

MEETING CHINA'S MILITARY CHALLENGE

COLLECTIVE RESPONSES OF U.S.
ALLIES AND SECURITY PARTNERS

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MEETING CHINA'S MILITARY CHALLENGE

Collective Responses of U.S. Allies and Partners

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Introduction: Meeting China's Military Challenge

Bates Gill

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The 2018 U.S. National Defense Strategy identified the People's Republic of China (PRC) as a principal challenge and long-term strategic competitor to the United States. According to the strategy document, China is “leveraging military modernization...to coerce neighboring countries to reorder the Indo-Pacific region” to Beijing’s advantage.¹ Echoing these themes, the Biden administration has emphasized that strategic competition with an increasingly assertive China is the number one “pacing challenge” for the United States.²

The military aspects of this challenge arise from Beijing’s aspirations to transform the People’s Liberation Army (PLA) into a force far more capable of conducting high-end joint operations that combine maritime, air, land, space, and cyberspace capabilities to dissuade, deter, and, if necessary, defeat technologically advanced adversaries such as the United States. Of greatest concern are such coercive, deterrent, and warfighting capabilities as precision-strike ballistic and cruise missiles, offensive cyber and counterspace weapons, and coercive “gray zone” tactics short of war.

As the Pentagon recognizes, the PLA has made critical progress toward its goals, advancing from a “mostly obsolete” force to one that has the “resources, technology and political will...to strengthen and modernize the PLA in nearly every respect,” even surpassing the United States in important military-technical areas. As a result, these capabilities “provide options for the PRC to dissuade, deter, or, if ordered, defeat third-party intervention during a large-scale, theater campaign.”³

But the United States is not alone in facing this growing challenge. Other countries in the Indo-Pacific region, including U.S. allies and security partners, confront similar concerns and sometimes face them more acutely. China’s burgeoning military capabilities, particularly within the “first island chain,” pose an increasing threat to the sovereign and territorial interests of U.S. allies and partners such as Japan, South Korea, the Republic of China (Taiwan), the Philippines, Indonesia, and Vietnam.⁴ Even countries beyond the first island chain, such as Australia, India, and Singapore, are increasingly vulnerable to Chinese coercion as the PLA enhances its long-range strike, joint operations, amphibious warfighting, and information warfare capabilities.

How to Respond?

The PRC’s growing military capabilities are formidable, and the challenges they present are clear. What is less clear is how the United States can respond most effectively in association with its allies and other security partners in the region.

To tackle this question, the National Bureau of Asian Research (NBR), with the support of the Defense Threat Reduction Agency Strategic Trends Research Initiative, conducted an innovative year-long Track 1.5 strategic dialogue project entitled “Meeting China’s Military Challenge: Identifying Collective Responses among U.S. Allies and Security Partners in the

¹ U.S. Department of Defense, “Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military’s Competitive Edge,” January 2018, <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>.

² See, for example, Joseph R. Biden Jr., *Interim National Security Strategic Guidance* (Washington, D.C., March 2021), <https://www.whitehouse.gov/wpcontent/uploads/2021/03/NSC-1v2.pdf>; and Office of the Undersecretary of Defense, “Pacific Deterrence Initiative,” May 2021, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2022/fy2022_Pacific_Deterrence_Initiative.pdf.

³ U.S. Department of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China* (Washington, D.C.: Department of Defense, September 2020), i, 72, and appendix 1, <https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF>.

⁴ The “first island chain” refers to the line of archipelagic features roughly extending from the Japanese islands, through Taiwan and the Philippines, and across the northern reaches Brunei, Malaysia, and Indonesia.

Indo-Pacific Region.” Engaging experts and government officials from across the Indo-Pacific region, the project’s research, analysis, and dialogue exchanges generated valuable insights and recommendations on the following dimensions of China’s military challenge:

- specific elements of China’s deterrent, coercive, and warfighting capabilities deemed most threatening to regional security;
- specific scenarios in which China might employ these capabilities;
- specific military-related responses, policies, and operational capabilities that regional governments have employed in response; and
- specific proposals for how the six Indo-Pacific governments covered in this report could partner with the United States and each other to effectively counter China’s most threatening deterrent, coercive, and warfighting capabilities.

