations will happen and that Japanese strike operations would complement U.S. strike operations when there is a need for combined strike operations. We believe such circumstances cannot be ruled out, given that a conflict with China could become a war of attrition and that network and electronic warfare could complicate various offensive operations. Additionally, we see two broad options: (1) the United States and Japan both have strike

Third, in connection with the earlier point, counterstriking Chinese bases, ports, and critical nodes would be strategically necessary to endure in a potentially protracted conflict. Even if a denial strategy to fend off a Chinese offensive were successful, and China decided to halt military operations, China likely would not give up its goal of imposing unification on Taiwan or capturing the Senkaku Islands once it had made an initial attempt, but China would instead merely defer the execution of such operations until a later, more favorable situation obtained. If this were the case, extending the time interval between China's initial attempt and its second effort to revise the status quo would be a strategic necessity. Counterstrikes on China's bases, ports, and critical nodes would make it necessary for China to recover and reconstitute more extensively and would force Beijing to take longer to rebuild for a second attempt. This would allow Japan and the United States to also recover from the damage caused by China's initial attack and reconstitute their own capacities. Gaining time to recover, elicit various forms of support from allies and partners, and explore diplomatic opportunities for a *modus vivendi* would all be crucial, so the interval after the conflict phase—effectively, the competition phase—should be extended as much as possible.³¹ In a protracted conflict, Japan and the United States would likely have to *repeatedly* deny China its revisionist goals by enduring in conflict and competition while seeking diplomatic solutions.³²

The basic idea is to add limited counterstrike capabilities to Japan's intercept capabilities and enhance these to the point that American and Japanese counterstrikes would be able to cause significant damage to the key Chinese systems sustaining the PLA's ability to conduct offensive operations so that China would be deterred from attempting such operations in the first place. Counterstriking military facilities and critical nodes with standoff weapons would be much less costly and escalatory than striking targets deep inside China. As China has been rapidly and significantly investing in developing its military capacity, Japan should join the United States to complement and maximize the lethality and survivability of the allies' strike capabilities.

Fixed, Not Mobile, Targets

Going after fixed instead of mobile targets with standoff weapons would require fewer expensive platforms and architectures and would make allied coordination and deconfliction less complicated and burdensome. Hitting mobile ground targets would require strike packages that involve highly expensive weapon systems and architectures, as well as substantial training. Such advanced missions should be left to the United States, which already has the necessary ability and experience and is furthering the modernization of its own conventional forces through a series of defense innovation initiatives. Japan should focus on developing counterstrike capabilities that aim to strike fixed military ground targets. It should also devise policies for employing such counterstrike capabilities in close consultation with the United States.

capabilities, and (2) only the United States has significant strike capabilities while Japan does not. We believe the situation in which both the United States and Japan have such capabilities would be better in terms of deterring China. We realize that any Japanese strike capabilities would be limited at an incipient stage, but it is, ultimately, up to policy to build that capability to a meaningful level. We do not believe that the United States has a policy of single-handedly holding strike capabilities, so there should be no reason to oppose delegating to Japan a fraction of its mission to strike fixed ground targets in the coastal region of China under agreed circumstances and also to assist Japan in developing strike capabilities. We similarly do not believe that there is any reason for the United States to oppose Japan's sovereign decision to acquire strike capabilities. Overhauling, augmenting, and updating the various alliance planning and coordination mechanisms, as well as the alliance's C2 arrangements, will be a serious challenge, but should be undertaken urgently.

³¹ A host of other nonmilitary measures, such as sanctions, would be required to diminish China's overall national capacity to wage war.

³² For a detailed discussion on the implications of a protracted conflict, see Andrew F. Krepinevich, Jr., *Protracted Great-Power War: A Preliminary Assessment*, Washington, D.C.: Center for a New American Security, February 2020.

Close Coordination with the United States as a Prerequisite

Finally, Japanese counterstrike operations and associated planning should be predicated on close Japan-U.S. consultation. If the SDF could launch counterstrikes against fixed ground targets, the U.S. forces would be free to go after a larger set of targets that require higher competence in offensive counterair. The need for deconfliction in the airspace during combined air and missile operations will no doubt require close consultation and operational coordination between the SDF and U.S. forces. In addition, tight operational coordination would alleviate U.S. concerns about the possibility of a Japanese unilateral decision to launch counterstrike operations. Japanese authorities should not make decisions on counterstrike operations without fully consulting the U.S. government. While Japan certainly has the right to defend itself, it would be beneficial for its overall security to ensure close coordination with the ally it relies on for strategic defense. Japanese and American political and strategic considerations need to be fully shared and understood to make any combined response effective.³³ The Japanese authorities will appreciate the fact that counterstrikes without consultation will undermine U.S. support and the solidarity of the alliance.

This will no doubt require an overhaul of the alliance—an issue that goes beyond what we can discuss here. What is most important is to convince China that its strategic goals, such as the invasion of Taiwan or the seizure of the Senkaku Islands, cannot be realized by the threat or use of force. Deterring China's use of force is the ultimate goal of the Japan-U.S. alliance.

A Proposed Phased Introduction of Expanded Counterstrike Capabilities

We propose that Japan should acquire expanded counterstrike capabilities in a phased manner based on their availability, cost, and ease of acquisition: first Tomahawks, then MRBMs and hypersonic weapons.³⁴ Japan should also continue its plan to develop and acquire long-range anti-ship cruise missiles (ASCMs) through upgrading the Type 12 surface-to-ship missile with an estimated potential range of 1,000 km.³⁵ The eventual deployment of these capabilities will no doubt require intensive training of SDF operators and advising and assistance from U.S. forces.

³³ For a detailed discussion of some major tasks that need to be addressed by the alliance, see Jeffrey W. Hornung and Scott W. Harold, "Japan's Potential Acquisition of Ground-Launched Land-Attack Missiles: Implications for the U.S.-Japanese Alliance," *War on the Rocks*, September 9, 2021.

³⁴ In a 2019 report from the Center for Strategic and Budgetary Assessments, the authors argued that "[p]erhaps the easiest short-term means of fielding a theater-range missile is a ground-launched Tomahawk Land-Attack Missile (TLAM)" because the existing ship-launched system might require only minimal adaptations to become ground-launched, "perhaps less than \$100 million in development costs" in U.S. dollars. That same report also proposed medium-term options, such as a Pershing III MRBM with a range of 2,000 km, which is estimated to cost "about \$16 million per missile" or a notional small MRBM with a range of 1,500 km, estimated to cost \$6 to 8 million per missile. See Jacob Cohn, Timothy A. Walton, Adam Lemon, and Toshi Yoshihara, *Leveling the Playing Field: Reintroducing U.S. Theater-Range Missiles in a Post-INF World*, Washington, D.C.: Center for Strategic and Budgetary Assessments, 2019, pp. 36–38. It has been reported that the U.S. Army is expected to acquire the Long-Range Hypersonic Weapon, or Dark Eagle, in 2023, so a ground-launched hypersonic weapon might become available before MRBMs. See Andrew Eversden, "First Live Hypersonic Missile Rounds to Be Delivered to Army Unit Next Year," *Breaking Defense*, October 15, 2021. Additionally, the U.S. Navy has announced that "[t]he Navy Strategic Systems Programs (SSP) and the Army Hypersonic Program Office (AHPO) successfully conducted a High Operational Tempo for Hypersonics flight campaign on October 20, 2021" and that "this test is a vital step in the development of a Navy-designed common hypersonic missile, consisting of a Common Hypersonic Glide Body (CHGB) and booster, which will be fielded by both the Navy and Army with individual weapon systems and launchers tailored for launch from sea or land." U.S. Navy, "Navy and Army Demonstrate Advanced Hypersonic Technologies," press release, Washington, D.C., October 21, 2021.

³⁵ On December 18, 2020, a Cabinet decision was made to pursue the development of this missile and the diversification of its launch platforms.

In the first phase, Japan should acquire ship-launched Tomahawk land-attack cruise missiles, and it should also acquire the ground-launched variant when it becomes available.³⁶ The ship-launched version can be launched from vertical launch systems of the MSDF ships with the necessary upgrading of their combat command systems, and the ground-launched version can be deployed on TELs throughout the southwestern islands and in the Kyushu region.

During the second phase, when the United States successfully develops ground-launched MRBMs—possibly around 2024 or later—Japan should acquire MRBMs and deploy them throughout the southwestern islands and in the Kyushu region. MRBMs with a range of approximately 2,000 km launched from Kyushu will be capable of striking targets within 1,000 km from Chinese shores in approximately 13 minutes. Ballistic missiles are tactically effective in terms of penetrating hardened underground facilities, and they can be launched from TELs. If Japan and the United States are able to mount ballistic missile attacks from about 100 launchers, it would become possible to conduct saturation attacks that could potentially overwhelm Chinese defenses.³⁷ One very rough costing estimate based on open sources suggests that acquiring 500 Tomahawks and introducing 25 MRBM units would still be cheaper for the SDF than two Aegis-equipped destroyers.³⁸

In the third phase, Japan should acquire hypersonic weapons with a range of approximately 2,000 km as soon as they are ready for acquisition and deployment, possibly in the late 2020s. Efforts to acquire hypervelocity gliding projectiles (HVGPs) and HCMs should be pursued; if acquired, these should be equipped on platforms of all three services of the SDF.³⁹ Another long-term goal for Japan would be to gain the ability to launch ballistic missiles from submarines deployed in the western Pacific.

