

STIMSON

ASIA

FROM THE *VIEWS FROM THE NEXT GENERATION* SERIES

# KEY CHALLENGES

## In Japan's Defense Policy

EDITED BY YUKI TATSUMI & PAMELA KENNEDY

Japanese  
Foreign Policy

Japan Program



STIMSON

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# Preface

I am delighted to present the latest publication from the Stimson Center’s Japan Program. *Key Challenges in Japan’s Defense Policy* is the seventh volume of *Views from the Next Generation*, an annual collection of policy briefs that offer recommendations for the most significant challenges facing Japan and its partners today. This edition benefits from the diverse expertise of five leading and emerging scholars, who share with us fresh insights on Japan’s defense policy.

The topics they cover—ensuring a human resource base for the military, deterring attacks from new technologies, balancing budget constraints with emerging threats, and maintaining partnerships amidst political changes—are pressing questions for not only Japan but states around the world. As governments design policy to adapt to novel domains like outer space, cyberspace, and the electromagnetic spectrum, the acceleration and complexity of threats mandate new thinking. Here we look to nuanced analysis from up-and-coming experts to shed light on how Japan and its partners can ensure stability in the Indo-Pacific region. Across its seven-year history, the *Views from the Next Generation* series has been uniquely positioned to provide balanced, original perspectives on today’s security challenges. I am confident the discussions in this volume raise timely and universal questions about the realities and future of security policy in Asia.

I am once again grateful to Yuki Tatsumi for leading this project as a part of Stimson’s expansive work on Japan. Yuki has dedicated her career to deepening ties across the Pacific, and her reputation as a rigorous scholar and nonpartisan voice on Japanese security and alliance policy precedes her. In this volume she again demonstrates her commitment to facilitating cross-border understanding. Pamela Kennedy and Jason Li also provided critical support to this publication. Finally, my colleagues and I are grateful for the continued support from our friends at the Embassy of Japan for their support of this initiative.

Brian Finlay  
President and CEO  
The Stimson Center

# Acknowledgments

*Key Challenges in Japan's Defense Policy*, the seventh volume of the *Views from the Next Generation* series, is the product of a great team effort. First and foremost, I would like to thank our contributing authors, Mr. Takahisa Kawaguchi, Dr. Masashi Murano, Ms. Ayumi Teraoka, Lt. Col. Taro Sato, and LCDR Yoshimitsu Sato, for producing high-quality essays. I very much appreciate their commitment to meeting various deadlines for drafts and revisions under relatively short writing and editing schedules.

I am also grateful for the encouragement and collaboration of the Embassy of Japan since the inception of this project seven years ago. This series would not be possible without their consistent support, and I truly look forward to continuing this collaboration. I am especially thankful to Mr. Michiru Nishida for making the project management as smooth as possible.

As always, my gratitude goes to my Stimson colleagues for their support and assistance. Brian Finlay, Stimson's president and chief executive officer, continues to be tremendously supportive of the Japan Program's efforts, including this project, to broaden the intellectual exchange between American and Japanese scholars beyond familiar names and faces. I am thankful for Stimson's Communications team and our talented graphic designer Lita Ledesma, who made the publication process seamless. I am also deeply grateful to Research Analyst Pamela Kennedy, Research Assistant Jason Li, and Research Intern Joseph Ross for taking on the labor-intensive details of our preparation for publication.

This is the first publication following Stimson's Japan Program reaching the milestone of its 20th anniversary in 2019. My team and I have a renewed sense of commitment to our efforts to not only produce our own timely analyses but also continue to cultivate the fresh perspectives of emerging security policy experts from Japan.

Yuki Tatsumi  
Co-Director, East Asia Program  
Director, Japan Program  
March 2020

# Abbreviations

A2/AD	Anti-access/area denial
ASDF	Air Self-Defense Force
ASAT	Anti-satellite weapon
ASEAN	Association of Southeast Asian Nations
ASW	Anti-submarine warfare
BRI	Belt and Road Initiative
C4ISR	Command, Control, Communication, Computer, Intelligence, Surveillance, and Reconnaissance
CSG	Carrier Strike Group
DA-ASAT	Direct Ascent Anti-Satellite
E.U.	European Union
EW	Early warning
FOIP	Free and open Indo-Pacific
FONOP	Freedom of navigation operation
GEO	Geostationary orbit
GOJ	Government of Japan
GSDF	Ground Self-Defense Force
INF	Intermediate-Range Nuclear Forces Treaty
ISR	Intelligence, surveillance, and reconnaissance
JAXA	Japan Aerospace Exploration Agency
JPS	Japan Pension Service
LEO	Low earth orbit
LTS	Long-term sustainability
MOD	Ministry of Defense
MRBM	Medium-range ballistic missile
NDPG	National Defense Program Guidelines
NDS	National Defense Strategy
NISC	National Center of Incident Readiness and Strategy for Cybersecurity
NSPM	National Security Presidential Memorandum



NSS	National Security Strategy
PLA	People's Liberation Army
PLAN	PLA Navy
PNT	Position, navigation, and timing
RPO	Rendezvous and proximity operation
SATCOM	Satellite communication
SBIRS	Space-based infrared system
SDF	Self-Defense Forces
SSA	Space situational awareness
U.S.	United States
USCYBERCOM	U.S. Cyber Command

# Introduction

YUKI TATSUMI AND PAMELA KENNEDY

On January 19, 2020, the United States and Japan celebrated the 60<sup>th</sup> anniversary of the signing of the U.S.-Japan Mutual Security Treaty. The foreign and defense ministries of the two countries recognized this occasion by issuing a Joint Statement on January 17, followed by celebratory messages from U.S. President Donald Trump and Japanese Prime Minister Shinzo Abe, commemorating the “peace, security, and prosperity” enabled by the “pillar immovable” that is the alliance.<sup>1</sup>

Through these statements, the two governments sent two significant messages: (1) the U.S.-Japan alliance is more critical than ever for the peace and prosperity of the Indo-Pacific region and beyond, and (2) the two governments are committed to continuing to strengthen the alliance. From Tokyo’s perspective, one of the critical components of Japan’s own effort to reinforce the alliance is to continue to modernize its defense capability to better meet the security challenges of today and the future. In this context, Japan released two key defense policy-planning documents in December 2018: the National Defense Program Guidelines (NDPG), a policy document that guides Japan’s defense policy for the next five years, and the Mid-Term Defense Program, an acquisition planning document that supports the NDPG.

The 2018 NDPG put out “Multidomain Defense Force (*tajigen tōgō bōei-ryoku*)” as an organizing concept that Japan will strive towards. Explained as deepening the concept of a “Dynamic Joint Defense Force (*dōteki bōei-ryoku*)” that was laid out in the 2013 NDPG, this new concept is supposed to serve as a vision that guides the effort to better prepare Japan to effectively meet the security challenges that Japan will face over the next several years.<sup>2</sup>

At the time of the release, the reference made in the NDPG to the possibility of acquiring long-range missile capability and the clear indication of Japan’s intention to acquire an aircraft carrier attracted intense media attention. However, the document highlighted other domains as the new priority for Japan’s defense-planners: space, cyberspace, and the electromagnetic spectrum.

Some of these “new” domains identified are not new to the 2018 NDPG. In fact, the 2013 NDPG already identified space and cyberspace as emerging battle domains that can potentially affect the operation of the Japan Self-Defense Forces (SDF) considerably. However, while these domains’ importance to the SDF’s future operational environment was mentioned, investment in these areas was not prioritized. What makes the 2018 NDPG’s emphasis on these areas, along with the electromagnetic spectrum, different from previous defense policy iterations is that

they are identified as critical enablers for future SDF operations in cross-domain environments and acknowledged as high-priority areas of investment.

The 2018 NDPG also reiterates that the security environment in Japan's immediate neighborhood continues to degrade, stressing the importance of continuing to strengthen Japan's alliance with the United States. In addition, the NDPG discusses the need for Japan to continue to expand its security cooperation with other likeminded countries, particularly in the Indo-Pacific region.

Indeed, the security environment that Japan—and the U.S.-Japan alliance broadly—faces is changing at an accelerated speed, its unpredictability quickly growing. In addition to the threats that have consistently been present, such as North Korea's nuclear and missile program and China's growing aggressive behavior, and the impact of emerging technologies in the battlespace, Japan finds itself in a security environment that is becoming less and less safe, particularly given the perceived declining commitment of the U.S. in the region. Given such circumstances, analyses that carefully examine how Japan plans to meet these challenges are indeed appropriate. That is why Stimson's Japan Program decided to “go back to the basics” and chose key challenges for Japan's defense policy, as identified and highlighted in the 2018 NDPG, as the theme for this year's edition of the *Views from the Next Generation* series.

As in previous years, we are fortunate to have a talented pool of up-and-coming thinkers and policy professionals contribute to this volume.

In **“Japan as a Stable Builder of Force in the Indo-Pacific,”** Ayumi Teraoka (Ph.D. candidate and Fellow, Center for International Studies, Princeton University) examines how Japan can leverage its partnerships with likeminded countries as a force multiplier in the Indo-Pacific region. Arguing that China's growing power projection capabilities and economic heft pose a serious concern for Japan's declining material resources, including human resources, Teraoka identifies Japan's progress in deepening security ties and economic cooperation with the United States and other friendly nations. Cautioning that solidifying a network of partnerships will require overcoming recent tendencies in the United States and elsewhere towards isolationism, she recommends measures to confront the challenges of partnership, enhance security cooperation and capacity building, and build an economic and security consensus among the partner states.

In **“Japan's Defense Policy in Cyberspace,”** Takahisa Kawaguchi (Senior Fellow, Tokio Marine and Nichido Risk Consulting Co.) assesses the intersection of cyberspace and Japan's security, emphasizing the need to deter cyberattacks while also taking preemptive actions. Discussing the development of Japan's cybersecurity policy, Kawaguchi notes the challenge in identifying a threshold for cyberattacks outside of the gray zone, which still encompasses many types of cyber incidents. The limited role of the SDF and constitutional restrictions on surveillance capabilities pose unique difficulties that require a creative approach

to cybersecurity. Kawaguchi offers recommendations such as enhancing Japan's defensive and attribution capabilities for cyberattacks as well as collaborating with the United States and likeminded countries to establish norms for cyberspace.

In **“The Defense of Japan in a Hyper-Aging Society,”** a short commentary article, **Yoshimitsu Sato** (Nonresident Fellow, Stimson) explores the urgent challenge of recruiting the necessary personnel for the Self-Defense Forces. Drawing upon key defense and population documents, Sato discusses the necessity of reinforcing the SDF's human resources. With recommendations ranging from assessment of hiring and retirement age limits to increasing the SDF's competitiveness in the job market, Sato provides a useful comparison of Japan's dilemma to other countries in Asia facing similar issues.

In **“Japan's Space Security Policy: Japan's Role in the Era of Strategic Competition,”** **Taro Sato** (Nonresident Fellow, Stimson) delves into the ways in which Japan can leverage its space capabilities to promote international norms in space, build partnerships with other likeminded countries, and ensure space remains peaceful and stable. Discussing the challenges that space and counter-space capabilities present to the Indo-Pacific military balance, including threats to military assets and communication channels, Sato emphasizes a three-pronged approach to an improved space policy. With multilateral, U.S.-Japan bilateral, and all-Japan recommendations, Sato encourages Japan's cooperation with other space-developed countries, joint operating capabilities with the U.S., and a stronger environment of innovation and training across Japan's government, universities, and industries.

Finally, in **“The Future of Deterrence Strategy in Long-Term Strategic Competition,”** **Masashi Murano** (Japan Chair Fellow, Hudson Institute) analyzes Japan's defense capabilities and the U.S.-Japan alliance in the context of competition with China. Rejecting the idea that Japan and China are in a traditional security dilemma, Murano assesses how the alliance should approach the challenge of a fundamental competition with China, including the possibility of adjusting the SDF's posture to provide more cost-effective deterrence in cooperation with the United States. With examples of the capabilities of SDF assets, Murano identifies challenges and vulnerabilities that Japan should address with acquisitions that improve the SDF's ability to effectively face China across domains and with closer U.S.-Japan cooperation on operational plans.

It is our hope that this volume will provide analysis that is not only scholarly rigorous but also pragmatic in a way that helps security policy communities beyond the United States and Japan better understand Japan's efforts in these important areas.

## Endnotes

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## CHAPTER ONE

# Japan as a Stable Builder of Force in the Indo-Pacific

AYUMI TERAOKA<sup>1</sup>

*The more forces we can concentrate in our center of gravity, the more certain and massive the effect will be.*<sup>2</sup> —*Carl von Clausewitz*

From the Anglo-Japanese alliance to the Tripartite Pact to the U.S.-Japan alliance, Japan's alignment decisions with major world powers have proved fateful in determining the success and failure of its grand strategy. Such strategic alignments have always been important ways and means for Japan to achieve its visions and positions on the world stage. As Tokyo grapples with its declining material capability in the face of China's growing power and influence, Japan should concentrate "forces" as suggested by Clausewitz, and such forces should take the form of Japan's existing and future partnerships with other friendly countries. These partnerships, and the trust and confidence that enable them, are the invaluable assets Japan has gained through its tireless diplomatic efforts of reconciliation after World War II. Tokyo should waste no time in actively shaping these partnerships into a force multiplier to achieve its national interests.

## Policy Objectives

The following policy objectives are designed to secure Japan's national interests as outlined in the 2013 *National Security Strategy*, which is to maintain the peace, security, and prosperity of Japan and its people, as well as to preserve and expand the international order that is rooted in universal rules and values.<sup>3</sup>

**1. Deter Chinese provocations, in particular the use of force to settle international disputes in the Indo-Pacific, in order to maintain the sovereignty and territorial integrity of Japan and its partners.**

Japan lies at the forefront of a dynamic security landscape in the Indo-Pacific, with its home islands making up the strategic first island chain and its coast guards in regular stand-off with Chinese counterparts in the East China Sea. Against the backdrop of China's military capability, it is critical to enhance Japan's deterrent—both independently and collectively—against China, in particular its use of force against disputed territories in the Indo-Pacific.

***2. Maintain free, open, and stable seas and strengthen a rules-based order free from coercion in the Indo-Pacific and beyond.***

As a maritime nation, Japan cannot achieve its security and prosperity without a free, open, and stable sea and global order surrounding it. The international and regional order rooted in the rule of law, market economy, and respect for human rights has allowed Japanese firms and talents to compete fairly and safely abroad. In the era of shifting balance of power in the Indo-Pacific, Japan's proactive efforts in preserving and fostering such an external environment are of acute necessity.