At the heart of the project, NBR commissioned in-depth studies by leading regional experts from Australia, India, Japan, the Philippines, Taiwan, and Vietnam. On behalf of the entire NBR team, I would like to thank Paul Huang (Taiwanese Public Opinion Foundation), Yuka Koshino (International Institute for Strategic Studies), Nguyen Hong Thao (Diplomatic Academy of Vietnam), Rajeswari Pillai Rajagopalan (Observer Research Foundation), Michael Shoebridge (Australian Strategic Policy Institute), and Andrea Chloe Wong (Pacific Forum) for their superb contributions to this report and collegiality over the course of the project. Taken together, the six highly detailed, country-specific studies that follow provide a set of insights that broadly align with U.S. interests. But more importantly they also underscore continuing gaps between U.S. and regional security perspectives and expectations, on the one hand, and divergent views across these six U.S. partners, on the other.

Contradiction and Common Ground

The project’s commissioned research and strategic dialogue discussions gave rise to five overarching and cross-cutting themes that define the six countries’ perspectives on China’s military challenge and how, in partnership with the United States and each other, they can counterbalance China’s unwelcome advances. These five themes—discussed briefly below—cannot do full justice to the in-depth studies in this report. Rather, they provide a distillation of the most important areas of contradiction and common ground that U.S. policymakers must address with regional partners in response to China’s growing coercive, deterrent, and warfighting capabilities.

Concerns, plans, and responses regarding an attack on Taiwan vary widely. A PRC attack against Taiwan was prominently flagged as a first- or second-order concern in two of the six country studies—Australia and Japan—in addition to being the central focus of the analysis from Taiwan itself. However, the commissioned analyses from India, the Philippines (a U.S. ally), and Vietnam did not mention the security of Taiwan or the possibility of the PRC’s use of force against the island, as a matter of primary concern. Most importantly, the project’s research and dialogue about Taiwan revealed serious deficiencies in its ability to defend itself and a wide range of views as to how Taiwan and U.S. allies should respond to a PRC attack across the Taiwan Strait.

A high level of concern exists about non-kinetic forms of Chinese coercion and deterrence. In nearly all the country studies—with Taiwan being the one exception—the most frequently flagged concerns were expressed about the PRC’s non-kinetic threats and activities beneath the threshold

of war: gray-zone tactics, including aggressive deployment of the coast guard and maritime militia in disputed maritime areas, political and economic pressures, information warfare, and cyber threats. As such, Indo-Pacific regional security can be enhanced considerably when countries have effective strategies to limit, deflect, and neutralize China's gray-zone tactics.

Where the threat of PRC kinetic use of force was identified and discussed, it mostly focused on the potential use by the PLA of short- and medium-range precision-strike missiles, enabled by an increasingly sophisticated space-based intelligence, surveillance, reconnaissance, and targeting capability. Importantly, at least three of the six country analyses (Australia, Japan, and Taiwan) identified the possibility of kinetic conflict across the Taiwan Strait as a key threat emanating from China and one that would directly affect those countries' national security interests.

This conspicuous concern with gray-zone and other non-kinetic threats was especially true of the analyses from India, Japan, the Philippines, and Vietnam, but also was flagged in the research from Australia and Taiwan. These threats included such tactics as the following:

- building military and other infrastructure near and within territorially disputed areas;
- using cyber and space assets to disrupt critical systems and extract sensitive data in peacetime, as well as to disrupt or destroy civilian and military systems in times of tension and conflict;
- deploying the China Coast Guard and the People's Armed Forces Maritime Militia, backed by the PLA Navy, to establish facts on the water, harass other claimants' government and commercial vessels, and potentially occupy disputed maritime features;
- gaining information awareness dominance through Chinese commercial enterprises; and
- conducting misinformation and political warfare activities.

At the same time, the project's dialogue discussions revealed gaps between regional concerns with such tactics and concerns within the U.S. policy community. This exposes a potential rift in perceptions and priorities between the United States and its regional partners—one that Beijing will readily exploit.

Stronger regional defense capabilities with U.S. support are urgently needed. The PRC armed forces increasingly pose an overwhelming quantitative and qualitative threat to regional militaries. This provides Beijing with an expanding spectrum of coercive, deterrent, and warfighting options and attendant ability to achieve its strategic ambitions, especially against weaker, disadvantaged neighbors. Regional militaries are unlikely to match Chinese capabilities one for one. However, backed by U.S. capabilities and resolve, the deployment of key systems—often asymmetric in nature—can serve to stabilize the region by deterring PRC threats and allowing regional countries to protect their national interests.