In addition, as mentioned previously, Japan needs to deny the PLA Navy maritime superiority. Thus, the three services of the SDF should acquire the capability to target China's warships with long-range, high-speed ASCMs. Japan should move ahead with its decision to extend the range of the Type 12 surface-to-ship missile and diversify its operating platform. The MSDF should also introduce significant numbers of unmanned underwater vehicles and increase the number of submarines beyond 22; the ASDF should increase UAVs for maritime surveillance and acquire stealth unmanned combat aerial vehicles to be operated in contested areas. (Capabilities to be used in space, cyberspace, and electromagnetic domains will also be crucial but are not discussed here.)

³⁶ Type C is the conventional land-attack variant of the Tomahawk that has a range of approximately 1,300 km. The Tomahawk is subsonic and lacks penetrating power compared with ballistic missiles, but when deployed in large numbers, it would impose costs and complicate Chinese defense.

³⁷ Murano, 2020b, p. 304.

³⁸ It has been reported that the two Aegis Ashore systems would have cost 600 billion yen (roughly 6 billion U.S. dollars) that would have had to have been armed with tens of SM-3 Block2A interceptors that cost roughly 4 billion yen (roughly 40 million U.S. dollars) each. "Aegis Ashore, Total Cost of More than 600 Billion Yen for 2 Units: Three Times More Expensive than Originally Estimated, Ministry of Defense Cost Estimation Shows" ["Aegis Ashore 2ki de sougaku 6 sen oku cho: Kanrenshisetsu fukumeru to soutei no 3 baini Boueisho shisan"], *Sankei Shimbun*, July 23, 2018. An Aegis-equipped destroyer costs roughly 250 billion yen each, so two destroyers would amount to 500 billion yen (roughly 5 billion U.S. dollars). A Tomahawk is estimated to cost roughly 300 million yen (approximately 3 million U.S. dollars), and a single MRBM (Pershing II) would cost roughly 1.4 billion yen (approximately 14 million U.S. dollars).

³⁹ According to a March 2020 document from the Acquisition, Technology, and Logistics Agency, HCMs and HVGPs are expected to enter service in the early 2030s. HVGPs are HGVs. See Acquisition, Technology, and Logistics Agency, "R&D Vision: Stand-Off Defense Technologies—Toward the Realization of a Multi-Domain Defense Force and Beyond," briefing slides, Tokyo, Japan, March 31, 2020, p. 10.

Conclusion

Japan's acquisition of counterstrike capabilities would raise numerous questions if it were to happen. The tasks that lie ahead are no doubt challenging, but this does not change the fact that, if Japan does not shift from its existing approach to air and missile defense, deterrence will continue to erode. Therefore, a change in strategy needs to be undertaken without delay. There are numerous issues that need to be resolved, but three questions will be addressed here.

First, Japan's counterstrike capabilities will be used in full compliance with the Japanese Constitution and international law. Preemption is not an issue because the approach we are advocating is entirely defensive in nature. Under international law, a state under armed attack from another state has the right to defend itself as long as its responses—including counterstrike—are proportional. Drawing on its interpretation of the Japanese Constitution, the Japanese government has determined that “the possession of armaments deemed to be offensive weapons designed to be used only for the mass destruction of another country, which would, by definition, exceed the minimum necessary level, is not permissible under any circumstances.”⁴⁰ However, the counterstrike capabilities at issue do not contravene the existing official interpretation.

In embarking on an immediate program to acquire the counterstrike capabilities outlined earlier, the Japanese prime minister should publicly declare that (1) Japan will not preemptively attack another country, but (2) Japan will certainly counterattack if attacked. Japan previously refrained from acquiring counterstrike capabilities, not because they were prohibited by the Japanese Constitution but because there was an agreed-upon division of labor between the United States and Japan about their respective roles as “the spear” and “the shield.” This means that whether Japan assumes to play the role of the spear on a limited basis is purely a matter of policy, not a constitutional question. At a time when China is rapidly building up its military and when the risks of armed conflict are rising, the acquisition of Japanese counterstrike capabilities increasingly fits with a minimally necessary capability for self-defense. Washington, which has long sought to encourage Japan to relax some of its self-imposed constraints on its defense capabilities and invest more in effective deterrent capabilities, is likely to support Japan as it takes steps that contribute to regional security and stability.

Second, there are those who worry that, if Japan were to possess counterstrike capabilities, China would respond negatively. However, while Japan's defense budget has increased only slightly over the past three decades, China's military budget has increased dramatically during the same period and, today, is already more than six times that of Japan. Many regional states are responding to China's arms buildup by strengthening their own defense forces and advancing defense cooperation with other states.⁴¹ For example, Australia, upon adopting its *2020 Defence Strategic Update* and *Force Structure Plan*, decided to increase its defense budget from 42 billion Australian dollars (fiscal years [FYs] 2020 to 2021) to 73.7 billion Australian dollars (FYs 2029 to 2030) during the next decade—the net difference is roughly equivalent to Japan's defense budget for FY 2020.⁴² Given that Australia's population is one-fifth of Japan's, and its nominal GDP is one-fourth,

⁴⁰ Japan Ministry of Defense, “Overview and Fundamental Concepts of National Defense,” webpage, undated-b. The website's explanation is based on the Japanese government's official statement to the House of Representatives on February 14, 1978, which represents the authoritative view on what the Japanese government cannot possess under Article 9 of the Japanese Constitution. The statement said that the specific limit was subject to change relative to the prevailing international situation, the level of military technologies, and various other factors, and it was discussed and decided through annual budget deliberations and other factors by the Diet.

⁴¹ Scott W. Harold, Derek Grossman, Brian Harding, Jeffrey W. Hornung, Gregory Poling, Jeffrey Smith, and Meagan L. Smith, *The Thickening Web of Asian Security Cooperation: Deepening Defense Ties Among U.S. Allies and Partners in the Indo-Pacific*, Santa Monica, Calif.: RAND Corporation, RR-3125-MCF, 2019.

⁴² Department of Defence, Australian Government, *2020 Defence Strategic Update*, Canberra, July 2020a, p. 53; Department of Defence, Australian Government, *2020 Force Structure Plan*, Canberra, 2020b; Department of Defence, Australian Government, “Defence Budget,” fact sheet, Canberra, 2020c, p. 1.

the Australian decision demonstrates the seriousness of the worsening regional security environment. Thus, one should not lose sight of the fact that states are reacting to a destabilizing China and not the other way around. Regional states, such as Japan, are trying to mitigate the risks of the growing military imbalance caused by China's arms buildup and increasingly aggressive behavior, and the purpose of Japan's counter-strike capabilities is to enhance regional security by modestly redressing this widening imbalance of military power. Had China taken a more reassuring path, Japan would not be having this debate.

Finally, with regard to the fiscal feasibility of acquiring counterstrike capabilities, we recognize that the need for domestic spending to respond to the damages caused by COVID-19 will inevitably constrain the defense budget. The same could be said about the United States, and although its defense spending might remain flat for a year or two, it might face downward pressure in the near future. Other regional states might also face similar situations because the fallout from the pandemic is global. However, when it comes to defense spending, Japan needs to realize that it is in a different position from others in the sense that its defense budget has consistently remained far lower than those of other regional countries in terms of defense spending-to-GDP ratio. The defense budget, as a percentage of GDP, for FY 2019 was 3.4 percent for the United States, 2.7 percent for South Korea, 2.4 percent for India, 1.9 percent for Australia, and 0.9 percent for Japan.⁴³ Australia has made a bold decision to dramatically expand its defense spending over the next decade. The United States will maintain its commitment to defend its allies, but the strength of that commitment is likely to depend on how much an ally contributes to maintaining regional security. To politically strengthen the Japan-U.S. alliance, Japan must boldly expand its defense budget and assume wider roles, missions, and capabilities to defend itself and contribute to regional security. Increasing the defense budget is a political decision and not an impossibility. Rather than the United States asking Japan to increase its defense expenditures, Japan should take the initiative to increase its defense budget for strengthening its conventional deterrence and vigorously advance defense cooperation with the United States, Australia, and other regional security partners.⁴⁴ It must begin with the realization that the military requirements for peace and stability in the western Pacific must change without delay.

Fully engaging in diplomacy and strengthening the alliance to stabilize international relations is an absolute necessity. However, as stated in the white paper by Japan's Ministry of Defense, *Defense of Japan 2020*, defense capability is "the ultimate guarantor of Japan's national security . . . [and it] represents Japan's will and ability . . . as a sovereign nation, by exerting efforts on its own accord and initiative, [to] defend to the end Japanese nationals' life, person and property as well as territorial land, waters and airspace."⁴⁵ We feel that much change needs to happen to make Japan's defense capabilities achieve this fundamental purpose. The proposals contained in this chapter are just one set of recommendations that are intended to identify some major elements of a new defense strategy for Japan in an era of strategic competition with China.

⁴³ Stockholm International Peace Research Institute, "Military Expenditure by Country as Percentage of Gross Domestic Product, 1988–2019," database, 2020. China's military budget was 1.9 percent of its GDP. Stockholm International Peace Research Institute, "Military Expenditure (% of GDP)," *SIPRI Yearbook: Armaments, Disarmament and International Security*, data set, undated. North Korea spent roughly 13.4 percent to 23.3 percent for the period between 2007 and 2017. "N. Korea Ranks No.1 in Military Spending as Percentage of GDP," Yonhap News Agency, January 9, 2020.

⁴⁴ Defense Minister Kishi Nobusuke stated, in an interview on May 19, 2021, that Japan will need to strengthen its defense capabilities at an unprecedented pace and that the Japanese defense budget should not be constrained to 1 percent of the GDP. Junnosuke Kobara, "Japan to Scrap 1% GDP Cap on Defense Spending: Minister Kishi," *Nikkei Asia*, May 20, 2021.

⁴⁵ Japan Ministry of Defense, 2020b, p. 243.