***3. Enhance Japan's position on the international stage in order to maintain leverage in shaping the international environment.***

Amidst growing uncertainty over the future global order, it is in Japan's best interests to maintain its own capacity to shape the external environment in a way that is conducive to its values and interests. Given the projected decline in its material capability, such as population size and economic growth rate, Japan should aim to enhance its strategic position through multilateral and regional networks with partner states and leverage its comparative advantages.

## Background

### Issues at Hand

The Free and Open Indo-Pacific (FOIP) has gained momentum as a key strategic concept under the leadership of President Donald Trump and Prime Minister Shinzo Abe. This vision aims to turn “the confluence of the Pacific and Indian Oceans and of Asia and Africa into a place that values freedom, the rule of law, and the market economy, free from force or coercion.”<sup>4</sup> While the names and buzzwords behind major policies may change with a new administration, the general strategy in dealing with Indo-Pacific geopolitics will likely persist for Japan and likeminded states beyond the Abe-Trump era. Though North Korea poses an immediate security concern, Japan's most critical strategic problem for the coming decades is the future direction of Chinese power, which, if managed incorrectly, will be the major obstacle to Japan's policy objectives.<sup>5</sup>

China's rapid military modernization is an undeniable fact of life that Japan has had to face, and will continue to face, for quite some time.<sup>6</sup> China's defense budget grew from a mere \$11.4 billion in 1989 to \$250 billion in 2018, jumping from being only 40 percent of Japan's defense budget to 536 percent.<sup>7</sup> In 2017, President Xi Jinping projected that “by the mid-21st century,” the People's Liberation Army (PLA) will “have been fully transformed into world-class forces” that “can fight and win.”<sup>8</sup>



China's growing power projection capabilities such as long-range precision fires pose difficult military challenges to Japan and its partners. China's anti-access/area denial (A2/AD) strategy is designed to limit states' capability to enter an operational area. For instance, China's A2/AD may pose greater risks and costs for Washington to enter the Taiwan Strait during contingencies and could also hamper the ability of the U.S. and its allied forces to maneuver freely once inside the area.<sup>9</sup> The question of how and in what range China's A2/AD could be effective in military warfare is highly scenario-dependent, in particular China's ability to strike moving targets without being itself vulnerable to opponents' A2/AD assets.<sup>10</sup> Nonetheless, such Chinese capabilities may be sufficient to convince risk-averse U.S. leaders not to order interventions in such a contingency—or may make allies think that they might, damaging the credibility of U.S. commitment to its allies.

In addition to China's assertions over various territorial claims and unilateral decisions to militarize reefs in the South China Sea, the PLA Navy is seeking to gain greater access to port facilities along the Indian Ocean to support its "out-of-area" operations.<sup>11</sup> China uses its vast economic heft and expanding network of United Front work abroad—co-opting ethnic Chinese individuals and communities to work for Beijing's interest—to purchase long-term leases of strategic ports, such as the ports in Darwin, Australia and Hambantota, Sri Lanka.<sup>12</sup> While these tactics are not always successful, the threat they pose may drive liberal democracies to overplay their hands.

## Japan's Responses

In response, Japan has made quantitative and qualitative improvements in its defense capabilities. Its defense budget is steadily increasing, albeit slowly, and the 2018 National Defense Program Guidelines calls for Japan's new multidomain defense force with cross-domain capabilities that include space, cyber, and the electromagnetic spectrum.<sup>13</sup>

Japan has also accelerated the process of deepening security ties with a number of other U.S. partners in Asia and Europe, through agreements on information sharing, logistical exchange, and defense technology transfer.<sup>14</sup> It now holds regular security consultations, 2+2 Ministerial Meetings, with the United States, Australia, Russia, France, Britain, Indonesia, and India.<sup>15</sup>

These key documents and the institutionalization of security partnerships are essential not only as a signal to China of solidarity and collective resolve over shared security concerns, but also as a step for Japan's Self-Defense Forces (SDF) to upgrade and expand joint military exercises with these partners. The SDF's three services now hold regular and multifaceted joint military exercises with various militaries, as shown in Table A, learning best practices and enhancing interoperability.

Table A. JSDF's Bilateral Joint Exercise Partners (2016-2019)<sup>16</sup>

Service	Partner Country
All Three Services	U.S., India, and Britain
Air and Sea	Australia
Sea	France, Canada, and Philippines
Unspecified	European Union and New Zealand

In addition to enhancing its own capability and interoperability, Japan has also taken the lead in capacity-building efforts for the militaries of the Association of Southeast Asian Nations (ASEAN) through the Japan-ASEAN defense cooperation framework, the Vientiane Vision. These efforts include Maritime SDF's deployment of *Izumo*-class destroyers to various ASEAN countries (Indo-Pacific Deployment), the Japan-ASEAN Ship Rider Cooperation Program, and a transfer of five TC-90 training aircraft to the Philippine Navy, along with pilot training as well as maintenance and repair assistance.<sup>17</sup>

Contrary to China's and the current U.S. administration's penchant for bilateralism over multilateralism, Japan has led the way in strengthening various layers of multilateral fora in the Indo-Pacific. Against the backdrop of a U.S. absence, Japan has kept alive one of the most strategic rule-making initiatives, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, and has also invited friendly powers outside the region, such as Britain and France, to become more involved in Asia's geostrategic landscape.<sup>18</sup>

Moreover, Japan has promoted investment frameworks for Asian and African developing economies, as in the cases of the Bay of Bengal Industrial Growth Belt in Bangladesh and the Asia-Africa Growth Corridor in Africa, co-sponsored with Indian counterparts, as well as the Partnership for Quality Infrastructure, a collaboration between the Asian Development Bank and Japan's aid agencies. Such projects not only provide recipient states more transparent and fairer alternatives to China's Belt and Road Initiative (BRI), but also incentivize other partners to become more active players in the region through joint funding, sending stronger signals to Beijing about its malpractices abroad, and ultimately shape China's investment practices.

## Impact of U.S. Policy

The United States' continued forward presence and active engagement with the region will remain indispensable for Japan's effective deterrent against China for the foreseeable future. advanced U.S. military assets in the Indo-Pacific, quality intelligence, and joint and combined combat experience with other militaries place the United States at the center of regional deterrence.

The U.S. military has developed a joint doctrine to counter Chinese and Russian A2/AD capabilities, where interoperability among partner militaries is identified as one of the most critical elements. To penetrate and disintegrate enemy A2/AD, the 2018 U.S. Army's joint doctrine calls for U.S. joint and combined forces to work with partner militaries to first “rapidly strike the enemy’s long-range systems” and then use cross-domain capabilities to neutralize the enemy’s mid-range systems.<sup>19</sup>

Cooperation with the United States is also critical to Japan’s strategy for achieving the desired Indo-Pacific order. As the traditional hub in the alliance system in Asia, the United States has helped Japan deepen its security ties with other U.S. allies, encouraging Japan to hold a number of multilateral military exercises as shown in Table B. The recent U.S. effort to lead an allied coalition against ships smuggling fuel to North Korea is yet another example.<sup>20</sup>

Moreover, the United States is the only country with security ties with Taiwan through its 1979 Taiwan Relations Act. Whether Washington is able to help Taiwan defend against Beijing’s coercion remains a critical litmus test for the viability of free and open order in the region and the credibility of U.S. security commitments to the countries directly within China’s A2/AD.

Table B. Examples of Japan’s Multilateral Exercises with Key Partners<sup>21</sup>

Trilateral	Quadrilateral	Pentagonal
U.S.-Korea-Japan	U.S.-Australia-Korea-Japan	U.S.-Australia-Korea-Canada-Japan
U.S.-Australia-Japan	U.S.-France-Britain-Japan	
U.S.-India-Japan	U.S.-Philippine-India-Japan	
U.S.-Philippines-Japan	U.S.-France-Australia-Japan	
U.S.-Britain-Japan	U.S.-Australia-Canada-Japan	
Canada-New Zealand-Japan	U.S.-India-Philippines-Japan	
	Australia-Canada-New Zealand-Japan	

The United States continues to have unrivaled diplomatic impact in shaping the global strategic discussion about China and the region. While Abe was among the first leaders to propose “the Indo-Pacific” as a strategic concept, it was only when the Trump administration adopted it into strategy documents that the concept turned into a global strategic phrase. Such an endorsement tremendously empowered this concept and allowed Japan to further expand and strengthen its networks of likeminded states. This turn of events speaks to the value of close U.S.-Japan cooperation not only in the context of the bilateral relationship, but also in promoting the key global strategic frameworks that Japan desires.

Japan's wartime legacy in Asia and U.S. legacy in Southeast Asia also make it preferable for the two states to develop strategic relationships with these nations together, making this effort more politically acceptable and resilient than when they operate independently.

## Challenges

### *1. Alliance solidarity for overcoming China's A2/AD challenges to ensure credible deterrent*

Despite the U.S. Army's updated joint doctrine to deal with China's A2/AD, the most imminent risk lies in the psychological impact of A2/AD on civilian decision-makers. If China's A2/AD renders risk-averse leaders in Washington or its allied capitals to only choose low-military risk actions, it may damage the deterrent by convincing Beijing that A2/AD has in fact successfully reduced U.S. and allied levels of resolve to engage in combat.

It may also raise the fear of entrapment in some capitals located farther away from China's coast where China's A2/AD could be less effective, such as Australia. Although Canberra has recently strengthened its concerns about China's political and information operations inside Australia, it may not be politically ready to commit to theater-wide military operations to deal with the defense of Taiwan or the South and East China Seas directly under China's A2/AD. Following America's withdrawal from the Intermediate-Range Nuclear Forces (INF) Treaty, the possible deployment of U.S. land-based long-range precision fires in Australia, Japan, or the Philippines to penetrate and disintegrate China's A2/AD might also face strong domestic backlash.

### *2. U.S. mixed messages and the burden-sharing debate*

Mixed messages from Washington about future U.S. commitment to the region and its direction of foreign policy present a central challenge to Japan's grand strategy. On one hand, the Trump administration's hardline view towards China, commitment to the FOIP, and Trump's personal ties with Abe, as well as Congress's Asia Reassurance Initiative Act that authorized funding for U.S. engagement with the Indo-Pacific, are all reassuring. A majority of the American public also support their country's active global engagement (69 percent approval and 30 percent disapproval) and see U.S. security alliances as mutually beneficial.<sup>22</sup> An emerging consensus in Washington that China is a "strategic competitor" leaves Japan relatively at ease that a possible U.S.-China condominium at the expense of allies' interests is unlikely in the near future.

On the other hand, Trump's proclivity for achieving "deals" either with enemies or partners and some Republican members of Congress's libertarian, isolationist foreign policy agenda have raised concerns in Tokyo. The U.S. withdrawal from

the Trans-Pacific Partnership, preceded by years of congressional resistance to multilateral free trade agreements, and Trump's acrimonious attitude towards allies over trade and U.S. base hosting costs, have damaged allies' confidence in Washington as a reliable partner. While the Japanese public view of the United States remains steadfastly favorable, their confidence in the U.S. president dropped sharply from 78 percent to 24 percent when Trump took office.<sup>23</sup>

Japan and the United States will begin another burden-sharing negotiation in 2020, as the current agreement expires in March 2021. The U.S. Department of Defense 2004 compendium on allies' contributions noted that Japan offset 74.5 percent of U.S. basing costs, and more recently former Japanese Defense Minister Tomomi Inada stated that Japan covered 86.4 percent in 2015.<sup>24</sup> According to media reports, however, Trump administration officials have already demanded that Japan quadruple its share of U.S. basing costs.<sup>25</sup> Former Secretary of Defense James Mattis, who two years ago called Japan "a model of cost-sharing, of burden-sharing," has left the administration in protest against Trump's approach to U.S. allies.<sup>26</sup>

These mixed signals about U.S. commitment to allies are troubling, and along with other U.S. allies, Japan is anxiously waiting for its friend to put the house in order.

### *3. Democracies as stable promoters of the free and open order in the Indo-Pacific?*

To achieve free and open order in the Indo-Pacific, it is imperative that major regional powers continue to work together towards shared visions. This requires joint funding efforts to ensure smaller powers have an alternative foreign investment to choose rather than accepting Beijing's financial package under duress. However, major regional powers who share an interest in doing so are also democracies that could face domestic constraints in pursuing this kind of long-term objective. Already, some partners such as the United States, the United Kingdom, and France face the rise of nationalist and isolationist political factions, which will make it more difficult for Japan to collaborate on strengthening the coalition of shared values and interests. Even Tokyo, where Abe's stable leadership and well-managed alliance relationship with the United States allowed Japan's substantial contribution to spreading the FOIP framework over recent years, cannot take the status quo for granted going forward.

With this in mind, it is important that likeminded states fill the vacuum of leadership when other democracies are in domestic turmoil. It is yet unclear, however, whether such an interstate collaboration to manage domestic instability and promote their shared goal abroad will be sustainable.

## The China gap and Taiwan gap?

There is an increasing consensus among U.S. allies and partners that China poses a direct threat to their territorial integrity, their sovereignty, or the global commons. The consensus over what to do about the threat, however, has not yet been

formalized. Analysts point out possible divergence in states' approaches to the vision for the Indo-Pacific, in particular over the degree of inclusivity or the level of confrontational tone targeting China.<sup>27</sup>

More specifically, what to do about the future of Taiwan and how to prioritize this issue in the FOIP vision is one of the thorniest issues in Asian alliance coordination. How should the supporters and promoters of the free and open order in the Indo-Pacific address China's increasing economic coercion and diplomatic isolation efforts towards Taiwan, as well as a possible military contingency over the Taiwan Strait? Japan and likeminded states have not yet come to terms with these questions, and it is time they do so.

## Policy Recommendations

### *1. Be mindful but don't overreact to the China gap*

It is crucial to be cognizant of any gap states have among the envisioned strategic framework for the Indo-Pacific, yet Japan and its partners should be mindful that perfect convergence is not necessary. In fact, such a divergence is a healthy one, and resilience despite the divergence has been one of the most prominent strengths of the U.S.-led order. Diverse approaches among allies could also present opportunities to moderate China's behavior. For instance, more assertive U.S. attitudes towards China might allow more moderate regional powers such as Japan or Australia to persuade China to offer concessions. Overemphasizing disagreements or rushing to create consensus, however, only highlights the lack of solidarity and depresses the strategic weight of what they do agree upon, which itself is valuable.

### *2. Enhance allied counter-capabilities to China's A2/AD capabilities*

To deal with China's improving A2/AD capabilities, Japan and other U.S. allies should work to enhance their own A2/AD capabilities with advanced radar systems, anti-ship missiles, and air defense systems, and focus on developing capabilities that can disperse quickly and flexibly, such as through mobile land forces.<sup>28</sup> In addition to such defense investments, Japan should work with the United States and other partners such as Australia and India to regularize and expand table-top and joint military exercises to improve interoperability for a theater-wide combined-force military strategy. Such efforts will help build confidence and trust in allied capabilities to penetrate and disintegrate China's A2/AD. In the process, allies and partners should engage in regular security dialogue about how states farther away from China's coast, such as Australia, may work for the defense of those directly impacted by China's A2/AD. The need and the risks of possible deployment of U.S. intermediate range missiles on allies' soil, including the risks of nuclear-conventional entanglement, should also be assessed.