Regional countries are taking action on their own to bolster their defenses in the face of the PRC's growing capabilities. But more can be done in collaboration with the United States, including through joint training and operations, U.S. transfers of arms and defense equipment, and joint research, development, and production of weapons and other defense systems.

U.S. bilateral engagement is welcomed, but the desired degree of that engagement varies. Across the project's six country studies, there is clear acknowledgment of a more uncertain and contested security environment, largely brought on by China's growing military power and willingness to brandish it in pursuit of Chinese interests. However, given their own sets of domestic and external security concerns, these countries assess Chinese threats differently and likewise differ about appropriate responses for their defense and security.

As such, the United States' increased presence in the Indo-Pacific is welcomed both bilaterally and multilaterally. However, U.S. policymakers must also understand that regional countries hope that an expanded U.S. presence and the collaborations it builds with partners will unfold in ways that stabilize regional circumstances, do not provoke—or can withstand—retaliation from China, and are consistent with their own domestic political imperatives.

U.S. investment in multilateral collective action is needed. U.S. allies and partners in the Indo-Pacific wish to expand and diversify their security partnerships, including with the United States, as a means to signal political solidarity, underscore common interests and concerns, build collective resilience, and spread risk in the face of PRC threats. Most regional governments will wish to avoid accusations of “containment” emanating from Beijing, concerns to which Washington should remain sensitive. Nevertheless, the United States has a major opportunity to build on current multilateral defense networks and establish new ones, with the longer-term aim of enhancing multinational communication and interoperability as a counterweight to China's growing regional military capabilities.

Next Steps

The six studies in the report present a wide range of specific and practical policy measures for the U.S. government. Collectively, they call for more robust U.S. security engagement in the Indo-Pacific. In some cases, these recommendations call on Washington to break long-held taboos and take greater advantage of favorable circumstances. In other cases, the recommendations warn the United States against overreaching or having overly high expectations about collective pushback against China.

In short, the next steps proposed by the project's regional experts should be a source of both consolation and concern for U.S. policymakers. They are intended as a constructive call to collaborative action and should be read with care. Without going into the specific recommendations, the following key ideas emerged from across the six studies:

- The United States should take urgent steps to mitigate Beijing's intimidation and isolation of Taiwan, support a more robust defense strategy for the island, and plan more concrete military, economic, and diplomatic responses for a Taiwan contingency with U.S. allies and other countries in the region and beyond. U.S. government agencies can make critical contributions to this effort through assessing and responding to advanced PRC deterrent and warfighting capabilities vis-à-vis Taiwan, including through tabletop exercises, especially among the partners most concerned with PRC activity, Australia and Japan.
- A coordinated U.S. government interagency effort is needed to expose, deter, and counteract PRC gray-zone activities. Deeper consultations with allies and key partners in the Indo-Pacific should follow in order to narrow any perception gaps about these gray-zone challenges and implement appropriate measures in response. Work by NBR and other organizations in conducting multilateral research, strategic dialogues, and tabletop exercises should continue to bring a variety of regional actors together to examine non-kinetic challenges and develop coordinated responses.
- Given its growing concerns with certain PRC military capabilities, the United States should accelerate region-wide consultations regarding developments in such critical areas as nuclear and missile technology (e.g., hypersonic weapons), cyberoperations, counterspace, and

autonomous systems and their contributions to China's coercive, deterrent, and warfighting capabilities. These discussions should explore cooperative options with U.S. allies and partners through measures such as strategic reassurance, joint deterrence, and counterproliferation.