Japanese Strike Capabilities and the U.S.-Japan Alliance

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In recent years, Japanese defense policymakers and analysts have expressed a growing interest in missiles as a tool to enhance the country's overall deterrence and defense capabilities. These discussions intensified following Tokyo's surprise cancellation of two Aegis Ashore ballistic missile defense systems in June 2020.¹ Then, in December 2020, Tokyo decided to continue discussions on strike capabilities while moving forward on an Aegis Ashore replacement and an extension of existing missile ranges.² One of the main areas of focus of Japan's strike discussions has been why Japan needs these capabilities and the advantages and disadvantages of possessing ballistic and cruise missiles.³ Another focus has been the legal framework that these capabilities would require.⁴ Broader operational considerations have been addressed only rarely.⁵ And almost no attention has been paid to the consequences for the U.S.-Japan alliance. This chapter seeks to address this last issue by examining the implications of Japan's acquisition of ground-based, long-range strike capabilities for the U.S.-Japan alliance. In particular, it explores the prospective impact of the acquisition on four areas: (1) planning, (2) operations, (3) technology and hardware, and (4) air and missile defense. The chapter does

¹ Tim Kelly, "Japan to Consider Strike Capability to Replace Missile Defence System, Reuters, June 25, 2020.

² The Cabinet announced a decision to pursue the construction of two Aegis-equipped destroyers as a substitute for the Aegis Ashore system. It also announced the conversion of Type-12 ASCMs into long-range standoff missiles. Japan Ministry of Defense, "About the Development of a New Missile Defense System, etc. and the Strengthening of Stand-Off Defense Capabilities" ["「新たなミサイル防衛システムの整備等及びスタンド・オフ防衛能力の強化について」"], December 18, 2020a.

³ Murano, 2020a; Murano and Iwama, 2021; Kelly C. Wadsworth, "Should Japan Adopt Conventional Missile Strike Capabilities?" *Asia Policy*, Vol. 14, No. 2, April 2019; David Santoro and Brad Glosserman, "Offensive Strike in Asia: A New Era?" *War on the Rocks*, September 18, 2020; Sugio Takahashi, "Dealing with the Ballistic Missile Threat: Whether Japan Should Have a Strike Capability Under Its Exclusively Defense-Oriented Policy," *National Institute for Defense Studies Security Reports*, No. 7, December 2006.

⁴ Masahiro Kurosaki, "The Dynamics of Japan's 'Armed Attack Initiation' Doctrine and Anticipatory Self-Defense," *Lawfare*, September 1, 2020; James L. Schoff and David Song, "Five Things to Know About Japan's Possible Acquisition of Strike Capability," Carnegie Endowment for International Peace, August 14, 2017; "Enemy Base Attack, Aiming to Avoid Misunderstanding with Preemptive Attack, Search for Common Ground" ["「敵基地攻撃 着地点探る 先制攻撃の誤解避ける狙い」"], *Sankei Shimbun*, September 19, 2020.

⁵ Masashi Murano, "The Japan-US Alliance in a Post-INF World: Building an Effective Deterrent in the Western Pacific," Hudson Institute, December 18, 2019.

not discuss the rationale or the merits of Japan acquiring these capabilities. Rather, the argument presented here is that such capabilities carry consequences for the U.S.-Japan alliance that need to be considered.⁶

Background

Japan eschews the terms *long-range strike* and *offensive strike* in favor of describing fire capabilities in terms of self-defense. The approach dates to comments made in 1956 by the administration of Hatoyama Ichirō, which talked about the need to be capable of “striking bases within the territory of an aggressor nation” (侵略国の領域内の基地をたたく).⁷ A variant of this phrase is now used: The government employs the euphemism “enemy base attack capability” (敵基地攻撃能力) to refer to long-range ground-attack missile capabilities. This phrasing resurfaced in March 2017 when Japan’s ruling LDP examined the issue (but ultimately did not act on it).⁸ Subsequently, the issue gained extra momentum in the context of Japanese deterrence capabilities after the Abe Shinzō administration decided to suspend deployment of two Aegis Ashore systems in June 2020.

The Abe administration and its successor, the Suga Yoshihide administration, stated that Japan needs a capability that can strike an enemy base preparing to launch missiles against Japan or counterstrike such an adversary after absorbing a first strike before the enemy can launch more salvos.⁹ Proponents of acquiring these strike capabilities argue that ballistic missile defense is relatively expensive and potentially ineffective against saturation attacks because Japan’s air defense assets and munition stocks are likely insufficient, so Japan should have capabilities to disrupt an attack by striking at an adversary’s launchpads. Tokyo is interested in how a limited number of strike capabilities can augment its existing ballistic missile defenses by doing just enough to complicate an adversary’s planning and to neutralize as many adversary missile sites as possible while intercepting others in the air before they can reach their targets.¹⁰

Because Japan does not have these capabilities, it is important to explain the assumptions that underlie this chapter. In Japan’s *National Defense Program Guidelines for FY 2019 and Beyond*, Tokyo introduced its interest in procuring a “standoff defense capability.”¹¹ Details were provided in the accompanying Medium-Term Defense Program, which included references to JSMs, the JASSM (later clarified to be the JASSM-ER, and the Long-Range Anti-Ship Missile—all of which would notionally be deployed on ASDF air platforms.

⁶ Because Japan does not possess ground-based, long-range strike capabilities, an exploration of the consequences for the alliance is a largely a hypothetical endeavor with little scholarship from which to draw. Therefore, much of the analysis in this chapter relies on interviews with civilian and armed forces personnel, both active and retired, in the United States and Japan. Also, because this issue is quite large, the chapter makes certain assumptions and focuses on some issues while leaving others for further research. For example, there could be broader geopolitical implications if Japan were to field ballistic missiles capable of reaching Chinese strategic assets, or Japan’s actions could lead to unexpected negative effects on arms control efforts or regional stability. As important as these issues are, however, this chapter does not examine them. See Schoff and Song, 2017; Murano, 2019; Murano, 2020a.

⁷ Funada Naka, House of Representatives, Cabinet Committee, Tokyo, February 29, 1956, parliamentary debate, National Diet Library online archives.

⁸ “LDP Research Commission Acknowledges the Recommendation for ‘Enemy Base Attack’” [“「敵基地攻撃」提言を了承 自民調査会」], *Nikkei Shimbun*, March 29, 2017.

⁹ “PM Abe, This Summer Will Revise National Security Strategy and Consider Acquisition of Enemy Base Strike Capability” [“敵基地攻撃能力保有を検討 安保戦略、今夏練り直し—安倍首相”], *Jiji*, June 18, 2020.

¹⁰ Yuki Nikaido and Ryo Aibara, “Japan to Revise Security Strategy with Halt to Aegis Ashore System,” *Asahi Shimbun*, June 20, 2020; Jeffrey W. Hornung, “Is Japan’s Interest in Strike Capabilities a Good Idea?” *War on the Rocks*, July 17, 2020a.

¹¹ Japan Ministry of Defense, *National Defense Program Guidelines for FY 2019 and Beyond*, Tokyo, December 18, 2018b, pp. 21–22.

The Medium-Term Defense Program also made note of Japan's research and development on HVGPs, new surface-to-ship missiles, and hypersonic weapons.¹² Depending on their means of delivery and proximity to an adversary, these capabilities have the potential to deliver strike packages far from Japanese shores. Aside from ASCMs, however, Japan does not possess ground-launched cruise or ballistic missiles with ranges that can reach the territory of such countries as China or North Korea.¹³ For this chapter, I have assumed that, if Japan acquires strike capabilities, it would field ground-launched missiles capable of reaching all of the Korean peninsula and large parts of China. Potential options include ground-based variants of the U.S. Navy's Tomahawk cruise missile or the multipurpose Standard Missile-6.¹⁴ The chapter assumes these types of systems, not ASCMs, air- or sea-launched missiles, or short-range precision strike missiles that do not require sophisticated, real-time targeting networks (e.g., artillery and mortars).

The chapter also assumes Tokyo reinterprets its domestic laws to enable the government to acquire these capabilities under independent Japanese control without violating any existing legal statutes or interpretations. This would involve, at the very least, a reinterpretation of Japan's exclusively defense-oriented defense policy (専守防衛) to permit Japan to possess missiles that can strike an adversary on its own shores in a defensive capacity. In so doing, the chapter assumes that Japan can maintain its constitutional prohibition against waging aggressive war but maintain tactically offensive weapons for an active defense posture.

Four Areas of Consequence

Japan's acquisition of long-range strike capabilities could affect the U.S.-Japan alliance in terms of (1) planning, (2) operations, (3) technology and hardware, and (4) air and missile defense.

Planning

Former Deputy Assistant Secretary of Defense for Strategy and Force Development Elbridge Colby has stated that it would make sense for Japan to have strike capabilities, "especially one integrated with U.S. plans and systems," to give the allies the ability to target PLA airfields and other military facilities because this would pose a tremendous challenge to the United States should it be its responsibility alone.¹⁵ Of course, if the SDF have the ability to strike foreign territory from launchers based in Japan, the allies will need to plan for this. Although the contents of their CONOP and OPLANs—unilateral or bilateral—are classified, public documents shed light on how they approach planning.

In 1978, the allies' first mutual defense guidelines stated that the SDF and U.S. forces would conduct studies on joint defense planning limited to Japan's defense.¹⁶ As part of this process, the allies were to study

¹² While the HVGP will be propelled by rocket engines, the hypersonic missiles will be propelled by scramjet engines. Japan Ministry of Defense, *Medium Term Defense Program (FY 2019—FY 2023)*, Tokyo, December 18, 2018a, p. 12.