### *3. Coordinate capacity building efforts for ASEAN and other smaller maritime states*

Along with India and Australia, Japan should work with France, the United Kingdom, and Canada to coordinate capacity building efforts with ASEAN states and other smaller maritime nations through arms sales, joint exercises, and training. While many U.S. allies and partners thus far have refrained from conducting U.S.-style freedom of navigation operations (FONOPs) near Chinese-occupied features in the South China Sea, Japan, Australia, and India have all been much more willing to increase their military presence in Southeast Asia in the form of joint military exercises with, port visits to, and capacity building for ASEAN states. Similarly, London and Paris have already shown interest in deeper reengagement with the Indo-Pacific.<sup>29</sup> These efforts are just as important as FONOPs in countering Beijing's claims and restoring military balance in the South China Sea and should be strengthened and coordinated. Such efforts present an opportunity for Japan to expand the network of likeminded states, leading another multilateral cooperation framework.

### *4. Work with Asian and European liberal democracies to expand free and open investment frameworks in Asia and beyond*

Japan should continue to lead by example by providing alternative investment frameworks, which are based on decades of experience in Asian development. As in the case of the Asia-Africa Growth Corridor that India and Japan cosponsored, Japan should continue to find cosponsoring partners from other likeminded states, such as Australia, the United Kingdom, France, or Canada, to reinforce investment projects in Asia and Africa. Such collaboration helps generate larger funds required to compete with China's BRI, offers platforms for other middle power states to take part, and allows Japan's projects to be seen not just as a product of Sino-Japanese rivalry but a reflection of global awareness of the Asian infrastructure gap. Existing frameworks such as Partnership for Quality Infrastructure should be extended beyond 2020, with new partners involved.

### *5. Build nonpartisan consensus on Indo-Pacific strategies in Japan and its partner states*

In order to compete with a China that allocates a vast budget for military development and innovation, Japan and its partners must try to forge nonpartisan support for the shared vision for the Indo-Pacific and continue to implement the agreed strategy across administrations. To do so, Japan should encourage expansion of track 1.5 dialogues that include representatives from various opposition parties, including those with a populist bent, and improve upon public diplomacy to nurture deeper understanding among the public. These efforts should help to ensure the competition with China remains a less-polarized issue in various liberal democratic capitals. Such a domestic political environment allows for long-term planning, which in turn enables gradual resource reallocation for long-term defense and foreign investment.

### ***6. Changing the pattern of the burden-sharing debate***

While today is not the best time to put the burden-sharing debate at the center of alliance relationships and antagonize both publics' sentiment against one another, the acrimonious burden-sharing debate has been a recurring theme in the U.S.-Japan alliance for decades and in some sense is unavoidable. First, to avoid misunderstanding on numbers, the Japanese Ministry of Defense and the U.S. Department of Defense should work together to establish common calculating standards and regularly provide the most updated numbers for U.S. allies' share of basing costs. Then, through public diplomacy, engagement with congressional members, and military diplomacy, Japan should continue to cultivate broader American support and understanding for the U.S.-Japan alliance and Japan's contributions to the alliance that are unrepresented by the basing costs. Last but not least, Washington and Tokyo should move forward with their conversation for possible co-basing of SDF units and U.S. Forces Japan, starting from co-locating lower-rank personnel from the Foreign Liaison Officer to the Foreign Exchange Officer to enhance interoperability.

### ***7. Squarely face Taiwan's future in Indo-Pacific strategy***

Beijing's economic coercion and increasing pressure of diplomatic isolation towards Taipei is an undeniable fact. Japan and its partners must engage in thorny conversations about where to place the issue of Taiwan in the context of the desired free and open order in the Indo-Pacific. For decades, Taiwan has been considered a major issue of the U.S.-China bilateral relationship, yet what Taiwan represents are much broader strategic issues of the defense of the first island chain, China's A2/AD challenges, and the viability of the Indo-Pacific free and open order. Starting regular, quiet, and incremental conversations among likeminded states towards unofficial security cooperation with Taiwan is an important step. On the other hand, Taiwan should also work to enhance its intelligence protection framework. Washington should facilitate this process and embed Taipei in a multilateral allied cooperation framework to protect U.S. allies against expected coercive pressure from Beijing.

### ***8. Bolster channels of dialogue with Beijing to prevent misperceptions at all times***

While taking the above-mentioned measures, it is still of necessity to engage in continuous dialogue with Beijing to prevent misperceptions and unnecessary spirals. In a period of great power rivalry and strategic competition, Japan should develop and maintain its own line of communications with Beijing and have regular fora to gauge each other's intent.



## Endnotes

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**CHAPTER TWO**

# Japan's Defense Policy in Cyberspace

TAKAHISA KAWAGUCHI

## Policy Objectives

Cyberspace has developed beyond a mere information system. It is now the basic and underlying framework of the real world that supports the economy, social infrastructure, electronic communications, and so on. However, cyberspace has also been used as a platform for malicious activities by criminals, anarchism-oriented individuals and groups, terrorists, nation states and their proxies, etc. Cyberspace must be secure from such activities. Japan's policy objectives in cyberspace are the following.

### *Establish and Maintain a Rules-Based, Liberal, and Open Order in Cyberspace*

“Rules-based” refers to all users of cyberspace such as nations, companies, individuals, and other entities complying with agreed rules when accessing and using virtual space.

“Liberal and open” refers to cyberspace where freedom of access and communications are secured. However, the free “flow” and “stock” of digital data have recently been disturbed by sovereign states. Some nations, having isolated the Internet domestically from the world-wide network, are requiring foreign companies to implement “data localization,” i.e., storing digital data on any storage server that is physically present within the borders of the nation.

### *Deter Significant Cyberattacks, Especially When Equivalent to “Armed Attacks”*

Even if order in cyberspace is thus maintained, there will always be perpetrators who try to launch a destructive cyberattack. Japan must deter such attacks, in particular destructive cyberattacks and those deemed to be “armed attacks” by nation states and their proxies.

It has been a subject of great debate over the past decade or more whether deterrence by punishment can work in cyberspace or not.<sup>1</sup> Naysayers underscore the attribution problem.<sup>2</sup> However, today it is widely thought that time, resources, and legal permissions will enable us to determine the attacker to some extent. Clear attribution and credible retaliation can deter revisionist states from launching a devastating cyberattack.

### *Practice Preemptive Actions in Areas Where Deterrence Does Not Work Well, and Improve Social Resilience and Retaliation Capabilities when Deterrence Fails*

Armed attacks are not the only problem today; cyberattacks below the threshold of such attacks are more common. These cyberattacks may be difficult to deter by punitive measures, and thus deterrence may fail. For these reasons, in cyberspace, as soon as a sign of an attack is detected, vigilant and preemptive actions must be taken in response.

It is impossible to totally remove all cyber risks. A zero-day vulnerability is a clear indicator of this difficulty. Practically, effort must be made to minimize the cyber risks below the maximum permissible level and measures taken in preparation for a cyberattack. If deterrence has failed, the damage to information systems and social infrastructure must be controlled and limited so that they can be restored promptly. Credible retaliation and rational sanction against the adversary must also be imposed.

## Background

### Evolving Japan's Cybersecurity Policy and Japan-U.S. Cooperation

In a December 2018 Cabinet meeting, the Abe administration adopted the new National Defense Program Guidelines (NDPG), which declare: (1) improvement of defense capabilities inclusive of acquisition of “superiority in new domains such as space, cyberspace, and electromagnetic spectrum,” and (2) implementation of so-called “cross-domain” operations, military activities across all domains consisting of new ones in addition to physical domains, i.e., land, sea, and air. The NDPG emphasizes that Japan, in cyberspace, shall achieve a radical strengthening of “its cyber defense capability, including capability to disrupt, during attack against Japan, opponent’s use of cyberspace for the attack.”<sup>3</sup>

Tokyo and Washington are strengthening the Japan-U.S. alliance in response to the risk of cyberattacks. On April 19, 2019, the Japan-United States Security Consultative Committee, the 2+2 Ministerial Meeting, affirmed that “a cyberattack could, in certain circumstances, constitute an armed attack for the purposes of Article 5 of the Japan-U.S. Security Treaty.”<sup>4</sup> Tokyo has affirmed that some cases of cyberattack would be subject to response with physical means, that is, defense operations by the Japan Self-Defense Forces (SDF).

The questions are what kind of cyberattacks would be deemed “armed attacks,” and what cyberattacks would be subject to the exercise of the right of individual and collective self-defense. At present, scholars of international law and policy officials perceive that they would be determined on a case-by-case basis.<sup>5</sup>

Defense Minister Takeshi Iwaya said on April 26, soon after the 2+2 Ministerial Meeting, that the ministry would delve into what factors would satisfy the self-defense criteria “in light of” the examples which the U.S. once showcased.<sup>6</sup> The U.S. had illustrated that cyberattacks leading to, for example, core meltdown of a nuclear plant, collapse of a dam built upstream of an area of high population density, and an aircraft crash would constitute armed attacks.<sup>7</sup>

Experts have raised an alert over possible cyberattacks against the electric power grid. These can also be regarded as armed attacks under certain conditions.<sup>8</sup> In Ukraine, cyberattacks caused two massive blackouts in December 2015 and December 2016. Also, in parts of the western U.S. in March 2019, there was a power failure due to a cyberattack, though it was small in scale and lasted for less than five minutes.

### Vast “Gray-zone” Situations

Measures to be taken in response to the most devastating cyberattacks or those equivalent to armed attacks are being put in place. However, there extends a vast blank space, or gray-zone, between armed attacks and minor cyber-crimes.

Revisionist powers conduct cyberattacks for the purpose of achieving their geopolitical aims, at a level of magnitude below the threshold of armed attacks, i.e., at a degree which will not trigger a large-scale reprisal or retaliation by the target. In direct terms, revisionist powers are neither afraid of nor reluctant in using their cyber capabilities against the U.S., Japan, and their allies in the following areas.

The first is election interference. Acts of campaign interference by a foreign government were confirmed during the 2016 U.S. presidential election, and also elsewhere such as the U.K., France, Germany, and Taiwan in varying degrees. Cyberattacks and influence operations on social media are intended not only to affect the success or failure of a certain candidate, but also to damage the legitimacy of an election or undermine public trust in democracy.<sup>9</sup>

No cyber interference by any foreign government has been confirmed in the national elections of Japan so far. A national referendum, however, if held for the amendment of the Constitution, will definitely split public opinion, making it an attractive target for hostile states.

The second is organizational, large-scale cyber-enabled theft for the purpose of achieving economic advantages. General Keith B. Alexander, the first commander of the U.S. Cyber Command (USCYBERCOM), said in 2012 that the loss of business secrets and intellectual property through cyber theft by China constitutes the “greatest transfer of wealth in history.” The U.S. and China once reached an agreement. According to a statement by the White House in September 2015, Presidents Barack Obama and Xi Jinping agreed that neither country’s government would conduct or knowingly support “cyber-enabled theft of intellectual property, including trade secrets or other confidential business information, with the intent of providing competitive advantages to companies or commercial sectors.”<sup>10</sup>

Nevertheless, cyberattacks dispatched from China have not decreased.<sup>11</sup> Among various hypotheses possible, however, the very conceptual framework of the 2015 agreement where “security, diplomacy, and defense” were separated from “business and economy” may have been unreasonable. For Beijing, the maintenance of its unique political system is a matter of national security, and planned economic development is quintessential for the stability of the regime.

The third is cyberattacks against big data, which cannot be defined simply by economic value. The aim of data breaches against the Japan Pension Service (JPS), U.S. Health insurance provider Anthem, the U.S. Office of Personnel Management, Singaporean medical institution SingHealth, the Marriott Group, and others may have been to build databases of the population of target nations, including politicians, senior officials, and military personnel.<sup>12</sup>

The Japanese government and the National Center of Incident Readiness and Strategy for Cybersecurity (NISC) made an investigation into the cause of JPS’s information leak in 2015, when 1.25 million cases of personal data were leaked. They publicly disclosed that they could not identify the penetrator. According to the report from Macnica Networks Corp released around the same time, however, it is obvious that the cyberattack was launched from inside mainland China.<sup>13</sup>

Acts of probing and exploitation into the target are often orchestrated as a prelude to these cyberattacks. Whether the hacker’s activity ends with probing or exploitation, or it develops further to gray-zone situations or armed attacks, is indistinguishable in the initial stage.

Deterrence by punishment does not have much effect on gray-zone situations, probing, or exploitation in cyberspace. It is necessary to impose an intolerable cost on the attackers, to neutralize their efforts and force them to alter their strategic calculations, through efforts such as preemptive actions, upgrading and expanding deterrence by denial, or enhancement of resilience.

## Challenges for Achieving Policy Objectives

In order to achieve the policy objectives mentioned above, Japan faces several challenges.

### Limited Missions and Roles of the SDF

At present, the SDF are engaged in limited roles and missions compared to USCYBERCOM. Tokyo needs to constructively examine the involvement of defensive support of the government and critical infrastructure, and offensive operations.

In March 2014, the SDF set up the Cyber Defense Group under the SDF Command Control Communication Computers Systems Command. The latest NDPG says



that the SDF will organize a “Cyber Defense Unit (1 squadron)” as a “Joint Unit.”<sup>14</sup> In addition, “the 301 System Protection Unit” was established in the Western Army of the Ground SDF (GSDF) in Kumamoto Prefecture in March 2019. This is the first time that the SDF have established a cyber-related unit in any of the area armies. The 301 System Protection Unit composed of 60 members is engaged in defending the GSDF’s networks and systems, which are deployed in Okinawa and the southwestern islands.

Each of these is responsible for defense of the SDF’s networks and information systems. Defense of the government’s network outside the Ministry of Defense (MOD) and that of critical infrastructure are not included within the range of its current mission.

NISC helps defend the government’s network. The roles of NISC are monitoring, analyzing, probing, and inspecting the networks of the government. After the Basic Law for Cyber Security was revised in 2016, the sphere of its mission was expanded and covered incorporated-administrative agencies and some designated corporations.

The designated fourteen industrial sectors such as finance, energy, and telecommunications are supposed to defend their critical infrastructure systems by self-help efforts and response measures against attacks. However, this situation is changing somewhat.

NISC went public about the judgment criteria and process of severity evaluation of a cyberattack against the designated sectors of critical infrastructure on April 4, 2018. The severity of the “impact on people and the nation” of critical infrastructure system failures is evaluated on a scale from 0 to 4.<sup>15</sup> According to the newspaper reports, depending on the degree of intensity, the government now considers responses and countermeasures against the attack, which are currently undecided or undisclosed.