- The United States must redouble efforts to improve U.S., allied, and partner defense, deterrent, and warfighting capabilities in the region in the face of rapid advances in PLA capabilities, especially across air and sea power, missilery, and the cyber and space domains. This should include accelerated transfer of offensive and defensive systems to partner governments, improved infrastructure and societal resilience against cyberattack, augmented joint training, capacity-building and exercise activities, more regularized and expanded rotations of U.S. military personnel and platforms in the region, and increased, dispersed pre-positioning of critical military stores.
- The United States needs to re-engage not only more robustly but more effectively at a bilateral level. It must be responsive to the differing security perceptions and needs of individual countries, while developing a greater sense of common purpose across the region. This more nuanced approach is especially important for relations with India, the Philippines, and Vietnam, but it also should define U.S. ties with Australia, Japan, and Taiwan.
- The United States should encourage a range of multilateral defense partnerships in the Indo-Pacific, which enhance regional stability and security by discouraging and deterring PRC threats. The U.S. approach should be framed as delivering strategic public goods while shaping China's behavior to respect its neighbors' legitimate interests according to a common set of rules embraced by the region.

Assuming that the United States is serious about engaging regional partners more effectively in response to China's military advances, the diplomatic challenge going forward will be responsively balancing the range of security perceptions and expectations among those partners while building on the common concerns they share about Beijing's ambitions. Individually and collectively, the studies presented in this report encourage and contribute to that critically important process.

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An Australian Perspective on Chinese Military Capabilities

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EXECUTIVE SUMMARY

This essay provides an Australian perspective on China's military capabilities and considers options for Australia to increase cooperation with the U.S.

MAIN ARGUMENT

China's more powerful military creates new challenges for Australian strategic interests. Analytic focus on the technical capabilities of individual weapons systems like ships, missiles, or aircraft misses the strategic implications of China's ability to outproduce Australian and allied sustainment systems. This production gap is a critical vulnerability, particularly in the new "consumables" of conflict—unmanned systems and guided missiles—that Australia and its U.S. ally must address. China's military capabilities are also likely to be supplemented by its civil sea and airlift companies, which will work in support of the People's Liberation Army (PLA) during conflict. And at times of crisis, China's opaque military doctrines for space, cyber, and nuclear, including concepts for "blinding" the U.S. and its allies early in a conflict, are dangerously destabilizing. There is a need to increase credible military deterrence of Beijing not only by addressing capability vulnerabilities but also by enabling Australian and U.S. force postures within Southeast Asia and the South Pacific to prevent PLA power projection from these regions against Australian and U.S. interests.

POLICY IMPLICATIONS

- Australia and the U.S. must prioritize rapid identification, development, and adoption of new capabilities that give combat advantage and can be consumed, lost, and replaced at low cost to reverse the shifting strategic capability balance with the Chinese military.
- If left unchanged, China's ability to outproduce Australia, the U.S., and other allies and partners will likely give China the advantage in a future conflict—perhaps a decisive one.
- The force posture for Australian and U.S. forces must become more positive and less reactive to Chinese moves than has been the case for at least the past decade. For Canberra, enabling greater U.S. presence in Australia, along with greater Australian and U.S. presence in the South Pacific, is an achievable goal.
- The new AUKUS arrangement is a key symbolic and practical response to Chinese power that begins to shift strategic dynamics in the Indo-Pacific. While the focus has been on the nuclear submarine elements, the more critical and time-sensitive purpose is to accelerate powerful new technologies into the hands of Australian and U.S. militaries well before 2030 and to enable a more dispersed and active regional military posture for the U.S., the UK, and Australia.
- Reversing Beijing's narratives about Taiwan being an internal matter for China—and reversing Beijing's moves to further isolate Taiwan from the international community—is part of effective deterrence of Xi Jinping from using force to unify Taiwan with the mainland.

China's growing and increasingly assertive military capabilities produce common challenges for Australia and the United States. This has the advantage of providing some clear opportunities for allied cooperation (and, increasingly, cooperation with European partners, including the United Kingdom, as the intermingled challenges from China around security, technology, and economics become clearer).

The areas of unmanned technology and guided missile systems are primary areas for this cooperation and essential for reversing China's advantage from new capabilities and from a high-volume production capacity to support its forces during conflict. But deterring Chinese power must also address China's growing information and spectrum advantage and the increased reach its civil shipping and port operating firms can provide to the People's Liberation Army (PLA), notably in Southeast Asia. Moreover, Beijing's powerful propaganda effort to shape other countries' thinking and assessments to its advantage—notably on Taiwan—must also be understood and countered.

Fortunately, Australian policy and budgeting provide large opportunities to enable U.S. force presence in the region and to address critical technology and supply vulnerabilities that the Australian and U.S. militaries both face. This can make a positive contribution to Australian and regional security, if there is sufficient high-level political will and direction to take advantage of these opportunities, despite corporate and bureaucratic obstacles.