¹³ Japan operates the Type-12 ASCM. In December 2020, media reported that Tokyo had extended the range of these from 200 km to 900 km and that the range of a new ASCM under development is 2,000 km. Jeffrey W. Hornung, *Japan's Potential Contributions in an East China Sea Contingency*, Santa Monica, Calif.: RAND Corporation, RR-A314-1, 2020b, pp. 58–67; "Toward the Development of a 'Domestically Produced Tomahawk,' New ASCM with 2,000 km Range, Extension of the Type-12 to 1,500 km" ["「国産トマホーク」開発へ 射程2千キロの新型対艦弾 12式は1500キロに延伸"], *Sankei Shimbun*, December 29, 2020.

¹⁴ Tyler Rogoway, "The Army Is Working to Field a Ground-Launched Strike Version of the Navy's SM-6 Missile," *The Drive*, September 6, 2020; David B. Larter, "The US Navy Has an Upgraded Tomahawk: Here's 5 Things You Should Know," *Defense News*, December 14, 2020.

¹⁵ Hiroyuki Akita, "Why Japan Should Have the Capability to Counterattack Enemies," *Nikkei Asia*, August 7, 2020.

¹⁶ Japan and the United States, *The Guidelines for Japan-U.S. Defense Cooperation*, November 27, 1978.

and prepare common procedures deemed necessary for operational needs.¹⁷ In 1997, the allies revised the guidelines and “opened the aperture” of defense planning beyond simply the defense of Japan to situations in areas surrounding Japan (SIAS-J).¹⁸ The guidelines stipulated that the results of mutual cooperation planning efforts would be reflected in the plans of the two governments. Importantly, the guidelines established common standards for preparations for the defense of Japan and cooperative measures in SIAS-J and common procedures to ensure the smooth and effective execution of coordinated operations.¹⁹ This included an agreement to develop and update bilateral plans to ensure effective execution of coordinated operations by their combined forces.²⁰ Then, in the 2015 guidelines, bilateral planning was strengthened further through an upgraded Bilateral Planning Mechanism meant to ensure that bilateral plans are “reflected appropriately in the plans of both governments.”²¹

Japanese long-range strike capabilities will require a broader scope of planning than what these public documents suggest the allies are conducting. This is because, at the time of this writing, the scope of any plan would be very narrow, based on tactical capabilities that cannot strike far from Japan.²² The alliance is “woefully behind the curve” in terms of deliberate plans and products that could serve as the foundation for bilateral planning for long-range strike operations.²³ Because Japan has never had such capabilities, no details are provided in existing plans and planning cycles that consider these; new capabilities would require new plans.²⁴ Washington would need to understand Japan’s targeting system, strike doctrine, and objectives for using strike capabilities and, based on these, draw Japan into a coordinated alliance plan. This would likely involve alliance agreement on a theory of victory, an OPLAN and CONOP, and joint targeting processes where the allies agree on target lists—including no-strike lists and restricted target lists—and clarify operational responsibilities, as well as when and how these missiles should be used and for what effect.²⁵

The *process* of revising plans might take time. Political agreement would come first, setting restraints and constraints for negotiations.²⁶ Then, like negotiations on ballistic missile defense in which the allies discuss what needs to be defended by which fire units, negotiations would move to objectives, strategies, and specific targeting options.²⁷ Because Japan has never had such capabilities and because unilateral U.S. OPLANs and contingency plans are not shared with Japan, bilateral planning that involves long-range strike capabilities

¹⁷ Such procedures include matters related to operations, intelligence, and logistics. Because communications and electronics are essential to command and liaison, the allies will also determine their mutual communications and electronics requirements.

¹⁸ Retired U.S. military officer, email correspondence with the author, January 29, 2021.

¹⁹ Japan and the United States, *The Guidelines for Japan-U.S. Defense Cooperation*, September 23, 1997. The common standards are meant to address such matters as intelligence activities, unit activities, movements, and logistics support in each readiness stage. The common procedures include such matters as procedures for communications, transmission of target information, intelligence activities and logistics support, and prevention of fratricide. Common procedures will also include criteria for properly controlling respective unit operations.

²⁰ Japan and the United States, *The Guidelines for Japan-U.S. Defense Cooperation*, April 27, 2015.

²¹ Japan and the United States, 2015.

²² Japan Ministry of Defense official, interview with the author, January 13, 2021; U.S. military officer, interview with the author, April 1, 2021.

²³ U.S. military officer, email correspondence with the author, March 23, 2021.

²⁴ Japan Ministry of Defense official, interview with the author, January 14, 2021; SDF officer, interview with the author, January 14, 2021; Japan Ministry of Defense official, interview with the author, April 10, 2021.

²⁵ Loren Thompson, “Army Breakthroughs in Long-Range Fires Raise Novel Questions About Targeting, Organization, Command,” *Forbes*, August 7, 2020.

²⁶ Retired U.S. military officer, interview with the author, January 15, 2021.

²⁷ SDF officer, interview with the author, January 14, 2021.

would have to begin from scratch, which would necessitate a lot of back-and-forth coordination between policy and military levels.²⁸ It would also likely necessitate closer talks between Japan's operations (J3) and strategic planning and policy (J5) directorates and the U.S. Indo-Pacific Command (USINDOPACOM) J3/J5.²⁹ If Japan's strike units are fielded by the GSDF, planning would likely take more time than if the ASDF or MSDF fielded the units because the GSDF has "nowhere close to that level of operational thinking" needed to conduct operations far from Japanese shores.³⁰ The services would have to work to learn the necessary shared concepts and doctrines to incorporate these capabilities into existing plans. Because of Japan's decades-long experience of training with and learning from the United States, Japan's long-range fire concepts and doctrines would probably be closely coordinated with the United States, resulting in the SDF likely adopting "almost identical planning processes to those of the U.S.," thereby helping the process move along quicker than it otherwise would.³¹

Agreeing on the *content* of plans, however, is likely to be a completely "different story."³² These negotiations "would be hard."³³ First, the allies might have difficulty agreeing on a shared understanding of the objective of a long-range strike as part of their shared CONOP and achieving the allies' theory of victory.³⁴ Would Japanese strikes be used just to neutralize specific targets such as launchers, for example, to impair China's East China Sea operational domain? Or would the strikes be part of a broader effort to enable U.S. forces to project power deep into enemy territory, potentially even to topple the Chinese leadership? Even if the allies agreed on objectives, Japan's lack of experience beyond tactical fires that enable maneuver of forces might make it difficult to reach agreement on specifics in the alliance's OPLAN and contingency plan. For example, Japan might want to avoid specific target discussions in favor of discussions on broad situations in which it could legally use missiles, such as if North Korea struck Japan and appeared to be readying to launch again.³⁵ Agreeing on specific target lists and strike tasking could be difficult because Japan could approach these talks with a very constrained view, politically unable to pursue countervalue targets, limited instead to counterthreat targets.³⁶ Yet as the January 2020 drone strike on Iranian General Qasem Soleimani demonstrates, the United States sometimes strikes high-value targets when the opportunity arises.³⁷ Japan, however, would probably be highly cautious about even striking an airfield in the middle of a populated area.³⁸ Therefore, if Japan finds it difficult to agree to strike countervalue targets or targets that might risk harming

²⁸ Japan Ministry of Defense official, interview with the author, January 14, 2021; SDF officer, interview with the author, February 3, 2021; Japan Ministry of Defense official, interview with the author, February 6, 2021.

²⁹ Japan Ministry of Defense official, interview with the author, January 14, 2021.

³⁰ Because the GSDF focuses on attacking visible points at relatively close ranges, the GSDF would have to overcome its historic focus of solely defending Japanese territory. The addition of operating ASCMs is a step in this direction. SDF officer, interview with the author, February 10, 2021.

³¹ Japan Ministry of Defense official, interview with the author, April 10, 2021.

³² SDF officer, interview with the author, January 14, 2021.

³³ Retired U.S. military officer, interview with the author, January 20, 2021.

³⁴ SDF officer, interview with the author, January 25, 2021.

³⁵ Japan Ministry of Defense official, interview with the author, January 20, 2021.

³⁶ Retired U.S. military officer, interview with the author, January 15, 2021; SDF officer, interview with the author, February 3, 2021.

³⁷ Michael Crowley, Fahim Hassan, and Eric Schmitt, "U.S. Strike in Iraq Kills Qasim Soleimani, Commander of Iranian Forces," *New York Times*, January 2, 2020.

³⁸ SDF officer, interview with the author, April 14, 2021.

civilians, it might be difficult for the allies to reach consensus on targets and division of roles in their planning processes.

Operations

In an operation in which the GSDF uses long-range strike capabilities, it would need to integrate these with other SDF capabilities. These capabilities, in turn, would need to be coordinated with the operational activities of all four services of the U.S. military. These would consist of air, naval, ground, cyberspace, space, and electromagnetic operations; combat search and rescue and personnel recovery; and logistical support. The crowded operational battlespace will challenge the allies' ability to synchronize and deconflict to avoid fratricide. This will put pressure on the allies to achieve much deeper integration of their operational decision-making to know where their assets are, where they are going, and how best to generate force.³⁹ This is intrinsically a large issue that cannot be fully explored here, but by narrowing the focus, we can ask how long-range strike capabilities could affect the way the allies conduct the C2 of their forces.