Besides, NISC launched the Cybersecurity Council in April 2019, which is a framework for information sharing among the national and local governments, critical infrastructure, security companies, and other private businesses. Members will actively exchange substantial information including undefined information, under “a duty of confidentiality” that includes a punitive clause and “an obligation to share information.”<sup>16</sup>

## Constitutional Restrictions on Surveillance Capabilities: Article 21

The exclusively defense-oriented policy derived from Article 9 of the Constitution has shaped not only Japan’s cybersecurity policy, but also the entire framework of its national security policy. However, in the field of cybersecurity, what is perhaps even more important than Article 9 is Article 21, which states, “No censorship shall be maintained, nor shall the secrecy of any means of communication be violated.” According to experts, the secrecy of communication stipulated in Article

21 of the Constitution and Article 4 of the Telecommunications Business Law is more strictly interpreted and applied than in other developed countries, making it especially difficult for the government and telecommunications carriers to monitor packet communication.<sup>17</sup> That is, the interpretation of Article 21 is partially limiting Japan's cybersecurity policy.

The case of the Japanese piracy site Manga-mura, which was also taken up in the Diet, sparked great controversy about secrecy of communication. Manga-mura illegally uploaded images of many comics and got about 100 million views a month in its prime, against which publishers claimed damages of around ¥300 billion. On April 13, 2018, the Japanese government urged Internet service providers to block access to three piracy sites including Manga-mura as an emergency step.<sup>18</sup> As this "blocking" included monitoring of each terminal destinations on the Internet, it came under fire for the possibility of violating the provisions of no censorship and secrecy of communication.

Though the MOD and SDF are monitoring some wireless telecommunications,<sup>19</sup> a vast body of wired digital information is left intact. Of course, Tokyo cannot concentrate its limited resources intensively on monitoring all the wired digital information. One practical idea is that at least highly security-oriented ministries, agencies, and infrastructure should consider executing such exhaustive monitoring under Article 21 with reinterpretation.

## Impact of U.S. Policy

As cyber risks become increasingly apparent, the Trump administration has dramatically evolved its policy of responding to cyberattacks. In July 2018, the Trump administration declassified the Obama-era Presidential Policy Directive 20 and rescinded the self-restraint cyber response strategy. Instead, President Trump signed the National Security Presidential Memorandum 13 (NSPM-13), an offensive policy on combatting emerging cyberattacks. NSPM-13 is a classified document, but according to a report from The Washington Post, the memorandum "frees the military to engage, without a lengthy approval process, in actions that fall below the 'use of force' or a level that would cause death, destruction, or significant economic impacts."<sup>20</sup>

Then, based on the concept of NSPM-13, "defend forward" was emphasized in the 2018 Department of Defense Cyber Strategy.<sup>21</sup> As far as the relevant documents are concerned, "defending forward" is possibly interpreted as a strategy that may be exercised on an external network which is not the department's subject of management or defense, and often on a foreign network.<sup>22</sup>

The Trump administration's policy implies a vital perception of the circumstances. That is, cyber defense requires constant activity outside the nation's network, especially in the defense against cyberattacks below the threshold

of armed attacks or use of force. Deputy Secretary of Defense William J. Lynn III indicated this a decade ago: “The United States cannot retreat behind a Maginot Line of firewalls or it will risk being overrun.”<sup>23</sup> It is critical to detect cyberattacks and activities at all levels, to relentlessly track them and identify the attacker, and to beat the source of the attack. This is the very “persistent engagement” which General Paul M. Nakasone, Commander of USCYBERCOM, advocated.<sup>24</sup>

“Defending forward” is a realistic must-have for cybersecurity, although it may raise arguments from the viewpoint of international law. Japan may find it difficult to put into practice complete “defending forward” in the near term, but nevertheless policy discussions bearing this in mind are required.

As mentioned above, the missions and roles of the SDF are basically to resort to defensive behavior. However, in the sphere of cybersecurity, Japan’s underlying concept of an exclusively defense-oriented policy after World War II does not hold water. Indeed, the latest NDPG says the SDF will aim at acquiring “capability to disrupt [...] opponent’s use of cyberspace,” but it also says they are exclusively for use “during attack against Japan.”<sup>25</sup>

In cybersecurity, it is difficult to make a sharp distinction between an emergency and ordinary times. The Israel Defense Forces, for example, in retaliation for a cyberattack by Hamas, used physical means against the building from which the terrorist group’s cyber unit was launching the attack.<sup>26</sup> The retaliatory strike was conducted in a short period of time after the detection of the cyberattack. If Israel had not conducted probing and espionage activities vigilantly, such a prompt retaliation would have been difficult. On occasion, defending forward beyond the regular firewall is needed for national security. Hack-back against the dispatcher of a cyberattack also needs to be clearly specified as an act of necessity or legitimate self-defense.

## Policy Recommendations

### *1. Enhancement of attribution capabilities*

Without attribution, adversaries will launch a cyberattack with no fear or hesitation. Tokyo needs to enhance attribution capabilities beyond its current level.

Cyber attribution is akin to intelligence work, which requires information gathering and probing activities during peacetime. Tokyo is especially recommended to take the following measures: (1) enhancing capabilities for capture and surveillance of vast amounts of wired digital information, including further reinterpretation of secrecy of communication in Article 21 of the Constitution, and (2) codifying in law that hack-back against the source of cyberattacks is an act of necessity or legitimate self-defense.

Of course, both efforts must be controlled under a framework with the commitment of the Diet and the principle of protection of secrets. In Japan, the State Secrecy Law, officially the Act on the Protection of Specially Designated Secrets, was enacted in 2013. Besides, the Cybersecurity Council is taking the lead in experimentally using a kind of clearance system. However, a more comprehensive system for security clearance should be set up.

In attribution judgments, validity and reliability are of key importance just as they are in judgments by an intelligence organization. Whether or not to attribute a cyberattack to a specific state, or to disclose the attribution details, will eventually require a high-level political decision. When facing the impending crisis of a real event, it will be difficult to gather accurate and adequate intelligence. Japan should improve not only technical or intelligence aspects of cyber attribution, but also the political part of it. Japan may need additional efforts to review the process of the Cabinet's confirmation of a situation as an armed attack.

## *2. Development of defensive capabilities against cyberattack*

In addition, Japan needs to strengthen its ability to cope with cyberattacks and their sources. In particular, the following areas are crucial:

**Development and enhancement of disruptive capability:** The latest NDPG has declared the strengthening of “capability to disrupt, during attack against Japan, opponent’s use of cyberspace for the attack.”<sup>27</sup> In order to materialize this disruptive capability, Tokyo should accelerate investment in, staffing for, and study of operations. The new NDPG’s disruptive capability will contribute to Japan’s deterrence against cyberattacks. However, the meaning of disruptive capabilities is closer to deterrence by denial than deterrence by punishment. Such capabilities are constitutionally acceptable, and the Japanese government considers these to be compatible with its exclusively defense-oriented policy. In the future, Tokyo should consider exercising the disruptive capabilities, currently limited to emergency situations, even during ordinary times. Otherwise, dealing with cyberattacks below armed attacks and use of force will be more challenging.

**Expanded options for sanctions and retaliation:** If Japan receives a cyber-attack below an armed attack or use of force, it must make the attacker pay the price. Besides, Japan must deter potential cyberattacks effectively. To these ends, Tokyo should ensure that multiple options of sanctions and retaliation are readily available. Measures of reprisal involve naming and shaming, economic sanctions like asset freezing, criminal prosecution, diplomatic sanctions, or retaliation by cyber and kinetic means. Tokyo needs to impose proportional and appropriate sanctions and retaliation on the attacker for the severity of attacks such as election meddling, cyberattacks targeting commercial interests, and big-data theft. In particular, a naming and shaming campaign, financial sanctions, and criminal prosecution are more effective when implemented in cooperation with allies and coalition partners.

**Engaging in defense of critical infrastructure:** If there is a potential cyberattack on critical infrastructure that could have a significant impact, it is desirable for the Japanese government to minimize the impact and develop countermeasures. First, Japan should develop a predictive approach for evaluation and improve countermeasures, based on the severity evaluation criteria. In addition to the non-military countermeasures by the Japanese government, the involvement of the MOD and SDF in defending some of the critical infrastructure should be actively considered. In fact, the SDF and the U.S. military already have this inside the scope of their assumptions.<sup>28</sup>

### *3. Coordinated practices to establish a norm*

Declaring Japan's position on cyberspace and international law repeatedly, Tokyo needs to establish a norm of conduct on cybersecurity together with the U.S. and likeminded countries. Tokyo should continue to make efforts to clarify that the existing international law applies in cyberspace. If the existing international law loses validity in cyberspace, both concepts of armed attack and self-defense right will have no meaning, and cyberspace will become more violent. It is as vital as ever for the G7 countries and coalition partners to mutually verify the rules and principles of action, which could not be adopted at the U.N. Group of Governmental Experts in 2017.<sup>29</sup>

Generally speaking, however, norms are established based on past performance. It is important to resort to tangible behavior if necessary. From the viewpoint of establishing a norm of conduct, it is also crucial to disclose the attribution of an attack and enforce sanctions or take retaliations against the attacker. In fact, Tokyo, along with Washington and likeminded countries, formally condemned the worldwide-infectious malware WannaCry, which a North Korean hacker perpetrated in December 2017,<sup>30</sup> and the sophisticated hacking group APT10, which was linked to the Ministry of State Security of China in December 2018.<sup>31</sup>

Efforts such as bringing the author of a cyberattack to light, denouncing this aggression, and imposing sanctions under given conditions will open the way to the establishment of a norm of conduct in the future.

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## ISSUE SPOTLIGHT

# The Defense of Japan in a Hyper-Aging Society

YOSHIMITSU SATO

The security environment around Japan has become increasingly tense. Despite United States President Donald Trump’s top-down effort to engage North Korean leader Kim Jong Un on denuclearization, Pyongyang continues to develop nuclear weapons and ballistic missiles. China is expanding and intensifying its activities in the East and South China Seas, and its military strategy continues to lack transparency. In addition, Russia has changed the status quo in Ukraine with “hybrid warfare,”

which intentionally blurs the boundaries between military and non-military activities, and similar tactics might be used in Japan’s Northern Territories in the future. In such a situation, the Ministry of Defense (MOD) and Self-Defense Forces (SDF) must secure highly qualified personnel who can respond to diversified missions.

However, the recruitment of uniformed SDF personnel has been a serious challenge. On March 31, 2019, the number of authorized positions for uniformed SDF

personnel was 247,154, while the actual number of staff was 226,547—a gap of about 20,000 people and a staffing rate of 91.7 percent.<sup>1</sup> Most recently, the National Defense Program Guidelines for FY 2019 and beyond identified securing human resources for SDF personnel as “an imminent challenge in the face of shrinking and aging population with declining birth rates.”<sup>2</sup> Therefore, it is important to analyze the current population shift in Japan and explore how to reinforce the human resource base in the SDF.

Japan's aging challenge is serious. The Annual Report on the Ageing Society and the Declining Birthrate White Paper—both published by the Japanese government—elaborate on the urgency that surrounds Japan's aging and population decline. In today's Japan, the current average lifespan is 81.09 years for men and 87.26 for women.<sup>3</sup> This is expected to increase every year, reaching 84.95 and 91.35 years respectively by 2065. Japan's total population began to decline in 2011, and its population is estimated to decrease from 126.44 to 88.08 million between 2018 and 2065.<sup>4</sup> With this overall trend of population decline, the working-age population (15 to 64 years old) is projected to shrink from 75.45 million in 2018 to 45.29 million by 2065. Concurrently, Japan's aging process will accelerate. The elderly population (defined as 65 years old and older) is estimated to reach 38.4 percent of the total population by 2065. Simply put, one in three Japanese will be over 65 years old in 2065.<sup>5</sup>

Given such circumstances, the MOD/SDF has already begun to take measures

to mitigate the impact of aging and population decline in SDF recruitment. For example, as a measure to better prepare the organization for the shrinking population, the MOD/SDF raised the upper age limit for entrance of new SDF personnel from 26 to 32 years old in order to expand the recruitment of enlisted soldiers.<sup>6</sup> As a measure to accommodate the aging society, the MOD announced in December 2018 that it would gradually extend the mandatory retirement age of SDF personnel starting in 2020.<sup>7</sup>

But there are other measures that may also be worth considering. One is to vary the hiring age limit depending on the services. In the United States, for instance, each service has a different enlistment age limit (Marine Corps: age 28; Coast Guard: 31; Army: 34; Navy and Air Force: 39).<sup>8</sup> Given that the personnel requirements and physical abilities for each SDF service differ, setting appropriate age limits, like the United States does, may help the SDF services recruit enough personnel by expanding the number of eligible Japanese for some of the services.

Furthermore, the extension of life expectancy indicates that older people may be healthier than in the past. As the average life continues to lengthen, the MOD should consider further extension of mandatory retirement ages in order to leverage the potential of older people, who have rich knowledge, skills, and experience.

The MOD/SDF also needs to take further measures to increase the SDF's attractiveness in order to encourage talented

personnel to choose the military as their career. One of the necessary measures is enhancing welfare and benefits to build a system which incentivizes people to join the SDF. In case of the United States, the merits of entering the military are conveyed clearly through recruitment materials, including airline benefits for military families, military discounts at shops and restaurants, and free or discounted admission for military personnel to museums and amusement parks. The MOD/SDF should look into the possibility of incorporating some of these measures to improve the SDF's competitiveness.

Another measure is to encourage the younger generation to join the SDF through education. Television shows, movies, games, and comic books can all be useful educational tools. In the United States, the number of applicants to the military increased due to the 1986 movie *Top Gun*. However, former Marine pilot Carl Forsling points out that the 2020 sequel to the film will not have the same effect because the nature of combat in 2020 is different from the one portrayed in 1986, noting that “during a time of peace, a movie glamorizing war drove recruitment through the roof.”<sup>9</sup> Major General (Ret.) Paul Kennedy, who has served as Commanding General of Marine Corps Recruiting Command, observed that “recruitment is an emotional decision for a young person that has never made decisions for themselves” and advised involving young people in humanitarian assistance/disaster relief operations, because they want to feel good about their sacrifices.<sup>10</sup> It is important to consider realistic and effective recruitment

measures through positive media portrayals, the Internet, and social media.

A United Nations Population Division report in 2001 concluded that Japan needed “a much higher level of immigration [...] to offset population decline.”<sup>11</sup> In Japan, however, there are still some concerns about accepting foreign workers. For example, they are seen as potentially leading to increased crime and terrorism, destruction of traditional Japanese culture, increased costs of social benefits, and leaks of intellectual property. Nevertheless, during the 2019 Rugby World Cup held in Japan, half of the Japanese team were foreign-born, and they won Japan great results. This might epitomize the future Japan. Japan may need to prepare to accept skilled foreign workers in the private sector and hire Japanese in government areas related to national security, including the MOD/SDF, so as to maintain national defense.