It is a timely development that, with the AUKUS arrangement, the leaders of Australia, the UK, and the United States, have agreed to “deeper integration of security and defence-related science, technology, industrial bases and supply chains” and to “significantly deepen cooperation on a range of security and defence capabilities.”¹ Undersea technologies beyond submarines and advanced missiles, which this essay assesses to be key priorities, are in the small set of focus areas the three leaders identified, along with cyber and quantum technologies. The leaders' continued focus on the outcomes that AUKUS is designed to achieve will be essential. Without this, there will be no timely and meaningful industrial and technological cooperation that provides these countries' militaries with new capabilities in the volumes required to provide credible deterrence of the PLA because of the major political, corporate and regulatory hurdles that will otherwise slow and constrain this essential work.

This essay provides an Australian perspective on China's military capabilities. It is not a “net assessment” of the overall power of China's military or of the cumulative effect of China's use of those capabilities. Instead, it identifies which capabilities Australia regards as posing the greatest challenge or danger for adversaries during conflict, particularly maritime conflict.

Principal Threats

Advanced Missiles

The first capability that carries profound implications for adversaries is China's advanced missiles, along with the targeting systems and data that make them effective and the production systems that allow stocks to be replenished during times of conflict. It is not possible to fully analyze specific weapons and compare them with their counterparts in the United States and other

¹ “Joint Leaders Statement on AUKUS,” September 15, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/09/15/joint-leaders-statement-on-aukus>.

partner inventories using open-source information. However, it appears that the PLA currently has both a range and a quantity advantage in advanced missile systems, which means that Australian, U.S., and other partner militaries would likely sustain combat losses in major platforms, such as surface ships and manned aircraft, before inflicting similar losses on the PLA. The PLA has a range of capabilities in this regard, including DF-21 missiles that target surface ships from land, destroyer-launched missiles, and air-launched long-range missiles, such as a missile designed to attack refueling and airborne early-warning and control aircraft. New hypersonic missiles coming into service add to this threat. PLA Navy surface ships operating advanced missiles have highly effective sensor and targeting systems as stand-alone vessels as well as network connections to Chinese space systems and other sensors.

Critical industrial systems in Australia, the United States, and other countries that supply advanced missiles to the Australian Defence Force have limited surge capacity to lift production during times of conflict (as shown in the conflicts in Iraq and Syria). By contrast, Chinese production systems seem capable of surging to meet PLA needs during a conflict—and thus to “out-sustain” adversaries during conflict. The rate of production of Chinese naval ships and combat aircraft in recent years demonstrates this production capacity, which also applies across munitions and missile capacity.² This ability to surge reverses a defining U.S. and allied advantage sustained since World War II once the United States enters a war.

Unmanned Systems

The PLA also appears capable of a more rapid and broad adoption of unmanned systems, both armed and unarmed, with less of the mindset held by Australian and U.S. militaries that such capabilities are simply adjuncts of human-centered platforms and methods. This development is likely to produce at least operational and perhaps even strategic surprise in a conflict with the PLA, as its use of such new capabilities may demonstrate new concepts for military operations that are difficult to counter. As with advanced missiles, Chinese production of these small, high-tech systems is likely to be on a scale that allows them to be high-volume “consumables” in a conflict. In contrast, unmanned aerial vehicles (UAVs) in service with the United States (and belatedly, the Australian Defence Force) tend to be at the expensive, complex end of the spectrum.

A Less Permissive Region

The Indo-Pacific region, and Southeast Asia in particular, is becoming less permissive for U.S. and Australian military operations and more penetrated by Chinese technology, infrastructure, and shipping. This development risks reversing the “information and spectrum” advantage that Australia, the United States, and their partners have held in all conflicts since Vietnam.

Civil technologies for e-commerce and communications and infrastructure operations in Southeast Asia are increasingly enabled by Chinese technologies—whether through big port operators like China COSCO Shipping or “big tech” companies like Alibaba, Tencent, and Huawei. This is essentially a very large sensor network available to China in times of tension and conflict. Insights into Australian, U.S., and partner decision-making, planning, deployment, and

² Kyle Mizokami, “China Just Commissioned Three Warships in a Single Day,” *Popular Mechanics*, April 27, 2021, <https://www.popularmechanics.com/military/navy-ships/a36232947/china-commissions-three-warships-in-one-day>; and Lindsay Maizland, “China’s Modernizing Military,” Council on Foreign Relations, Background, February 5, 2020, <https://www.cfr.org/background/chinas-modernizing-military>.

operations flow from this network, with communications and logistics that flow through Southeast Asian partners' facilities and territories vulnerable to compromise and exploitation.