The U.S.-Japan alliance has two parallel C2 structures, a difference from the North Atlantic Treaty Organization or the U.S.-ROK alliance.⁴⁰ In a contingency, for the United States, a joint force commander would have operational control over units allocated to them by the theater combatant commander, in this case the Commander, USINDOPACOM, which would likely establish a joint task force (JTF) to which it would hand off operational control. The organic command element of the JTF commander would serve as the nucleus of the JTF headquarters, to which other headquarters would send personnel. Japan, for its part, would command operations out of Tokyo, with command authority flowing from the prime minister through the minister of defense to the commanders of the major service commands (for the GSDF, that is the Ground Component Command; for the MSDF, the Self-Defense Fleet; and for the ASDF, the Air Defense Command). Like the United States, Japan may establish a JTF, with the minister of defense designating an SDF regional commander as the JTF commander and the JTF commander's organic headquarters serving as the JTF headquarters. The allies would coordinate their separate operations through the Alliance Coordination Mechanism (ACM).

The ACM is meant to strengthen policy and operational coordination related to activities conducted by the SDF and U.S. forces in all phases from peacetime to contingencies.⁴¹ Although the ACM is considered *standing* at all times, given that personnel conduct coordination through it and share nearly daily communications, it does not physically exist and has no dedicated, permanently manned personnel and equipment devoted to it.⁴² Structurally, the ACM consists of three layers. The top layer consists of the Alliance Cooperation Group, which focuses on policy and interagency coordination, while the middle layer focuses on joint coordination and the lower one on service component or JTF-level coordination, or both.⁴³ The joint layer consists of the Bilateral Operations Coordination Center (BOCC), which, using physical space in the Bilateral Joint Operations Coordination Center at Yokota Air Base, is staffed by military and embassy representatives from both sides, with the purpose being "to coordinate and conduct bilateral operations" between the two

³⁹ Retired U.S. military officer, interview with the author, January 15, 2021.

⁴⁰ Jeffrey W. Hornung, *Modeling a Stronger U.S.-Japan Alliance: Assessing U.S. Alliance Structures*, Washington, D.C.: Center for Strategic and International Studies, November 2015; Jeffrey W. Hornung, *Managing the U.S.-Japan Alliance: An Examination of Structural Linkages in the Security Relationship*, Washington, D.C.: Sasakawa Peace Foundation USA, 2017.

⁴¹ Japan and the United States, 2015.

⁴² Hornung, 2017, p. 50.

⁴³ Japan Ministry of Defense, "Composition of the Alliance Coordination Mechanism (ACM)" ["「同盟調整メカニズム (ACM) の構成」"], undated-a.

militaries.⁴⁴ This covers the full spectrum of military operations: logistics, protection, and any other aspect requiring bilateral joint coordination. This allows the allies to be in the same space, where they can coordinate their operations together even though execution is under their separate national authorities. Below this layer is the component layer that coordinates activities of the different services in three Component Coordination Centers—ground, maritime, and air—and has the capability to perform the function of JTF-level coordination between U.S. and Japanese JTFs.

Although the allies can plan operations in peacetime without an integrated C2, having an integrated C2 structure for conducting operations would be extremely beneficial.⁴⁵ This is because, among other things, the allies will want to ensure that their sensors and weapons are synchronized and decisionmaking unified to take advantage of time-sensitive information, particularly targets at long distances. Officials already admit that their parallel C2 structures are “not effective” and that they “always struggle” with this fact in training.⁴⁶ It is, one U.S. military official has argued, the alliance’s “greatest vulnerability.”⁴⁷ This will be particularly problematic when operational situations change rapidly, requiring quick responses.⁴⁸ Integrating C2 would benefit operations because it would streamline decisionmaking and provide unity in command. Through a unified chain of command, the allies would be able to use their assets in a more effective manner to gather intelligence, analyze targets, prioritize target selection, disseminate orders, strike, and conduct battle damage assessments—all on a continual basis.⁴⁹ Given that the United States already relies on such a model in the Combined Air Operations Center (CAOC) when it operates in a coalition, the United States might prefer this framework with Japan because it enables the United States to integrate and synchronize strategic decisions to tactical-level execution of coalition members.⁵⁰ In this framework, U.S. doctrine and processes get applied, meaning that the United States will lead operations and be responsible for planning, monitoring, and directing sortie execution, close air support, and precision air strike; intelligence, surveillance, and reconnaissance (ISR); airlift; air refueling; aeromedical evacuation; air drop, and other mission-critical operations.⁵¹

Although this integrated format simplifies operational C2, the allies could confront challenges. For Japan, it presents two potential complications. One is legal. Integrating C2 structures with any country poses problems because Japan legally is prohibited from doing so per a constitutional prohibition on integrating with the use of force with another military (武力行使との一体化).⁵² The rationale behind this is that Japan is “concerned legally [about] being in a chain of command that would force [its] officials to make a war decision that is prohibited by [its] constitution.”⁵³ In a situation where Japan has not been attacked but the United States wants to launch an attack on an adversary, this would therefore present a legal problem for Japan. And

⁴⁴ Hornung, 2017, p. 51. The BOCC, as a bilateral coordination center, handles issues that cannot be resolved by the components. The senior U.S. officer in the BOCC is the Commander, USFJ. The senior Japanese officer is usually the deputy commander of the joint staff.

⁴⁵ Retired U.S. military officer, interview with the author, January 15, 2021.

⁴⁶ Japan Ministry of Defense official, interview with the author, January 20, 2021.

⁴⁷ U.S. military officer, email correspondence with the author, March 15, 2021.

⁴⁸ Japanese security expert, interview with the author, February 4, 2021.

⁴⁹ Retired U.S. military officer, interview with the author, January 21, 2021.

⁵⁰ “Combined Air Operations Center (CAOC),” fact sheet, U.S. Air Forces Central, July 2017.

⁵¹ Even if naval and ground forces are involved, there will be cells inside the CAOC that consist of personnel from these services, such as a Maritime Domain Operations Center, for example. “Combined Air Operations Center (CAOC),” 2017.

⁵² Japan Ministry of Defense, “Q&A Integration with the Use of Force” [“「Q&A 武力行使との一体化」”], 2003 *Defense White Paper* [平成15年版 防衛白書], Tokyo, 2003.

⁵³ Japan Ministry of Defense official, interview with the author, January 20, 2021.

although there is a view in Japan that this is not likely problematic in a defense of Japan situation (i.e., where Japan has been attacked), “theoretically [it] does not disappear even in a defense of Japan situation” because “if the U.S. is using force for other purposes” beyond Japan’s defense, the issue is still relevant.⁵⁴ For example, because Article VI of the U.S.-Japan security treaty gives the United States the responsibility to maintain the international peace and security in the Far East, if Washington sought to conduct military operations against another country that was not related to the defense of Japan, the integrated command “would put Japan in a tricky situation” with its domestic laws.⁵⁵

The second problem relates to politics. One political challenge would be the fact that an integrated command structure requires one commander. Although the United States would likely want to be in charge because of its operational experience, it would likely be politically difficult for a Japanese leader to place Japan under a U.S. commander, even in defense of Japan, because this might have the optics of being seen as a return to an “occupation-type relationship.”⁵⁶ Japan wants to avoid this because its leaders want to “decide by [them]selves.”⁵⁷ A second political challenge has to do with operational decisions. Executing plans requires flexibility and rapid decisionmaking. For the United States, once an operational area has been established, a U.S. commander would have wide powers; a Japanese commander, by contrast, would likely not have that same freedom because of sensitivities and the need for political sign-off.⁵⁸ Instead, Japan will likely seek more political control over operational decisions. For example, Japan would likely be forced to conduct many meetings to decide what action to take, likely taking much more time than an adversary to launch its missiles.⁵⁹ This could limit U.S. options; foreclose the opportunity to act quickly; and, in some cases, preclude the ability to take advantage of targets of opportunity.⁶⁰

Should C2 integration prove difficult, the allies would need to coordinate operations from their existing parallel C2 structures. For a high-end contingency, this arrangement could function via coordination cells built around the ACM.⁶¹

Although operational coordination for any high-end conflict is expected to be difficult, the addition of coordinating long-range strike operations might require the allies to reexamine whether the ACM is sufficient. Skeptics argue the ACM “lacks the command and control elements necessary for a rapid combined and joint response to potential crises or conflicts.”⁶² The ACM has also never tested how all its layers work based on actual war plans.⁶³ Such skeptics note that, because the ACM has no standing liaisons attached or physical space—and the necessary equipment—it is not equipped to be the central C2 node for bilateral

⁵⁴ Japan Ministry of Defense official, email correspondence with the author, March 8, 2021. Another official expressed a similar concern, saying Japan “can’t escape” from it. Ministry of Defense official, interview with the author, January 20, 2021.

⁵⁵ Japan Ministry of Defense official, interview with the author, April 10, 2021.

⁵⁶ Retired U.S. military officer, interview with the author, January 20, 2021.

⁵⁷ SDF officer, interview with the author, April 14, 2021.

⁵⁸ U.S. military officer, interview with the author, April 1, 2021; SDF officer, interview with the author, April 14, 2021.

⁵⁹ Japan Ministry of Defense official, interview with the author, January 20, 2021.

⁶⁰ U.S. military officer, interview with the author, April 1, 2021.

⁶¹ Hornung, 2017.

⁶² Michael Green, Kathleen Hicks, Mark Cancian, Zack Cooper, John Schaus, Ernest Bower, Victor Cha, Heather Conley, Ryan Crotty, Melissa Dalton, Bonnie Glaser, Rebecca Hersman, Murray Hiebert, Christopher Johnson, Thomas Karako, Stephanie Sanok Kostro, Gregory Poling, Richard Rossow, Sharon Squassoni, Nicholas Szechenyi, and Denise Zheng, *Asia-Pacific Rebalance 2025: Capabilities, Presence, and Partnerships, an Independent Review of U.S. Defense Strategy in the Asia-Pacific*, Washington, D.C., Center for Strategic and International Studies, January 2016, p. 58.