The MOD/SDF may be able to learn from the practices of other countries that are facing similar aging problems. In Asia alone, for example, the total fertility rates in Singapore, South Korea, and Taiwan are also below replacement level.<sup>12</sup> Researching how these societies secure their human resource bases for their militaries will be helpful in devising measures for Japan.

Finally, in order for the MOD/SDF to continue to strengthen the human resource base to sustain Japan's defense capability, it may be necessary to review if the current authorized strength of SDF personnel is sufficient to respond to increasing threats around Japan. In

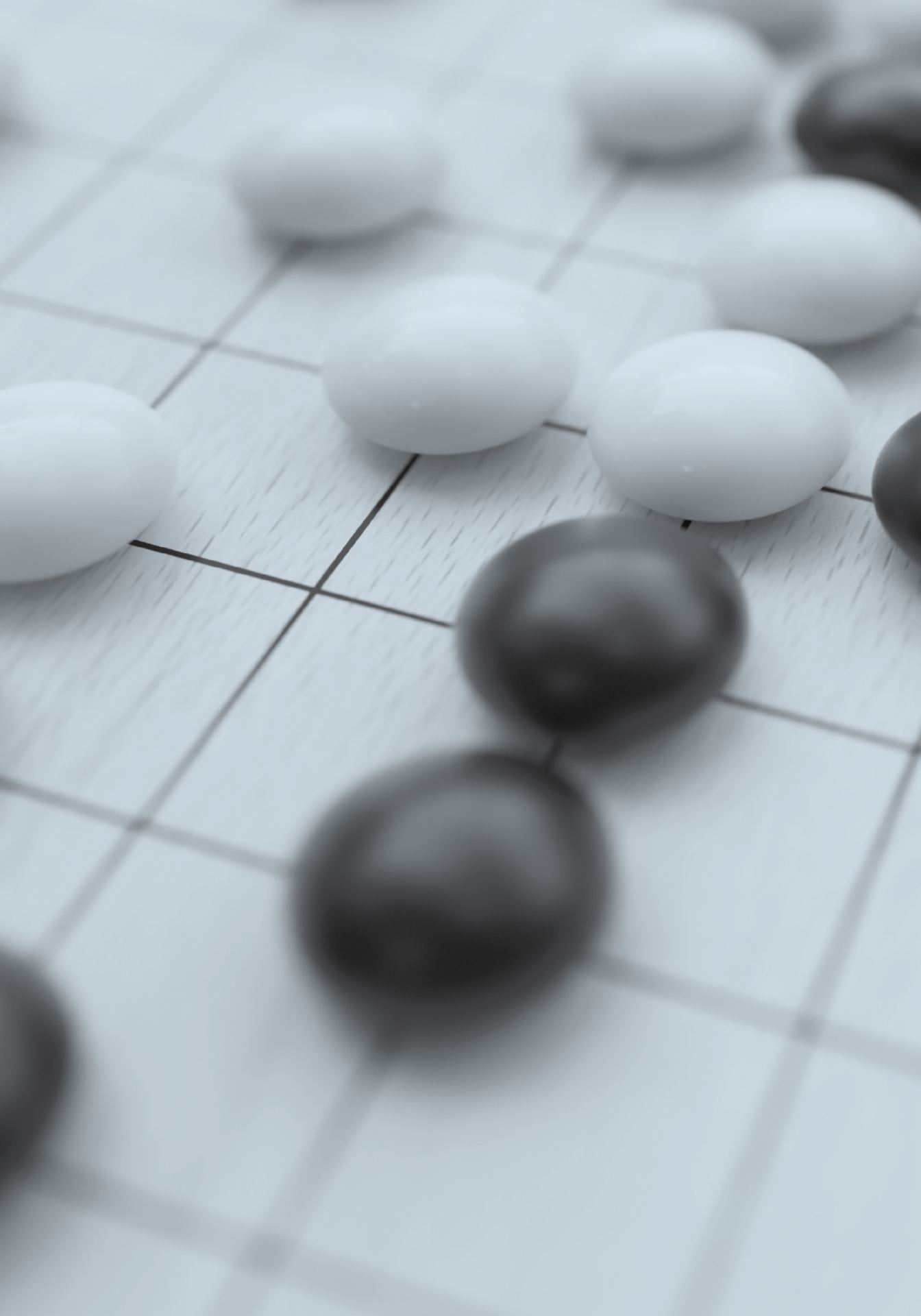
Japan, there is still an allergy to discussions about security, the military, and war. Although Japanese tend to think inside the box, they should creatively debate realistic and practical ways to prevent and deter a harrowing war.

Still, in order to meet today and tomorrow's security challenges for Japan, the MOD/SDF need to consider all the relevant factors from the changing security environment to cutting-edge military technology and search for solutions to secure the sufficient number of personnel required for the defense of Japan.

*The views and opinions expressed here are of the author only.*

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**CHAPTER THREE**

# Japan's Space Security Policy: Japan's Role in the Era of Strategic Competition

TARO SATO

The U.S.-China strategic competition, rivalry over geopolitics, geo-economics, and values between liberalism and authoritarianism, has begun in the Indo-Pacific region over the past decade. Space is not an exception to this competition; rather, space is becoming its main battlefield. In the last two decades after the Cold War, the United States maintained a dominant position in outer space. However, such an environment is changing with the significant progress of Chinese space development and utilization. China is rapidly catching up with the U.S. in both quantity and quality: it has been launching more rockets than the U.S. since 2018<sup>1</sup>, and its space-related technology is evolving speedily. In June 2018, China successfully launched the world's first relay satellite Queqiao into the halo orbit of Lagrange point 2 in the Earth-Moon system.<sup>2</sup> As technology advances, the competition arena of outer space has been expanding. Since the end of the Cold War, the U.S. has proven through many wars that the superiority of space is directly linked to the superiority of traditional domains. In the Indo-Pacific region, the strategic competition in space is one of the crucial factors determining the region's military superiority and thus regional geopolitics.

In response to the U.S.-China competition, Japan is dramatically shifting its space security policy. In December 2018, the Government of Japan (GOJ) announced the National Defense Program Guidelines (NDPG), in which the GOJ identified "acquiring and strengthening capabilities in space, cyber and electromagnetic domains"<sup>3</sup> as the top priority for strengthening Japan's defense capability, and announced that the SDF will expand its Intelligence, Surveillance, and Reconnaissance (ISR) capabilities in space. Furthermore, the NDPG acknowledged that "to ensure superiority in use of space at all stages from peacetime to armed contingencies, the SDF will also work to strengthen capabilities including mission assurance capability and capability to disrupt opponent's command, control, communications, and information."<sup>4</sup> The Ministry of Defense (MOD) has decided to enhance its defense capabilities to acquire active Space Control capabilities. In August 2019, the MOD announced the establishment of a "Space Operations Command" in the Air Self-Defense Force (ASDF).<sup>5</sup> In January 2020, multiple media sources reported that the GOJ began considering

## **VISION: Development of a Free and Open Outer Space**

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### ***Mission***

Maintain peace in space, ensure prosperity through space, and maintain space as an “international public good” comprehensively and transparently.

### ***Objectives***

1. Strengthening international norms in space, maintaining free access to space, and promoting international cooperation in space
2. Strengthening economic connectivity through space
3. Ensuring peace and stability in space

### ***Approaches***

1. Multilateral approach
2. Bilateral approach  
(U.S.-Japan alliance)
3. All-of-Japan approach

### ***Means***

1. Diplomatic power
2. Science and technology power
3. Military power

renaming the ASDF to “Air and Space Self-Defense Force” by 2023.<sup>6</sup> Although Japan has lagged behind other developed countries in the area of space security, it is rapidly developing its space security policy and accelerating the development of its capabilities in outer space.

Promoting space security policy within Japan’s limited resources requires unifying efforts with various national and international actors who share the same values, benefits, and awareness of issues under clear goals. This paper proposes approaches for space security policy and ten policies that Japan should pursue in the future.



## Policy Objectives

The importance of outer space may be similar to that of the ocean. Free access to the seas, especially the securing of sea lanes (sea lines of communication), has not only sustained the lives of the people and Japan's economic development through securing resources and trade but also played an important role in terms of Japan's diplomatic presence and territorial defense. Today, space supports social, economic, and military infrastructure and includes indispensable "informational lines of communication" for people's lives, economic prosperity, and security. For example, the location information provided by satellite navigation systems is used not only for military purposes but also for agriculture, construction, mining, logistics, and supply chain management, and the time information supports communication networks, financial systems, financial markets, and transmission network systems. Thus, stable utilization of outer space is an indispensable requirement for people to live with peace of mind and for a nation to continue its prosperity. Certainly, as in the U.S. after the Cold War, stable utilization of outer space may be achieved by establishing dominance in outer space. However, such a one-sided environment cannot be envisaged in an age of competition with those whose economic and military growth will continue.

In view of the similarity between sea and space, Japan needs to pursue *development of free and open space* together with countries with which it shares values, as many sea power countries aspire to free and open maritime development. It is in the common interest of free and open societies to maintain peace in outer space, ensure prosperity through outer space, and maintain and develop outer space as a *global commons* in a comprehensive and transparent manner.

Therefore, Japan must play an active role in achieving the following three objectives: (1) strengthening international norms in outer space, maintaining free access, and promoting international cooperation; (2) strengthening economic connectivity through outer space; and (3) ensuring peace and stability in outer space. It is also essential for Japan to utilize its three means of diplomatic, scientific and technological, and military powers through three approaches: multilateral cooperation, bilateral cooperation, and all-Japan efforts.

## Background and Challenges

Since the 2000s, the People's Liberation Army (PLA) has been rapidly advancing counter-space capabilities. Between 2005 and 2019, China conducted at least ten tests of ground-based direct anti-satellite (DA-ASAT, direct ascent anti-satellite) weapons.<sup>7</sup> In January 2007, it succeeded in destroying a satellite flying in low Earth orbit (LEO) at an altitude of 865 km with DA-ASAT weapons,<sup>8</sup> and in 2013 it is said that it conducted DA-ASAT experiments on geostationary orbits (GEO) at

an altitude of around 36,000 km.<sup>9</sup> Also, China tested a new type of anti-satellite (ASAT) weapon called DN-3 in October 2015, December 2016, August 2017, and February 2018.<sup>10</sup> Critical military satellites, such as reconnaissance satellites, satellite PNT (positioning, navigation, and timing) system, communications satellites, and early warning satellites, are deployed between LEO and GEO in which China is conducting DA-ASAT experiments. China's opaque development of counter-space capabilities is a serious concern for Japan, the U.S., and free and open societies.

China is also developing space-based counter-space capabilities. In general, space-based counter-space capabilities “include kinetic kill vehicles, radiofrequency jammers, lasers, chemical sprayers, high-power microwaves, and robotic mechanisms,”<sup>11</sup> all of which require rendezvous and proximity operations (RPO) with other satellites. Since 2010, China has repeatedly conducted RPO tests in outer space, and in August of that year, it brought an SJ-12 satellite less than 300 meters near its own SJ-06F satellite. In July 2013, China launched three satellites for the purpose of developing satellite maintenance technology.<sup>12</sup> Besides, in recent years, Chinese ASAT technology has diversified. For example, in June 2016, China launched the Aolong-1 satellite with a robotic arm as an experiment to collect and remove space debris. During the mission, China announced that it had successfully refueled other satellites with the Tianyuan-1 satellite.<sup>13</sup> Given the “dual-use” nature of satellites, there is a concern that these technologies, if diverted for military use, could become a co-orbital ASAT weapon.<sup>14</sup>

The PLA is also actively promoting the development and utilization of space. For example, since 2006, China has launched more than 30 series of Yaogan remote sensing satellites<sup>15</sup> and 4-5 Tian Lian data relay satellites optimized for the Western Pacific.<sup>16</sup> The Yaogan remote sensing satellite is reported to be equipped with an optical sensor, synthetic-aperture radar, or electronic intelligence sensors. The Chinese government officially announced that China aims to conduct scientific research, although many analysts believe “this class of satellite is being used for reconnaissance purposes.”<sup>17</sup> Other research has reported that “these dual-use capabilities provide global, near-real-time, multi-spectral reconnaissance coverage—albeit optimized for the Western Pacific.”<sup>18</sup> In this manner, the Chinese space-based ISR system is monitoring the SDF and U.S. forces, including the Carrier Strike Group (CSG) and the readiness of U.S. air bases in the Pacific region. Moreover, information from remote sensing satellites such as the Yaogan Satellite and the BeiDou Navigation Satellite System has been integrated to enhance anti-access/area denial (A2/AD) capabilities through ballistic missiles capable of precision attacks, anti-ship ballistic missiles (ASBMs) such as the DF-21D and DF-26, and cruise missiles.

## Impact on Military Balance in the Indo-Pacific Region

China's counter-space capabilities threaten free access to outer space, and its space development and utilization lack transparency. Also, due to the dual-use nature of satellites, the boundary between the development of science and technology in space and military intentions is becoming vague. In the Indo-Pacific region, mutual distrust between the U.S. and Japan and China in space has led to a security dilemma not only in space but also in traditional domains. For example, discussions on China's strengthening of precision intermediate-range missile attack capabilities based on its space-based ISR system and the deployment of U.S. intermediate-range missile forces in East Asia are likely to be relevant. In addition, the U.S. Department of Defense recognizes that the threat of China's space capability requires "[transforming] to more resilient space architectures."<sup>19</sup> In October 2019, the Space Development Agency announced the National Defense Space System to respond to threats in outer space. Furthermore, the expansion of China's counter-space capabilities and space development and utilization have had a significant impact on Japan's defense policy.

Japan's defense policy is based on the credibility of the U.S. military presence in the Indo-Pacific region, with the assumptions of U.S. forward presence, U.S. Indo-Pacific Command's freedom of maneuver throughout the region, and a broad command, control, and communication structure to enable long-distance contact. However, as the PLA strengthens its A2/AD capabilities based on its counter-space capabilities and space development and utilization, these assumptions are becoming extremely fragile. First, the PLA's space-based C4ISR (Command, Control, Communication, Computer, Intelligence, Surveillance, and Reconnaissance) system can find and fix on the U.S. forward bases and major SDF facilities. It can also track the U.S. Navy CSG and provide target information for a variety of ballistic and cruise missiles, including ASBMs. In addition, given the PLA Navy's efforts to expand operational areas from near seas to far seas and the PLA Air Force's ongoing program to develop next-generation bombers, it is highly likely that these systems will be used as a means of engaging targets' information transmission for the PLA's surface ships, nuclear submarines, long-range bombers, and other long-range weapons in the region.