⁶³ SDF officer, interview with the author, January 25, 2021.

operations in a contingency.⁶⁴ There is a possibility, for example, that personnel at USFJ will be “chopped up for unilateral operations vice [being] focused on bilateral coordination.”⁶⁵ For skeptics, ensuring efficient operational coordination in the existing parallel C2 systems will require the ACM to acquire some level of dedicated manpower, equipment and physical space where U.S. and Japanese personnel can work together in large numbers in peacetime and a contingency.

This view is not universally shared. Other observers believe the “beauty of the ACM” is its flexibility.⁶⁶ It is built to find solutions at the lowest level possible and to adjust to situations as needed. As noted earlier, this means the CAOC could potentially be plugged into the ACM to coordinate fire operations. Because specific targets could require political involvement on the Japanese side, being able to quickly send operational questions that carry policy implications or require interagency coordination to the Alliance Coordination Group would support allied operations.⁶⁷ It is also unclear whether Japan’s acquisition of strike capabilities would dramatically alter coordination requirements. The defense of Japan is already operationally complex, requiring the allies to closely coordinate, for example, on operational deconfliction and airspace management. The addition of strike capabilities does not “dramatically change the [issues] already taxing coordinating requirements” and the efforts the allies are making to overcome these.⁶⁸ And because everything is mostly digital anyway, adding strike capabilities would simply be another tool in the alliance’s arsenal.⁶⁹

Regardless of which view is accurate, a key to success in operating under parallel C2 structures will be for any SDF officers working in the ACM to have decisionmaking authority. If they do—operating under their commanders’ intent—coordinating alliance operations with parallel C2 structures should be easier.⁷⁰ This would allow the allies to resolve problems at the lowest level possible instead of pushing it up for senior deliberations, which is the norm today.⁷¹

Hardware and Technology

A third area of potential consequence is the adverse impact that Japan’s acquisition of the necessary hardware and supporting technologies and architectures might have on the alliance. As of this writing, Japan has some of the relevant technology that would be needed to field long-range strike capabilities, such as sensors and radars. Successfully executing long-range strike operations, however, will require the infrastructure to find, fix, track, target, and assess what are likely to be well-hidden or well-defended targets. Japan will need not just more-sophisticated sensors, satellites, and long-range radars and the missiles and launchers that are often the focus of debate in Japan but also the supporting infrastructure to collect and transmit the targeting information to those shooters and conduct battle damage assessment.⁷² Acquiring and setting a target (or conducting battle assessment) that is potentially thousands of miles away will require obtaining informa-

⁶⁴ Japanese security expert, interview with the author, February 4, 2021.

⁶⁵ U.S. military officer, email correspondence with the author, March 23, 2021.

⁶⁶ Japan Ministry of Defense official, interview with the author, February 6, 2021.

⁶⁷ Japan Ministry of Defense official, interview with the author, January 14, 2021; Japan Ministry of Defense official, interview with the author, February 6, 2021; U.S. military official, interview with the author, April 1, 2021.

⁶⁸ Japan Ministry of Defense official, interview with the author, February 6, 2021.

⁶⁹ SDF officer, interview with the author, January 14, 2021; U.S. military officer, interview with the author, April 1, 2021.

⁷⁰ Japan Ministry of Defense official, interview with the author, January 14, 2021; U.S. military officer, interview with the author, April 1, 2021.

⁷¹ Retired U.S. military officer, interview with the author, January 15, 2021.

⁷² For insight into the types of networks and supporting infrastructure required, see Barry D. Watts, *Six Decades of Guided Munitions and Battle Networks: Progress and Prospects*, Washington, D.C.: Center for Strategic and Budgetary Assessments,

tion from advanced low Earth orbit satellites, sophisticated airborne ISR capabilities, and sensors close to the target. It will also require a robust network that rapidly connects these assets to ground shooters to transmit the targeting information via secure networks. And to increase strike effectiveness, Japan will require robust cyber, space, and electromagnetic capabilities to degrade an adversary's defenses before these missiles reach their targets. Whether Japan obtains this infrastructure independently or relies on U.S. infrastructure will carry different consequences for the alliance.⁷³ Japan is nowhere close to possessing this infrastructure today. For example, according to former Defense Minister Kōno Tarō, "While currently we don't have long-range missiles, we don't have . . . capability for ISR, we don't have capability to shut down the enemy radar. In order to have a strike package, it will take some years, and it will cost us some more."⁷⁴

According to former Assistant Chief Cabinet Secretary Yanagisawa Kyoji, the costs for Japan to independently obtain these capabilities would be "astronomical."⁷⁵ Doing so could have deleterious consequences on the alliance if acquiring them forced trade-offs about what to cut and keep in Japan's already constrained defense budget. As two analysts warn, "their price tag and deterrence effectiveness should be weighed against those of systems that will not be purchased because of budget constraints."⁷⁶ Pouring money into these capabilities, including the supporting infrastructure, could come with opportunity costs in terms of other defense efforts foregone.⁷⁷ These could include modernizing aircraft and expanding the fleet; maintaining and acquiring sufficient ships to maintain sea superiority; bolstering the existing ballistic missile defense system; continuing Japan's push into the new domains of space, cyber, and the electromagnetic spectrum; and possibly, hampering Japan's shift toward smaller, survivable, and attritable forces. The alliance would have to decide whether the trade-offs of not investing in these areas are worth the investment in strike capabilities.⁷⁸ However, should Japan be able to acquire an independent strike infrastructure without sacrificing these critical efforts, it could benefit the alliance. More than simply a deeper missile magazine, having a broader network of sensors, ISR capabilities, and high-speed information-sharing capabilities that can provide greater situational awareness in the theater and, if necessary, striking if the United States is unable to do so, adds value to the alliance and reduces sole reliance on the U.S. network.⁷⁹ This would "make the alliance stronger" and make Japan and the United States "equal partners" in ways that they are not today.⁸⁰

March 2007; Barry D. Watts, *The Evolution of Precision Strike*, Washington, D.C.: Center for Strategic and Budgetary Assessments, August 6, 2013.

⁷³ Not covered here, but equally important, is that Japan would also need to be able to readily replace and replenish its strike capabilities from attrition and usage. U.S. military officer, email correspondence with the author, March 23, 2021.

⁷⁴ Kōno Tarō, Minister of Defense, Government of Japan, transcript of interview with John J. Hamre and Michael J. Green, "Mt. Fuji DC Event: The U.S.-Japan Alliance at 60," Washington, D.C.: Center for Strategic and International Studies, September 9, 2020.

⁷⁵ "Interview: Ex-Japan Official Cautious About Enemy Base Attack Capability," *Nippon*, August 18, 2020.

⁷⁶ Santoro and Glosserman, 2020.

⁷⁷ Research by Jacob L. Heim has suggested that the true costs of ground-based missiles, once costs of supporting architectures and maintenance are factored in, could be two to three times those of the missiles themselves. See Jacob L. Heim, *Missiles for Asia? The Need for Operational Analysis of U.S. Theater Ballistic Missiles in the Pacific*, Santa Monica, Calif.: RAND Corporation, RR-945-A, 2016.

⁷⁸ One individual interviewed for this research said that it is possible to argue that, if Japan acquires strike capabilities, it could fund this through a reduction in ballistic missile defense interceptors because these are quite expensive. Japan security expert, interview with the author, February 4, 2021.

⁷⁹ Japan security expert, interview with the author, February 4, 2021; SDF officer, interview with the author, February 10, 2021.

⁸⁰ Retired U.S. military officer, interview with the author, January 20, 2021.

The cheaper—and more likely—option (at least in the near term) is for Japan to rely on the existing U.S. infrastructure.⁸¹ This option is not unheard of for U.S. allies. The ROK, for example, has relied heavily on U.S. satellites to secure military information about North Korea’s nuclear and missile-related activities to acquire the situational awareness needed for its operational purposes.⁸² This reliance on the United States might also be problematic, however, because this could require the United States to devote some of its assets, such as satellites and sensors, for use by Japan, when these might otherwise be engaged elsewhere. It would also reduce any benefits to be gained from redundancy. Japan having its own sensors and command, control, and communications (C3) grid would provide redundancy in the event an adversary successfully attacked large numbers of U.S. sensors and degraded the U.S. C3 grid. For this option to work, however, the allies would have to build-in sharing procedures in peacetime and agree on prioritization of usage during a contingency.⁸³ The Japanese sensor and C3 grid would also likely need to be integrated into the U.S. sensor and C3 grid. This might cause problems for Japan. Regardless of who plans an operation, if Japan is assigned targets using U.S. intelligence, Japan might not be legally able to carry out the mission if its political leaders believe it violates the integration with the use of force prohibition described earlier.⁸⁴ Japanese political leadership might also be hesitant to launch attacks relying solely on received data because, without the ability to independently verify, there is a risk Japanese missiles could strike friendly forces or civilians.⁸⁵ This would be problematic because politicians would not be able to explain why they felt the target was the right target.⁸⁶

Air and Missile Defense

Former U.S. Secretary of Defense Robert Gates noted in 2010 that

[p]otential adversaries are investing in weapons designed to neutralize U.S. advantages—to deny our military freedom of action while potentially threatening America’s primary means of projecting power: our bases, sea and air assets, and the networks that support them.”⁸⁷

The same might be true of Japan and any strike capabilities it fields. Although the acquisition of strike capabilities does not change the threat that Japan faces from such potential adversaries as China, given China’s proximity to Japan, Japanese fire units and the bases that house them will be within range of Chinese air and missile assets. This means that Japan’s strike capabilities will be operationally relevant as long as they are protected. Should an adversary successfully attack the shooters, their maintenance facilities, or munitions storage, Japan could be prevented from generating strikes. Therefore, Japan will need to “double down on defense of these assets” if it wants to retain their operational relevance beyond their first usage.⁸⁸

As a 2020 RAND report on U.S. air base vulnerabilities detailed, bases face several threats from the air, such as cruise and ballistic missiles, hypersonic weapons, combat aircraft, civil aircraft, unmanned aircraft

⁸¹ This was the dominant opinion heard throughout all interviews for this research.