Second, the PLA's counter-space capabilities not only reduce the U.S. and Japan's qualitative advantage such as precision strike capabilities but also enable them to deceive, deny, disrupt, or destroy command and control communication lines in the Western Pacific. Although satellite communication (SATCOM) is not the only method in use, the loss of SATCOM would restrict operation capabilities including ISR, unmanned aerial vehicle operations, and missile defense.

Thus, the PLA's space capabilities in outer space and its unclear space development and utilization overturn the assumption of a military balance between the U.S. and China in the Indo-Pacific region, increasing the risks and costs of forward deployment by the U.S., while lowering the political and military costs of China's ambitious efforts in the region.

## Development and Challenges of Japan's Space Security Policy

### *1. Development of Japan's space security policy*

Japan's pacifism has uniquely shaped its space policy. Japan's space policy was initiated by the establishment of the National Space Development Agency of Japan, the predecessor to the Japan Aerospace Exploration Agency (JAXA), under the National Space Development Agency of Japan Act of 1969. At the time of the enactment of the bill, a supplementary resolution was adopted by the House of Councilors that "activities related to the development and use of outer space shall be limited to peaceful purposes," and "peaceful purposes are non-military."<sup>20</sup> Thus, the use of space for military purposes was prohibited in principle.

In such a political environment, it was difficult for security-related organizations such as the Defense Agency to conduct space activities. However, this situation has changed rapidly over the past twenty years, in response to the expansion of threats in outer space since the 2000s. In 2008, the Japanese government enacted the Basic Space Law, transforming its conventional science and technology-oriented policy into a three-pronged policy of "security, industrial promotion, and science and technology."<sup>21</sup> In addition, space security was increasingly emphasized in the Space Basic Plan, formulated in 2009, 2013, and 2015, with a significant policy change in the 2015 iteration. In response to the 2013 National Security Strategy of Japan in which "ensuring the stable use of outer space and promoting its use for security purposes"<sup>22</sup> was listed as one of the strategic approaches, security came to be positioned at the center of space policy. Furthermore, since 2018, even Japan, which has a relatively self-contained security policy compared to other countries, has recognized the need for offensive counter-space capabilities.

### *2. Challenges of Japan's space security policy*

In contrast to its development, there are many challenges in promoting Japan's space security policy. First, even if there is a need to establish and expand space units in the SDF in the future, it will be challenging to secure the necessary personnel with Japan's declining and aging population. Since operating in space is a relatively new field for the MOD and the SDF, those two organizations have not yet trained enough space experts sufficiently, and space doctrine has not yet been developed. Second, due to Japan's unique pacifism, there is a significant gap in the collaboration of industry and government with academia.<sup>23</sup> Third, although the defense budget is expected to continue to increase, the government as a whole cannot expect a drastic increase in science and technology-related expenditures allocated to the MOD due to an increase in fiscal expenditures, including social security expenditures with the aging population. Fourth, with the establishment of Japan's future space operations capabilities, it is necessary to standardize the

actions between Japan and the U.S. in a joint operation plan. Thus, in order to promote Japan's space security policy, a comprehensive approach is necessary to overcome those issues.

## Policy Recommendations

Given the strategic competition between the U.S. and China in the Indo-Pacific region and Japan's limited resources, Japan's space security policy must be promoted not only through the country's efforts but also through cooperation with its allies and countries that share its values. Through these efforts, Japan should achieve the three goals that contribute to the overarching vision: formation of free and open space and an Indo-Pacific strategy that aspires to "stability and prosperity of the international community."<sup>24</sup> From this perspective, Japan needs to promote its space security policy through three multilayered approaches: (1) Multilateral, (2) Bilateral (U.S.-Japan Alliance), and (3) All of Japan.

### Multilateral Approach

#### *1. Shaping international norms for the development and use of space*

To contribute to the peaceful use of outer space, Japan must actively participate in the formation of norms in space with other countries that share "free and open" values. Japan played an essential role with the U.S., Canada, and France in the formulation of the "Long-Term Sustainability (LTS) Guidelines for Space Activities" adopted by the U.N. Committee on the Peaceful Uses of Outer Space in June 2019.<sup>25</sup> Japan should continue to play an active role in the international implementation of good practices in space and the formation of new international norms. In the future, international discussions on how existing international law can be applied to outer space must be advanced. In particular, discussions should be encouraged on what activities in outer space fall under the category of "the threat or use of force" under the U.N. Charter. Even if a consensus cannot be reached as a comprehensive international norm, dialogue with countries sharing common values can be the basis for collective action in the event of the threat of the use of force in space.

#### *2. Promoting transparency and confidence-building measures*

Promoting transparency and confidence-building measures in space is crucial for stabilizing the security environment. In contrast to the fact that less binding international norms such as the LTS Guidelines have achieved positive results, it has become challenging to formulate more binding international norms such as disarmament and arms control on space weapons. One of the reasons for this is the interest gap between the major powers, but the most fundamental reason is the dual-use nature of satellites. Even if space weapons could be defined, banned, and restricted, civil or commercial satellites could easily be converted to military

use in space. In particular, there is no fundamental technical difference between on-orbit services and on-orbit ASAT. Therefore, considering the difficulty of disarmament and arms control in space, it would be more practical to promote transparency and confidence-building measures even if they are non-binding. For example, since China's proximity operations to U.S. satellites is one of the concerns in space, the establishment of proximity limits in geostationary orbit and the framework for mutual notification of proximity can be options for advancing transparency and confidence-building measures. There are also options in which Japan could cooperate with potential competitors in the field of scientific exploration, like the Apollo Soyuz Test Project during the Cold War and the current International Space Station. It may also be able to cooperate in areas such as debris removal projects.

### *3. Strengthening cooperation with likeminded space-developed countries*

Japan should advance cooperation on the development and utilization of space with space-developed countries that share "free and open" values. For example, Japan's participation in the Combined Space Operation Center, consisting of the U.S., Canada, the United Kingdom, Australia, and New Zealand, as well as France and Germany, will not only promote global space situational awareness (SSA) capabilities but also serve as the first step toward further cooperation. In addition, if Japan shares satellite platforms and satellite services not only with these countries but also with international organizations and other space-developed countries like the E.U. and India, it would ensure technical redundancy and promote political resiliency of space systems by complicating the political cost calculation of the use of ASAT weapons by hostile countries.

### *4. Strengthening cooperation through outer space with countries in the Indo-Pacific region*

It is also crucial to strengthen cooperation with countries in the Indo-Pacific region through outer space. While it might be difficult to cooperate in the field of space development with countries other than space-developed countries, it will be possible to strengthen economic connectivity by providing Japanese space services to countries in the region. For example, the Japanese version of GPS, QZSS, will be able to provide highly accurate Position, Navigation, and Timing (PNT) information for all of the Southeast Asia region. The utilization of that PNT capability for social services, agriculture, disaster risk management, and environmental monitoring will contribute to the "promotion of prosperity across the [Indo-Pacific] region."<sup>26</sup> Besides, Japan, with the U.S. and France, is currently exploring opportunities for cooperation in satellite-based marine domain monitoring,<sup>27</sup> and if it is possible to provide this information to Southeast Asian countries, it will be possible to align Japan's space development and utilization with its capacity-building projects. China established the Asia-Pacific Space Cooperation Organization in 2008 and has been

promoting cooperation in space utilization with countries in Southeast Asia and elsewhere; countries such as Thailand, Malaysia, and the Philippines have already joined or are interested in joining. Therefore, by seeking opportunities to provide satellite services to these countries, Japan will not only counterbalance the increase of Chinese influence in space but also strengthen the political resiliency of Japanese satellites by internationalizing them.

## Bilateral Approach (U.S.-Japan cooperation)

### *5. Strengthening cooperation in fundamental military functions*

Cooperation in fundamental military functions includes ongoing cooperation in SSA and the evolution of consultations toward future space traffic management. In particular, since SSA will become the foundation for the “capability to disrupt [the] opponent’s command, control, communications, and information,”<sup>28</sup> SSA architecture must be integrated with the electronic warfare system in the future. Therefore, further advancing cooperation in the defense and intelligence sectors between Japan and the U.S. will be extremely important. Furthermore, given the impact of China’s space and A2/AD capabilities on the U.S.-China military balance in the Indo-Pacific region as described above, it is also essential to promote cooperation in the fields of SATCOM, early warning (EW), and PNT, which are essential for U.S.-Japan joint operations. In particular, given the increasing demand for SATCOM in future military operations and its importance as the basis for command and control functions, advancing U.S.-Japan cooperation in SATCOM will have great significance in improving technical redundancy and political resilience.

Cooperation on EW may affect the regional military balance more directly because EW satellites are indispensable for the initial detection and identification of missiles in a series of missile defense operations. Therefore, they are an essential component of Japan’s ballistic missile defense architecture. The current EW system in Japan’s ballistic missile defense system relies on shared early warnings transmitted from the U.S.’s Space-Based Infrared System (SBIRS) as the primary source of information. However, since SBIRS was designed in the 1990s when space was a “sanctuary” for the U.S., its survivability is a concern. Since the U.S. has started to develop new EW satellites (e.g. the Next Generation Overhead Persistent Infrared)<sup>29</sup> and the hypersonic and ballistic tracking space sensor satellites,<sup>30</sup> Japan should seek the opportunity to cooperate with these programs. Japan succeeded in developing a prototype of a space-based dual-wavelength infrared sensor module in April 2019 and plans to mount it on the Advanced Land Observing Satellite (ALOS-3) to be launched in 2020.<sup>31</sup> Therefore, there might be opportunities for cooperation between Japan and the U.S. in the joint development of infrared sensors, cooperation in satellite upgrade programs, or the establishment of an information-sharing system of the EW systems developed by both countries.

### *6. Establishing joint operating capabilities in space from peacetime to contingency situations*

As Japan expands its use of space in the military field in the future, Japan and the U.S. need to consider the roles, missions, and capabilities across the full range of military operations. In addition to defensive operations such as SSA and collision avoidance operations in peacetime, Japan and the U.S. need to deepen joint efforts on how to respond to malicious actions by competitors in gray-zone situations. The allies need to reach a consensus on how to respond to attacks with “reversible” consequences, or temporary disruption, such as laser dazzling, electronic jamming, cyberattacks, or any other malicious actions. Such consensus-building dialogues are crucial for escalation control in a gray-zone situation and deterrence against ambitious attempts by competitors.

In addition, in preparation for contingencies, discussions should be advanced on the collection and sharing of information on potential military targets, role-sharing of offensive counter-space operations, and rapid response satellite operations under degraded mission capability in space. Japan and the U.S. should maintain warfighting mission assurance in space through those comprehensive activities. In addition, based on the results of various table-top exercises, including the Schriever Wargame, Japan and the U.S. need to integrate the space capabilities with joint capabilities in the other four domains.

### *7. Advancing cooperation in space exploration with a view to long-term security effects*

Japan should advance cooperation with the U.S. in scientific exploration and the development of facilities in lunar orbit and on the Moon from the perspective of space security. It is exceptionally vital for long-term security considerations. In particular, from a military perspective, the Moon has the potential to become the ultimate “high ground” in terms of observability and an energy advantage. The benefit of the high ground in land operations, the superiority of air power over maritime and land forces, or the effectiveness of space power is based on the essential superiority of the high ground. In space, gravity defines high and low ground. The point of lower gravity becomes the high ground because of its energy advantage. Since the Moon has one sixth of the Earth’s gravity, and Lagrange points are points where satellites can maintain their position relative to the Earth and Moon, those areas might become high ground in cislunar space. Therefore, the militarization of those areas will significantly impact space and terrestrial operations. Although the militarization of the Moon and lunar orbit is a long-term concern, history proves that any domains that are strategically critical, such as air, underwater, space, and cyberspace, are eventually militarized. Although the Outer Space Treaty and the Moon Agreement prohibit military facilities on the Moon, the possibility remains that “dual-use” facilities will be built for scientific research purposes. Furthermore, the deployment of weapons in lunar orbits is



not prohibited by these treaties. Therefore, it is essential for Japan and the U.S. to promote international space exploration on the Moon and in lunar orbit in order to enhance the international transparency regarding the Moon.

## All-of-Japan Approach

### *8. Strengthening cooperation among industrial, academic, and governmental sectors*

In order for Japan to promote space security policies, fostering the industrial base through industry-academia-government collaboration is critical. Japan is one of the few countries in the world that has a broad range of space industries, from satellite manufacturing to rocket manufacturing and launch services. Yet, though the public sector accounts for about 90 percent of the Japanese space industry, its business scale is smaller than that of Europe and the U.S. Thus, Japanese space companies, especially small and medium enterprises, are less competitive compared to leading foreign space companies.<sup>32</sup> To energize the domestic space industry, the GOJ should continue to reduce barriers to entry for venture capital and facilitate technological innovation. Furthermore, the MOD needs to develop a clear vision for space security policy to increase the predictability of space businesses. For example, in light of the current space security environment surrounding Japan, constellation technologies, small rockets and satellites, or advanced sensors will become critical technologies for ensuring the resilience, readiness, and financial feasibility of space operation capabilities.

In collaboration with academia, the GOJ needs to ensure that defense-related research projects at universities do not hinder university independence and governance. Moreover, incentivizing the university as a whole is also crucial. For example, with regard to research grants to universities, it may be possible to provide more flexible funds that include the cost of facility development or the cost of operating facilities. Additionally, such efforts will also lead to cultivating new talents in the long run.

### *9. Strengthening whole-of-government efforts*

Japan needs to strengthen its whole-of-government efforts. In particular, the MOD should advance its ties with the Ministry of Education, Culture, Sports, Science, and Technology in basic research and with the Ministry of Economy, Trade and Industry in technology development in order to further integrate the science and technology policies and space security policies across the government. In addition, given the dual-use nature of SATCOM, remote sensing, and PNT satellites, multiple ministries can move ahead with joint project funding to space companies that have critical technologies. In order to promote research and development in the field of space security with a limited budget, the MOD should find any opportunities to collaborate with the civil and commercial space sectors.

It is also necessary to strengthen cooperation between the government's space operation community and intelligence community. In particular, cooperation among the ASDF Space Command, JAXA, SDF intelligence squadron, Defense Intelligence Headquarters, and Cabinet Satellite Intelligence Center will become important. Furthermore, while the GOJ is advancing the development program of responsive small satellites as part of its study on strengthening the mission assurance of the entire space system, cooperation between the space operation community and the intelligence community will be even more essential. In addition, in order for the SDF to establish "capability to disrupt [the] opponent's command, control, communications, and information"<sup>33</sup> in the future, it is essential to integrate SSA information with ISR information such as electromagnetic spectrum information in outer space.

#### 10. *Cultivating "space professionals"*

Cultivating the space professionals who will play a central role in space security and bridge the gap between security and the other sectors of space is the most urgent task for the MOD and ASDF. The MOD and ASDF must accelerate the development of the quality and quantity of human resources through the recruitment, training and education, and establishment of career paths. They also should develop an "intellectual foundation," including the development of doctrines and the establishment of space operation procedures. In developing such human and intellectual foundations, the MOD and SDF will need to develop space professionals in three fields: space policy, space technology, and space operations. These professionals are necessary to bridge the gap between civil and commercial space and security space and to evolve air and space into multi-domain operations.<sup>34</sup>

Drastic organizational reform of the ASDF will be necessary in order to develop these human resources. The ASDF should review its existing organization by various measures including the integration of existing units, expansion of private contractors, utilization of retired SDF personnel, an increase of manpower-saving projects, female participation, and unmanned systems, and review of the division of roles within the SDF. However, the ability of the ASDF to create these space professionals is not fundamentally a matter of organizational structure but of the ability of the ASDF to transform its organizational culture and identity from *air* to *air and space*. The only way to create these new values is leadership. The ASDF should train the leaders who will lead the new era of the ASDF.

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**CHAPTER FOUR**

# The Future of Deterrence Strategy in Long-Term Strategic Competition

MASASHI MURANO

## Policy Objectives

It has been almost five years since the last Guidelines for Japan-U.S. Defense Cooperation were introduced in 2015. Since then, the Trump administration has taken power, and the United States and Japan have both reviewed their defense strategies (the 2018 National Defense Strategy [NDS]<sup>1</sup> and National Defense Strategy Program Guideline [NDPG]<sup>2</sup> respectively).

The U.S.-Japan alliance faces several challenges in preparing for long-term strategic competition with China. But have the U.S and Japan been able to clearly prioritize defense investment areas and allocate limited resources? The two countries' resources are finite, and it is not practical to pursue full-spectrum dominance.

- Japan should begin to engage in a discussion with the United States to redefine the roles, missions, and capabilities needed to impose costs on China by exploring the appropriate mix of offensive and defensive capabilities needed.
- Japan should attempt to define an appropriate force posture for the Self-Defense Forces (SDF) based on threats, not on legal issues including the Constitution. To do so, it is necessary to reconsider the meaning of an exclusively defense-oriented policy.
- Japan and U.S. alliance handlers should devote more time to verifying not only hardware issues such as weapon systems but also operational concepts and to updating the command and control structures.

## Background

The security environment in the Western Pacific, where the U.S.-Japan alliance and China encounter each other, is sometimes described as a risky situation that could lead to an arms race. Some people see this as a problem of the so-called “security dilemma.”<sup>3</sup> However, it is not appropriate to use the discussion of security dilemmas to explain this regional security environment. The security dilemma is defined as the spiral model of an unexpected arms race that occurs even though

no side really desires it.<sup>4</sup> However, it is clear that China's military expansion and the People's Liberation Army (PLA) activities over the past twenty years are not reactions to the defense build-up of Japan and the United States. From the late 1990s to 2012, Japan's defense budget was almost flat or even declining.<sup>5</sup> Since 2012 following the inauguration of the second Abe administration, Japan's defense budget has grown. But this growth rate is marginal relative to China's, which for FY2019 increased by 7.5 percent over the previous year.<sup>6</sup>

In recent years, Japan has also been preparing for a state visit from President Xi Jinping. Diplomatic relations between Japan and China have thus improved. However, China's Coast Guard and PLA Navy (PLAN) vessels have been increasingly active in the East China Sea.<sup>7</sup>

In other words, even if diplomatic relations between Japan and China improve, China's military and paramilitary activities have become more active. This indicates that China is engaging in a deliberate military expansion regardless of what Japan and the United States do. This is not an unexpected arms race spiral like a security dilemma. If China's military buildup is not a reaction to the actions of the U.S.-Japan alliance, no matter how much diplomatic communication improves, there will be a fundamentally competitive relationship between the U.S.-Japan alliance and China. This is the reality of long-term strategic competition that the alliance partners must recognize.

The 2017 National Security Strategy (NSS) criticized the U.S. government's traditional "engagement" policy for failing to produce results.<sup>8</sup> An unexpected arms race could be prevented by ensuring close communication and transparency. But if the challenger is engaged in deliberate military expansion, it would not be a realistic objective for a defending side (status-quo power) to aim to shape its opponent. What a status-quo power should do is identify what the challenger is trying to do and try to prevent it from doing so. This is the essence of selective deterrence or selective containment.<sup>9</sup>

## Impact of U.S. Policy

It should be noted that the "competition" referred to in the 2017 NSS and 2018 NDS contains elements of "competitive strategy." Competitive strategy is a concept that aims to overcome long-term competition by gradually wasting resources through cost-imposition by forcing competitors to compete in areas that are disadvantageous to them, while identifying and maintaining areas in which the defender has an advantage.<sup>10</sup>

The question is how to compete with China. China has a clear "Red Theory of Victory" to use asymmetric capabilities to form anti-access/area denial (A2/AD), seize the dominant domains of the U.S.-Japan alliance, and prevent the U.S.'s intervention. Japan—and even the United States—does not have the equivalent



“Blue Theory of Victory.” Why don’t we have a clear “Theory of Victory”? Here is the difficulty of setting strategic goals for the alliance.

What is clear is that the U.S.-Japan alliance represents a status-quo power and China is a strategic challenger to the rules-based international order and the balance of power in the Western Pacific. However, defenders of the status quo tend to have more difficulty in setting proactive, clear goals than challengers.

The issue might be related to Japan’s overinterpretation of the concept of an “exclusively defense-oriented policy” or *senshu-bōei* and its overly restrictive defense posture.<sup>11</sup> For a long time, from the standpoint of exclusively defense-oriented policy, Japan restricted the weapons systems that the SDF could possess. According to past Diet statements, the SDF was not allowed to possess intercontinental ballistic missiles, strategic bombers, or attack aircraft carriers.<sup>12</sup>

However, the security environment facing Japan is constantly changing. Whether these assets are necessary for Japan’s defense should be determined on operational demand or a threat-based approach, not by law. It should not be the law that limits it, but the rationality of the operations concept, cost analysis, and defense portfolio. This paper will not go into the issue of Article 9 of the Constitution, but the force posture of the SDF should not be restricted in advance by law.

So, how should the appropriate force posture for the SDF be designed? It is the strategic concept that determines it. It is important for the alliance to pursue cost-effective deterrence and defense strategies and avoid waste as much as possible, not to mention impose costs on its competitors. Has Japan’s defense strategy been able to do that?

## Challenges

Since the 2013 NDPG, operations research such as capability analysis and assessment has been employed as a scientific method in Japan’s defense force planning.<sup>13</sup> These methods scientifically derive the joint capability areas and functions currently lacking in the SDF, based on multiple estimates of defense planning scenarios to be addressed in the future, and identify the gap between the current SDF and future adversaries.

The same approach was used in the development of the 2018 NDPG. As a result, the 2018 NDPG comprehensively covers the challenges facing Japan.<sup>14</sup> For example, in the 2018 NDPG, it was specified that Japan would give priority to investments in space, cyberspace, and the electromagnetic spectrum. The capabilities of these new domains are key enablers in any joint operation and are a move in the right direction.

However, while scientific analysis reveals gaps that the SDF should fill, the methods do not decide the priorities of how they should fill those gaps. (This is because Japan’s defense budget is chronically short of the essential requirements.) The

portfolio priorities required to fill them are selectively determined by factors such as maintaining the defense technology and industrial bases and by various political decisions such as budget negotiations among the Ministry of Finance and the Ground, Maritime, and Air Self-Defense Forces.

For example, assume that a total of 1,000 point gaps are identified across ten capability areas. When there are only 500 point gaps that can be filled by the size of the execution budget in the next budget cycle, what to prioritize is the gaps up to the defense planning authorities and the political will to direct them. In addition, when making additional investments to fill the gaps, it is not sufficient to divide the available 500 points equally across the ten capability areas, because there are qualitative and quantitative differences in each function and capability gap. For example, in capability area A, the SDF needs only a little more effort to fill the gap. On the other hand, in area B, there is a hopeless lack of capability, and no matter how hard they try, the SDF cannot achieve the capability needed in the next ten years of budget cycles. In this case, it would be unreasonable to invest limited resources in area B that would not yield results in the next ten years. Therefore, it may be more effective to give up gracefully and invest in other areas.

In this respect, Japan faces difficult challenges. As a basic premise, the budget and human resources of the SDF are extremely limited. Moreover, the security environment facing Japan is a combination of low-intensity challenges, such as deterrence in the gray zone with Chinese Coast Guard vessels, and high-intensity challenges, such as A2/AD, in which the PLA's ballistic missiles and cruise missiles are present.

China's opportunistic creeping expansion without military conflict, such as the construction of artificial islands and the normalization of activities by naval vessels and military aircraft, as in the case of the disputed South China Sea, may be prevented by regular presence patrols and regional training by Japan's Coast Guard and Self-Defense Forces. This is the core concept in the 2010 NDPG's "Dynamic Defense Force" and the 2013 NDPG's "Dynamic Joint Defense Force."<sup>15</sup>

The 2018 NDPG is also basically following these concepts. However, in a high-intensity environment, forward presence becomes very vulnerable. This is a competing demand.

Ideally, Japan should have the right assets for each scenario. Again, however, Japan's defense resources are limited, and it needs to prioritize defense investments.

For this reason, some decisions raise questions about prioritization. A typical case is the refurbishment of the *Izumo*-class helicopter carrier destroyer.<sup>16</sup> The refurbishment of the *Izumo*-class destroyers makes it possible to operate F-35Bs, which have the ability to perform short takeoff and vertical landing, giving the SDF a capability like a light aircraft carrier. Subsequent political criticism is that the SDF possesses "aircraft carriers." However, as discussed above, the problem is not consistency with previous government statements; more important is whether decisions are based on clear operational concepts and cost efficiencies.

A review of the refurbishment of the *Izumo*-class destroyers and the acquisition of the F-35B suggests that there are roughly four possible operational scenarios: (1) presence operation during peacetime and gray-zone operations, (2) island defense in the southwest area, (3) air defense in the front of the Pacific (air-interdiction/defensive counter-air operations in the Pacific against the PLA's bombers and fighters, including carrier-based variants), or (4) combined scenarios of (2) and (3).

First, a combination of these assets would be useful for presence patrol in peacetime. It makes sense for the Japanese light aircraft carrier and the F-35B to carry out presence operations in the sea lanes connecting the East China Sea to the South China Sea and the Indian Ocean in collaboration with allies and partners such as the U.S., the U.K., France, and Southeast Asian countries. It is not difficult to imagine that, in the foreseeable future, U.S. and British F-35Bs will conduct joint exercises to land on and take off from Japanese aircraft carriers in the western Pacific.

On the other hand, the cost effectiveness of continuous operations of these vessels and the F-35B should be closely examined. To be sure, patrols by large Japanese destroyers in the South China Sea and western Pacific accompanied by "carrier-based fighters" should provide a sense of reassurance to Southeast Asian countries at a time when China has made the operation of its aircraft carriers regular practice. But it also means that these assets are limited to "show a presence" tasks in low-intensity peacetime environments.

Since aircraft carriers do not have the ability to defend completely against aerial threats themselves, it is essential to operate under the protection of accompanying Aegis destroyers. However, it will be difficult in practice to continue their operations in a high-stress A2/AD environment while exposed to China's anti-ship ballistic missiles and anti-ship cruise missiles and fighter-bombers. In particular, if the deployment of the F-35B increases the military value of the vessel, the *Izumo*-class destroyer would become a high-value target for the PLA, and Japan would have to strengthen its fleet protection. In the case of stealth assets like the F-35 that are hard to detect and intercept in the air, China has an incentive to strike early in a crisis. This is because detection and neutralization have a much higher probability of success while such assets are on the ship or base.

Presence operations under the guise of training by *Izumo*-class destroyers have already been carried out in the South China Sea, the Indian Ocean, and other areas since 2017, and they in themselves are beneficial. However, if actual warfighting is not assumed anyway, it is sufficient to continue the presence operations with the vessels already possessed. Therefore, it is questionable whether it is a priority to fund the refurbishment cost for the operation of the F-35B.<sup>17</sup>

In the second scenario, which assumes the defense of islands in the southwest, it is easy to imagine the difficulty of securing air superiority due to the shortage of fighter bases. In fact, if the Naha base in Okinawa becomes unusable due to a series of missile attacks, Air Self-Defense Force fighter squadrons will be forced

to operate from Tsuiki Airbase in Fukuoka and Nyutabaru Airbase in Miyazaki, which are more than 800 km west of Okinawa (excluding U.S. bases), until Naha is restored, and Japan will have no hope of maintaining air superiority on its own. Therefore, it is reasonable to introduce a certain number of F-35Bs that can take off and land even from short runways to ensure redundancy in air power.

However, the battle for air superiority envisaged on the southwestern front is likely to be high-intensity multi-domain combat with hundreds of fighter jets and various missiles, so the more than a dozen F-35Bs may not be able to secure enough force to substitute for the loss of Naha's F-15s and F-35As. Also, even if there is an *Izumo*-class destroyer for emergency landing, it is highly likely that it will be a priority target for the PLA. In addition, unlike air bases on the ground, aircraft carriers are difficult to recover once they are seriously damaged, so if high-intensity environments are expected, they will have to retreat beyond China's A2/AD zone. If that happens, the F-35B, which has a shorter combat radius than the F-35A, may have fewer operational opportunities.

The third demand coming from the air defense scenario on the Pacific side was mentioned only briefly in the 2013 NDPG, but the 2018 NDPG emphasized the necessity of the refurbishment of the *Izumo*-class destroyer.<sup>18</sup> In fact, as long as Iwo Jima (called Iwo To in Japan) is not used, measures to deal with intrusions into Japanese airspace around the Ogasawara Islands must be taken from places such as Hyakuri Airbase in Ibaraki, and it will take a long time to deal with them. In recent years, the Pentagon's annual report has stated that PLAN vessels and H-6 bombers have cooperated with each other to cross the first island chain and activate their activities in the western Pacific.<sup>19</sup> In light of this trend, it is reasonable for Japan to deploy the *Izumo*-class destroyer and F-35Bs in the Pacific Ocean to interdict Chinese fighters and bombers in the early stage of confrontation, before U.S. forces come to support Japan.