⁸² Jun Ji-hye, “3 Military Systems to Counter N. Korea: Kill Chain, KAMD, KMPR,” *Korea Times*, November 1, 2016.

⁸³ SDF officer, interview with the author, February 10, 2021.

⁸⁴ Japan Ministry of Defense official, interview with the author, January 14, 2021.

⁸⁵ SDF officer, interview with the author, February 10, 2021.

⁸⁶ SDF officer, interview with the author, April 29, 2021.

⁸⁷ Samuel R. Bethel, “Sustainment in an Anti-Access/Area-Denial Environment,” U.S. Army, January 4, 2016.

⁸⁸ Japanese security expert, interview with the author, February 4, 2021.

systems, rockets, mortars, and non-line-of-sight missiles.⁸⁹ These threats would also be present for Japanese bases housing long-range strike capabilities. The dangers of cruise missiles, for example, are highlighted in a 2015 RAND report that analyzes the effect of Chinese cruise missile attacks on infrastructure targets at Kadena Air Base, finding that just 60 cruise missiles could target every hangar, hardened aircraft shelter, and fuel tank such that every target individually would suffer a greater than 90-percent probability of kill.⁹⁰ If Japan's strike capabilities are meant to deter adversaries, defending them against an air and missile attack will likely be a top priority for the alliance. Effective air and missile defense will rely on a mix of active and passive defense measures. Active options include radio frequency jamming, directed-energy weapons, guns, SAMs, and aircraft flying defensive counterair missions, while passive options include using CCD, dispersing assets on one base and across multiple bases, hardening facilities, and employing postattack recovery capabilities.⁹¹ Should Japan acquire long-range strike options, Japan—and likely the United States—will need to make a more concerted effort in both defense areas.

Of Japan's active defense efforts, all areas of kinetic measures to defend future strike capabilities will require improvements, which could lead to increased taskings for different units in the alliance, including the United States. For example, although Japan has airborne early warning and battle management aircraft—such as the Airborne Warning and Control System—and combat fighters for defense of air bases, Japan's focus on defense will likely mean that these assets will focus on defense in depth rather than flying surveillance, offensive counterair combat operations, or combat air patrols in forward areas closer to enemy territory. Additionally, the SDF field Patriot systems on land for defense against cruise missiles and terminal phase interception of ballistic missiles and a Stinger-type missile and Type-03 and Type-11 SAMs for defense against aircraft and cruise missiles. However, more are needed, and these disparate short-range air defense systems need to be better coordinated into an integrated air and missile defense architecture.⁹² Third, Japan is weak in electronic-warfare capabilities, particularly electronic attack, such as jamming capabilities to disrupt communication or disorient the navigation systems and sensors of adversary aircraft or munitions. Finally, although its consideration is still in the early stages, Japan is exploring directed-energy technologies that can disable or destroy incoming enemy weapon systems or delivery platforms, similar to what the United States is doing.⁹³

The same is true of Japan's passive defense measures. As previously mentioned, passive defense measures include using CCD, dispersing assets on one base and across multiple bases, hardening facilities, and employing postattack recovery capabilities. Although Japan does some of this, it has not always been a focus. For example, outside Hokkaidō, Japan has few hardened bunkers or bases.⁹⁴ If Japan were to invest in long-range strike capabilities, some Japanese officials might conclude that the country can deprioritize passive defense measures.⁹⁵ But the opposite is true: Acquiring strike capabilities will require a more robust effort in Japan's passive defenses. For example, dispersing these fire units across multiple areas helps enhance their resiliency. Furthermore, although Japan does have some hardening of munitions depots, fuel lines, and communication

⁸⁹ Alan J. Vick, Sean M. Zeigler, Julia Brackup, and John Speed Meyers, *Air Base Defense: Rethinking Army and Air Force Roles and Functions*, Santa Monica, Calif.: RAND Corporation, RR-4368-AF, 2020, pp. 6–25.

⁹⁰ Heginbotham, Nixon, et al., 2015, pp. 62–63.

⁹¹ Vick et al., 2020, pp. 26–53.

⁹² Hornung, 2020b, pp. 62–64.

⁹³ “Japan to Launch Full-Scale R&D on High Power Microwave Weapons,” *Japan News*, February 6, 2022; Vick et al., 2020, pp. 31–32.

⁹⁴ Retired U.S. military officer, interview with the author, January 20, 2021.

⁹⁵ Japan Ministry of Defense official, interview with the author, January 14, 2021.

links, more can be done. More systematic burying (or tunneling if possible) or strengthening aboveground facilities with reinforced concrete could benefit these efforts, as would modernizing its existing underground facilities, such as fuel tanks. These efforts are expensive and not “sexy” compared with new equipment, so historically Japan has not invested heavily in these efforts.⁹⁶

Although Japan will be responsible for these efforts, defending against air and missile attacks has the potential for placing additional strain on the United States, which already will likely be tasked with most of the alliance’s offensive operations.⁹⁷ At a minimum, as a 2017 RAND report recommended, the United States should consider engaging Japan proactively to ensure that it develops systems that are secure from attack so as not to encourage preemption in a crisis.⁹⁸ Japan, in turn, might seek U.S. assistance in providing forward defense while Japan focuses on defense in depth, perhaps requiring assets specifically tethered to protecting these critical strike assets and the sustainment operations for these units to ensure uninterrupted support for combat operations. Japan might also need assistance with radar coverage because most SDF radars are ground- or sea-based, meaning that, at their low altitude, their radar horizon is limited and so will have difficulty detecting low, ocean-skimming missiles coming in from further away.⁹⁹ And given the quantitatively larger Chinese air and missile threats, the United States might need to help defend these strike assets because “Japan isn’t able to solely defend itself against the threats and the threats are outpacing Japan in capability/capacity.”¹⁰⁰ To avoid entering a regional contingency at a deficit, U.S. active defense measures would likely be needed to bolster the alliance. The same is true of passive defense efforts. The hardened aircraft shelters at U.S. air bases in Asia were designed to defeat near misses from aircraft delivering dumb bombs and tactical missiles—the primary Cold War-era threats—not direct hits from precision weapons, such as cruise missiles.¹⁰¹ Given that the use of laser-guided munitions increases the likelihood of direct hits, U.S. bases could benefit from more-robust designs meant to defend against modern threats.

The U.S. might also find it necessary to strengthen its own air and missile defense systems if SDF fire units are colocated with U.S. forces. This will require the allies to work out task-sharing responsibilities for base protection. For the United States, building up the capabilities to perform this task could prove to be a formidable challenge. As a 2020 RAND report on air bases details, “although the imperative of air base defense is often acknowledged, it must compete with other programs for funding and other fixed facilities for access to defensive systems.”¹⁰² The result is inadequate base defenses. Although that report does not cover data on U.S. bases in Japan, it can be inferred that U.S. bases in Japan likely suffer from inadequate air and missile defenses for its bases, thus requiring significant improvements should the United States help defend Japan’s strike assets.

⁹⁶ SDF officer, interview with the author, April 29, 2021.

⁹⁷ The allies do not have task-sharing of base protection. They are responsible for protecting their own bases, but this becomes complicated when the allies are colocated on the same base.

⁹⁸ Eric Heginbotham, Michael S. Chase, Jacob L. Heim, Bonny Lin, Mark R. Cozad, Lyle J. Morris, Christopher P. Twomey, Forrest E. Morgan, Michael Nixon, Cristina L. Garafola, and Samuel K. Berkowitz, *China’s Evolving Nuclear Deterrent: Major Drivers and Issues for the United States*, Santa Monica, Calif.: RAND Corporation, RR-1628-AF, 2017, p. 162.

⁹⁹ SDF officer, interview with the author, January 14, 2021.

¹⁰⁰ U.S. military officer, email correspondence with the author, April 15, 2021.

¹⁰¹ Vick et al., 2020, p. 47.

¹⁰² Vick et al., 2020, p. 1.

Conclusion

Introducing Japanese long-range strike capabilities would mean Japan has an ability to project force at distances once reserved solely for the United States. Because this alters the *shield-spear* relationship that has long defined the alliance's roles and missions, these new capabilities might place pressures on several aspects of the alliance, as discussed earlier. There are many other issues not covered here that would likely be part of alliance discussions. This could include questions about whether the allies' existing information-sharing practices are sufficient; whether USFJ would require new authorities and a more robust number of people and capabilities; and how to synchronize alliance efforts across the spectrum of doctrine, organization, training, materiel, leadership and education, personnel, and facilities.

The fundamental issue that this chapter highlights is that, if Japan acquires ground-launched strike capabilities, several areas of the alliance would be affected. This central fact is often ignored or underappreciated in the public debate about Japan's right or need to acquire such capabilities. It will be important for the U.S. and Japan to have a substantive discussion about the possible consequences of any decision to procure such capabilities for the alliance from the executive level down through their respective defense and foreign policy establishments.

Conclusion

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As the foregoing chapters have demonstrated, China's growing military power and assertiveness are fueling a debate inside Japan over how best to preserve deterrence and the kinds of roles, missions, and capabilities the SDF need and should take on, as well as how those sit within the U.S.-Japan alliance.¹ At a broader level, China's rise and growing assertiveness are contributing to a broader rethink in Japan about its identity, the role of military power and defense spending, the U.S.-Japan alliance, and Tokyo's place in the world.² If Japan moves to procure and field more long-range strike capabilities in support of a concept of deterrence premised on a retaliatory capability, would it be able to do so in a way that would clearly hurt China so badly that it would dissuade Chinese decisionmakers from initiating a conflict? Or might China's enormous size, looser restrictions on doctrine and targeting, and greater comparative escalation capability make such an approach inherently costly, unlikely to succeed, and highly risk acceptant?

At a minimum, should Japan procure long-range land-attack PGMs, it will need an understanding of Chinese views of deterrence and escalation, preferably a view shared with its U.S. ally and grounded in substantial research.³ It will also, as Mori, Kitaoka, and Hornung all note, require an extended and detailed dialogue with the United States about how best to employ such capabilities within an alliance framework. One leading study group of U.S. experts on Japan has argued for a deepening integration of military planning and intelligence cooperation, calling for "operating from combined bases, establishing a combined JTF, creating a Japanese joint operations command, and conducting combined contingency planning."⁴ Japan expert

¹ Yoshikazu Watanabe, Masanori Yoshida, and Masayuki Hironaka, *The U.S.-Japan Alliance and Roles of the Japan Self-Defense Forces: Past, Present, and Future*, Washington, D.C.: Sasakawa Peace Foundation USA, 2016.

² Michael J. Green, *Japan's Reluctant Realism: Foreign Policy Challenges in an Era of Uncertain Power*, New York: Palgrave Macmillan, 2003; Kenneth Pyle, *Japan Rising: The Resurgence of Japanese Power and Purpose*, New York: PublicAffairs, 2007; Richard J. Samuels, *Securing Japan: Tokyo's Grand Strategy and the Future of East Asia*, Ithaca, N.Y.: Cornell University Press, 2008; Andrew L. Oros, *Normalizing Japan: Politics, Identity, and the Evolution of Security Practice*, Stanford, Calif.: Stanford University Press, 2008; Andrew L. Oros, *Japan's Security Renaissance: New Policies and Politics for the Twenty-First Century*, New York: Columbia University Press, 2017; Smith, 2019.

³ Burgess Laird, *War Control: Chinese Writings on the Control of Escalation in Crisis and Conflict*, Washington, D.C.: Center for a New American Security, April 2017; Alison A. Kaufman and Daniel M. Hartnett, *Managing Conflict: Examining Recent PLA Writings on Escalation Control*, Arlington, Va.: Center for Naval Analyses, February 2016; and Dean Cheng, "An Overview of Chinese Thinking About Deterrence," in Frans Osinga and Tim Sweijs, eds., *NL ARMS Netherlands Annual Review of Military Studies 2020: Deterrence in the 21st Century—Insights from Theory and Practice*, Breda, The Hague, The Netherlands: T. M. C. Asher Press, 2021.

⁴ Richard L. Armitage, Joseph S. Nye, Kara Bue, Victor Cha, Zack Cooper, Michael Green, Matthew Goodman, Kevin Nealer, and Sheila Smith, *More Important than Ever: Renewing the U.S.-Japan Alliance for the 21st Century*, Washington, D.C.: Center for Strategic and International Studies, October 2018.

James L. Schoff has similarly advised “an increase in joint and shared use of facilities in Japan and abroad” and praised the allies’ decision to pursue upgraded bilateral planning and the ACM.⁵

Despite such developments as Tokyo’s reinterpretation of its right to exercise collective-self-defense, its passage of a package of peace and security enabling legislation in 2014, and the 2015 revised guidelines for U.S.-Japan defense cooperation, more work remains to be done if the U.S. and Japan are going to operate in an integrated fashion. Hornung and Mochizuki, for example, have argued that Japan remains an “exceptional ally” in the sense that its defense policies remain substantially more constrained by constitutional interpretation, politics, and policy than those policies of other U.S. allies.⁶ Liff similarly points out that, although Japanese defense policy has never been completely inflexible in light of changes in external threat levels and shifts in technology, many observers nonetheless appear to overestimate the extent of the changes in Japan’s security policies under the Abe administration, which were “evolutionary,” not revolutionary.⁷ Japan and the United States might, therefore, wish to substantially deepen their dialogue on Japan’s defense policy, strategy, capabilities and the roles, missions, and the capabilities Japan brings to the U.S.-Japan alliance, including the possibility of any prospective joint command structures, ahead of any Japanese procurement of long-range strike capabilities. And at a minimum, the United States and Japan might wish to discuss the advantages and disadvantages of various long-range strike options, as well as force employment concepts and targeting decisions. Such discussions might require reconceptualizing the roles and missions of U.S. and Japanese forces and could necessitate building a new, shared theory of deterrence using both denial and counterstrike by Japan and the United States. If Japan, which already possesses some strike capabilities, moves to embrace a theory of deterrence based in part on retaliatory strikes to degrade PLA capabilities for offensive operations, Japan and the United States will likely also need to discuss a shared concept of force employment, escalation management, and victory that would undergird such an approach premised on greater Japanese strike capabilities. As one reviewer commented during the preparation of this document, questions raised by such a shift would almost certainly include the following:

- What is the theory of victory?
- What targets would be struck?
- Would the targets be primarily countervalue or counterforce?
- What specific targets would be hit within those broad categories?
- To what extent would the intended targets be likely to have the desired impact?
- If striking the intended targets succeeded in causing China significant pain, how would Chinese leaders likely respond? Would Japan (and the United States) prevail in the potential exchange that would follow?
- Would Japan itself be deterred from embarking on a counterstrike campaign by the threat of nuclear retaliation?⁸

A clearer understanding of how Japan views the evolving Chinese and North Korean threats, the requirements of deterrence, and its own military needs and its place in the broader U.S.-Japan alliance would rep-

⁵ James L. Schoff, *Uncommon Alliance for the Common Good: The United States and Japan After the Cold War*, Washington, D.C.: Carnegie Endowment for International Peace, 2017.

⁶ Jeffrey W. Hornung and Mike M. Mochizuki, “Japan: Still an Exceptional U.S. Ally,” *Washington Quarterly*, Vol. 39, No. 1, 2016.

⁷ Adam P. Liff, “Policy by Other Means: Collective Self-Defense and the Politics of Japan’s Postwar Constitutional Reinterpretations,” *Asia Policy*, No. 24, July 2017, pp. 139–172; Adam P. Liff, “Japan’s Defense Policy: Abe the Evolutionary,” *Washington Quarterly*, Vol. 38, No. 2, 2015.

⁸ The authors would like to thank Eric Heginbotham for assistance in identifying and conceptualizing the additional questions raised by the counterstrike argument advanced by Mori and Kitaoka.

resent important contributions to preserving peace and stability in the Indo-Pacific. If Tokyo decides that it needs to procure expanded long-range strike capabilities, it will be necessary for the U.S. and Japan to have a shared understanding of what Japan is looking to field, how it will use any new capabilities, and the impact of such a decision on the U.S.-Japan alliance. For many in the United States, such capabilities could be seen as additive and operational, especially if embedded in a notional future joint command structure. For others, however, if the existing absence of a unitary alliance command structure remains, a shift in Japan toward an embrace of deterrence through counterstrike might appear unconvincing and the implications for escalation management disturbing. Conceivably, as Japan's capacity for independent action grows, the United States might seek to reduce its risk profile by shifting toward greater ambiguity in its commitment to Japan's security, a development that would clearly be at odds with the goals that advocates of increased Japanese strike capabilities are aiming at.⁹

How U.S. observers and policymakers would respond to such a shift merits substantial additional dialogue among American and Japanese defense experts. These conference proceedings aim to contribute to such a discussion.

⁹ The authors would again like to thank Eric Heginbotham for suggesting these points.

Abbreviations

| | |
|----------|---|
| A2/AD | antiaccess and area denial |
| ACM | Alliance Coordination Mechanism |
| ASBM | anti-ship ballistic missile |
| ASCM | anti-ship cruise missile |
| ASDF | Air Self-Defense Force |
| BOCC | Bilateral Operations Coordination Center |
| C2 | command and control |
| C3 | command, control, and communications |
| C4ISR | command, control, communications, computers, intelligence, surveillance, and reconnaissance |
| CAOC | Combined Air Operations Center |
| CCD | camouflage, concealment, and deception |
| CONOP | concept of operations |
| FY | fiscal year |
| GDP | gross domestic product |
| GLCM | ground-launched cruise missile |
| GSDF | Ground Self-Defense Force |
| HCM | hypersonic cruise missile |
| HGV | hypersonic glide vehicle |
| HVGP | hypervelocity gliding projectile |
| ICBM | intercontinental ballistic missile |
| INF | Intermediate-Range Nuclear Forces |
| IRBM | intermediate-range ballistic missile |
| ISR | intelligence, surveillance, and reconnaissance |
| JASSM-ER | Joint Air-to-Surface Standoff Missile–Extended Range |
| JSM | Joint Strike Missile |
| JTF | joint task force |
| LDP | Liberal Democratic Party |
| MRBM | medium-range ballistic missile |
| MSDF | Maritime Self-Defense Force |
| OPLAN | operational plan |
| PGM | precision-guided munition |
| PLA | People’s Liberation Army |
| PLAAF | People’s Liberation Army Air Force |
| PRC | People’s Republic of China |
| ROK | Republic of Korea |
| SAM | surface-to-air missile |

| | |
|-------------|---------------------------------------|
| SDF | Self-Defense Forces |
| SIAS-J | situations in areas surrounding Japan |
| SRBM | short-range ballistic missile |
| TEL | transporter-erector-launcher |
| UAV | unmanned aerial vehicle |
| USFJ | U.S. Forces, Japan |
| USINDOPACOM | U.S. Indo-Pacific Command |

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