What should be discussed is the effectiveness of countermeasures. What quality and quantity of threats does Japan have to deal with? In this scenario, unlike presence patrols in peacetime, what is needed here to deter China is a real war-fighting capability that can negate its confidence and operational objectives. It is said that the number of F-35Bs that can be carried on the modified *Izumo*-class destroyer is about 8 to 10, but with only 8 to 10 F-35Bs, is it possible to carry out an effective air interdiction against a Chinese bomber squadron that has breached the southwestern defense line? In fact, it is natural to think that these bombers are escorted by long-range fighter bombers such as the J-16 and fifth-generation fighters such as the J-20 and J-31, and it may not be straightforward for the F-35B, which is inferior to the F-35A in weapons payload and dogfight capability. In addition, unlike U.S. aircraft carriers, the *Izumo*-class destroyer without catapults is not able to take off and land carrier-based early warning and control aircraft such as the E-2D and electronic support, which are the cornerstones of defensive counter-air operations.

Furthermore, in a scenario such as the defense of Taiwan in which the situations described in (2) and (3) occur simultaneously, there is a strong possibility that operational foundations for the takeoff and landing of fighter aircraft will be required at the southwestern front first, and therefore there may not be room for the deployment of F-35Bs (with Aegis destroyers for escort) on the Pacific side.

Thus, of the scenarios discussed, the situations in which these *Izumo*-class destroyers and the F-35B can operate effectively will be limited to presence operations from peacetime to gray zone. In other words, it seems to be the same ground as China's current concept for operating its aircraft carriers. The concept of using the same aircraft carrier to compete with China's aircraft carrier presence is totally different from the concept of "competitive strategy" or "cost-imposing strategy" in which one's own camp chooses a domain that is advantageous and promotes competition. The only time it is possible to compete head-on is if both sides have a competitive edge in the same domain.

If that is the case, rather than competing head-on, Japan should place importance on imposing costs on other countries in the domains in which Japan has an advantage, such as anti-submarine warfare (ASW) based on a clear understanding of Japan-U.S. cooperation, and denial strategies using ground-based long-range missiles deployed on the southwestern island chain. Originally, the *Izumo* class played an important role as command platforms for ASW helicopters. At first glance, it may seem convenient to add the landing and takeoff capability of the F-35B for multi-purpose operation. The multi-purpose equipment, such as fighter jets and ASW helicopters, which can be replaced by modules, can be used for various missions within a certain period of time. However, unlike the SM-6 which can switch between anti-ship and anti-aircraft modes immediately before launch, *Izumo* cannot be used for multiple purposes in individual combat situations. More versatile use of assets leads to more complicated operation plans, more time needed for training personnel, and less efficiency.

## Policy Recommendations

In the first place, what is most desirable for Japan's defense policy is for the government to secure the necessary defense budget.

However, the growth rate of Japan's defense-related expenditures has been only about 0.8–1.4 percent annually for the past six years. To break through this situation, in August 2019, the Ministry of Defense requested to increase its FY2020 defense budget by 6.3 percent from the previous year. However, the actual budget for FY2020 approved by the government increased only 1.2 percent from the previous year.<sup>20</sup>

This is not an appropriate trend, but budgetary constraints make it more necessary to make efficient defense investments.

### *1. To avoid cost-imposed strategy and to shift to cost-imposing strategy*

What Japan needs today is nothing but a defense strategy in the era of “competition” in light of its inferiority to China. The demands of large aircraft carriers and similar large vessels such as the U.S.’s amphibious assault ships could prove counter-productive to sustainable defense strategy and portfolios in other important areas. If Japan gets stuck in the “cost-imposed strategy” where it should have a “cost-imposing strategy against China,” it will be difficult to change that direction after 2030. It will be difficult to cancel the *Izumo* refurbishment program already underway. However, Japan should avoid acquiring larger vessels.

### *2. To maintain superiority in an underwater domain*

Compared to other domains, the underwater domain is an area of relative advantage for the U.S.-Japan alliance, and low-visibility underwater assets can also operate in A2/AD environments. As the 2018 Nuclear Posture Review makes clear, the U.S.’s nuclear triad is mainly focused on submarine-based systems including low-yield submarine-launched ballistic missiles and new submarine-launched cruise missiles.<sup>21</sup> In order to maximize an underwater-based deterrent effect, Japan’s ASW units should support the U.S.’s submarine forces in the form of embedded nuclear deterrence operations by U.S. submarines.

### *3. Further enhancement of standoff capability*

A wider range of solutions should be discussed to ensure maritime and air superiority. To achieve these goals, it is necessary to consider Japan and the U.S.’s A2/AD capabilities, in which even if it is difficult to secure superiority, the opponent cannot gain superiority either. In this regard, it is important that the SDF has decided to acquire standoff weapons such as Joint Strike Missiles and Joint Air-to-Surface Standoff Missiles.

Frequent rotation of fighters to Iwo Jima should also be considered in order to control the large maritime area and choke points. In the past, Field Carrier Landing Practice for U.S. Navy carrier-based fighters was conducted on Iwo Jima, but as these drills will be conducted on Mageshima, a remote island located south of Kyushu, in the future, Iwo Jima will have more flexible operational values.

### *4. Acquisition of long-range strike option to fixed targets*

For Japan’s deterrence strategy, it is important to upgrade missile defense capabilities in stages as before. But unless a revolutionary solution like a directional energy weapon is put to practical use, the cost of being a defender will continue to rise. Therefore, Japan cannot continue to invest in missile defense-related assets without limit.

Cost efficiency is an important factor when Japan is trying to acquire an offensive system as well as a defensive weapon. For example, attacking time-sensitive

targets such as ballistic missile mobile launchers requires an integrated strike package such as advanced dynamic intelligence, surveillance, and reconnaissance, multi-role fighters, precision-guided munitions, and escort jammers for electronic protection. It would not be practical for the SDF to build this quickly.

When considering the appropriate mix of offensive and defensive capabilities within limited resources, Japan needs to narrow down its operational concept and target sets. Japan's defense posture can remain strategically on the defensive just because it has a long-range missile. But tactically, having the option to go on the offensive will complicate the opponent's calculations. To deter China's aggression, Japan and the U.S. should plan a mix of cruise and ballistic missiles that target China's offensive counter-air capabilities. These might include ground-launched cruise missiles deployed in the southwestern islands, long-range ballistic missiles that offset the weaknesses of cruise missiles, medium-range ballistic missiles deployed around the southwestern islands, as well as intermediate-range ballistic missiles deployed outside of China's A2/AD zone, such as on Iwo Jima or Guam. Therefore, in the post-INF world, it would be possible for Japan to have conventional medium-range and the United States to have intermediate-range ballistic missiles with longer ranges.<sup>22</sup>

##### *5. To establish a U.S.-Japan common operational picture and a joint targeting cycle*

If Japan hosts U.S. missiles or if Japan possesses long-range missiles, China will inevitably be wary of them. Japan must play an active role in developing an operational plan on the use of various missiles, perhaps through the ongoing Japan-U.S. joint missile-defense taskforce. Additionally, this will reduce political risks on the SDF's side.<sup>23</sup>

##### *6. Establishment of NDPG Review Commission*

In Japan, the process of reviewing policies that have already been formulated is hardly functioning. In formulating the 2018 NDPG, a panel of experts was held, but it is not enough to exchange opinions and hear them in advance. In order to ensure the rationality and transparency of the portfolio determined in the NDPG, it is necessary to consider, as in the case of the National Defense Strategy Commission, providing security clearances to experts outside the government and retired SDF officers, and then publicly providing opportunities for them to objectively and ex post facto review government policies and point out issues.

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# Final Thoughts

YUKI TATSUMI

Each chapter in this volume has focused on the key challenges for Japan's defense policy that were identified in the December 2018 National Defense Program Guidelines (NDPG). Some authors tackled new areas such as cyberspace, outer space, and the modality of Japan's deterrence posture in an era of strategic competition. Others examined challenges of an enduring nature, namely how Japan will play a proactive role in building a stable regional order in the Indo-Pacific and how Japan's Self-Defense Forces (SDF) might cope with the irreversible trend of aging and population decline. While these chapters discussed diverse topics, there are some common themes among them.

First is the importance that Japan places on enhancing security partnerships beyond the United States, its only treaty ally. As Teraoka argues in Chapter 1, Japan's own security and its future have been indivisibly linked with the strategic alignment choices Tokyo has made, dating as far back as its alliances and partnerships in the early 20<sup>th</sup> century. In the contemporary context in which Japan must continue to grapple with the ascendance of its neighbor China as the United States' new strategic competitor, she submits that expanding Japan's security partnership with other likeminded countries while still anchoring its security policy in its bilateral alliance with the United States is critical to ensure Japan plays a meaningful role as a "stable builder of force" in the Indo-Pacific region.

Of course, the importance of alliances and partnerships for Japan is not limited to its regional strategic environment. In Chapters 2 and 3, Kawaguchi and Taro Sato both emphasize the importance of maintaining cyberspace and outer space—two key emerging areas that are rapidly gaining significance—as liberal (free) and rules-based domains. They both also emphasize the importance of Japan leveraging its partnership with the United States and other likeminded countries to enhance norms in these domains, making their case of why multilateral cooperation and bilateral U.S.-Japan cooperation are mutually reinforcing and critical to achieve Tokyo's goal.

Furthermore, all the chapters squarely point out the vulnerabilities in Japan's defense capability in some of these areas due to limitations—legal, political, economic, or social—that have been imposed on the SDF. Some of these limitations are more tangible than others. For example, as Kawaguchi elaborates in Chapter 2, cyberspace is the primary example of how the SDF is limited in what it can do for the nation's cybersecurity. Due to both the constitutional restrictions on the government ability for surveillance and a legal framework that places non-Ministry of Defense (MOD)/SDF cybersecurity outside of the SDF's jurisdiction, Kawaguchi

points out that the SDF largely depends on the MOD's ability to coordinate and exchange information with other government and non-government entities to enhance its ability to cooperate with non-MOD entities in defending the nation's cybersecurity. Similarly, in Chapter 4, while he argues that Japan should adjust its posture based on current and anticipated threats rather than what is permissible in the existing legal framework, some of Murano's policy recommendations, such as the establishment of a joint U.S.-Japan taskforce on targeting, will likely invite intense political debate, which often stymies substantive exchanges and quickly descends into "what is constitutional" versus "what is unconstitutional."

Other challenges identified in this volume are based on longer-term trends. In Chapter 1, for instance, Teraoka refers to Japan's "declining material capacity" which limits Japan's ability to respond to the multi-faceted challenges that China presents for Japan's future. Similarly, Yoshimitsu Sato took on the challenge that Japan's demographic trendline—an aging and declining population—presents to the future of the SDF.

Finally, all the chapters suggest, either explicitly or implicitly, the necessity of "all-Japan" efforts in addressing these challenges. In other words, the challenges that are identified in the 2018 NDPG cannot be solved by the MOD alone. Rather, it requires a "whole-of-government" approach for Japan to fully achieve its policy objectives in these areas. The only exception is cyber because, as Kawaguchi lays out in Chapter 2, not only a "whole-of-government" approach but also "government-industry partnership" will be critical for Japan to enhance its capability in cyberspace, making the nation resilient to incoming cyber threats.

In addition, there are outstanding challenges that are difficult to solve, but nonetheless critical. First and foremost, regardless of the soundness of policy goals, whether enough fiscal resources can be allocated remains a critical challenge. Indeed, while the continuous increase of Japan's annual defense budget under the Abe government has been encouraging, the current pace of increase is too incremental to match the pace at which resources will become necessary. Given the long-term trend under which a greater percentage of Japan's annual national budget will have to be allocated for social security as Japan's aging progresses, it will be more difficult to secure a defense budget able to fully supply what is needed to defend Japan.

Furthermore, as all the chapters in this volume reflect, for the vision laid out in the 2018 NDPG to be fully materialized, it requires broad support both inside and outside Japanese government. In the government, it requires not only the MOD/SDF but also officials in the other agencies to support the new initiatives, especially the increase in the defense budget that would be required. In the Diet, the support for the overall policy direction established in the 2018 NDPG needs to be sustained beyond Prime Minister Abe's tenure, which will end in 2021. Should the specific policy objectives under the NDPG need revision because of, for example, considerable changes in the security environment that Japan faces, such

debates should be encouraged, particularly among the Diet members. But these debates need to be substantive and meaningful, rather than stalling on nitpicking arguments over the legality and constitutionality of policy goals or acquisition programs. Avoiding a sincere discussion of Japan's defense needs would not only be utterly unproductive but also would hobble necessary steps to enhance Japan's defense capability.

Finally, any policy document is useful only to the extent that it aligns with the reality of today as well as the anticipated reality of tomorrow. While it seems unlikely that the current trends in the geostrategic environment that undergird the 2018 NDPG will change in the short-term, the Japanese government should not shy away from conducting a rigorous review of these policy documents, including the 2013 National Security Strategy, regularly. Though China's increasing assertiveness was observed long before Abe returned to power in 2012, Japan went through a "lost decade" of defense spending decline during that time. Tokyo's inability to adjust its spending policy cost Japan an important opportunity to begin modernization of the SDF before China earnestly began its own investment in some of the same technologies, forcing Japan to play a belated game of catch-up. Japan should not make the same mistake again.



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## About Views from the Next Generation

*Views from the Next Generation* is a series of policy papers by emerging experts on the most pressing security challenges facing Japan and the Indo-Pacific region. Published annually since 2014 by the Stimson Center's Japan Program with support from Japan's Ministry of Foreign Affairs, the series raises awareness in the U.S. of issues ranging from peacekeeping to nuclear weapons – all from the perspective of the next generation of scholars and researchers – through public seminars and free distribution of the report. With each group of authors who visit Washington, D.C. for the report launch, ties between the American and Japanese security policy communities deepen.

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The Japan Program provides a dynamic platform for academics and policymakers to engage in discussion and analysis on the security issues relevant to Japan and its alliance with the United States. Led by Yuki Tatsumi, the program's researchers explore ways to proactively respond to challenges in Japan's security environment through strengthening security cooperation with the U.S. and other

partners worldwide. Through workshops, seminars, and research reports, the Japan Program identifies policy areas in which the U.S. and Japan can pursue greater collaboration and assesses how Japan can successfully overcome shortfalls in the legal and institutional frameworks of its security policy.





# KEY CHALLENGES

## In Japan's Defense Policy

Japan is concentrating its efforts to reconceptualize its national defense to meet a modern, more uncertain security environment. The release of the 2018 National Defense Program Guidelines emphasizes that preserving stability and maintaining a rules-based order within the Indo-Pacific region requires Japan to take a forward role in adapting to rapid challenges ahead. Still, questions linger around Japan's ability to work around constitutional constraints, an aging population, and alliance demands. Despite these concerns, Japan has avenues and opportunities to develop its defensive capabilities in close cooperation with the United States and other partners. *Key Challenges in Japan's Defense Policy* presents fresh and insightful reports from Japanese experts on core security issues—from emerging domains like cyberspace and outer space to enduring challenges of strategic competition, deterrence, and demographic change—that it must undertake in the coming years.

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