Further, digital connectivity initiatives promoted by the Association of Southeast Asian Nations (ASEAN) under its "connectivity" agenda will likely worsen the situation, as will the implementation of the Regional Comprehensive Economic Partnership (RCEP) if ASEAN becomes more Sino-centered as a result.³ The RCEP includes all ten ASEAN members plus Australia, China, Japan, New Zealand, and South Korea. The economic pressures faced by Southeast Asian nations as a result of the Covid-19 pandemic will likely accelerate this deeper integration with the Chinese economy. Such economic and technological factors have been of less interest to strategists. However, they are likely to provide an important advantage for the PLA and a major constraint for U.S. and allied forces during a conflict in the Indo-Pacific and deserve greater analysis.

Relatedly, Australia, the United States, and other partners and allies need to be concerned about the enabling ability of major Chinese shipping and port operator companies such as COSCO and China Merchants. These types of civil maritime companies will have ships, port infrastructure, and systems available to support PLA operations and deployments in the Indo-Pacific. In fact, they are really a supplementary part of the PLA Navy's order of battle in ways that are more integrated and easier to take advantage of than shipping companies or port operators available to the Australian and U.S. militaries.⁴ Assessment of PLA capabilities must include these enabler entities and not simply the narrower PLA capability set.

Space, Nuclear, Misinformation, and Cyber Capabilities

Chinese counter-space capabilities—from systems that disrupt space and ground link communications to antisatellite weapons deployed in space and launched from earth—are potentially at the leading edge of an escalation to major conflict with the United States and its allies and partners. Chinese doctrine on space holds that blinding the U.S. military early in a conflict will lead to the United States not seeking to fight (e.g., in the case of a conflict over Taiwan) or realizing that it cannot win and so seeking a negotiated peace to China's advantage.⁵

There is little comprehension of the incredible risk that such early attacks on core U.S. systems would have on U.S. decision-making, with risks up to and including a nuclear response. The U.S. response to a major attack on its space and intelligence, surveillance, and reconnaissance (ISR) capabilities would likely be rapid and aggressive. The United States is unlikely to have a graceful and measured response, nor would it want the first steps in negotiations to be on Beijing's terms. Following long-standing conflicts in Afghanistan and Iraq, U.S. decision-makers would need to convince an American public still experiencing "war fatigue" that use of military power, up to and including war, is necessary. Yet an attack on core U.S. capabilities would make this emotionally and politically closer to Pearl Harbor or September 11 than Iraq.

Similar misapprehensions may exist about the use of nuclear weapons. The PLA and Chinese government could believe that a U.S. response to the "tactical" use of nuclear weapons intended to destroy regionally deployed U.S. military forces would be contained and proportional. This reflects

³ Further information on these initiatives is available at <https://connectivity.asean.org/whats-new>.

⁴ Charlie Lyons Jones and Raphael Veit, "Leaping Across the Ocean: The Port Operators Behind China's Naval Expansion," Australian Strategic Policy Institute (ASPI), February 17, 2021, <https://www.aspi.org.au/report/leaping-across-ocean-port-operators-behind-chinas-naval-expansion>.

⁵ See U.S. Defense Intelligence Agency, *Challenges to Security in Space* (Washington, D.C., January 2019) https://www.dia.mil/Portals/27/Documents/News/Military%20Power%20Publications/Space_Threat_V14_020119_sm.pdf; and U.S.-China Economic and Security Review Commission, "2020 Report to Congress," December 2020, https://www.uscc.gov/sites/default/files/2020-12/2020_Annual_Report_to_Congress.pdf.

a misunderstanding of U.S. political will under such circumstances. The effect is destabilizing, as it undercuts the power of U.S. military and nuclear deterrence, including in the credible scenario of an attempt by Beijing to take Taiwan by force in the next five years.

In the lead-up to and during a conflict, China's use of misinformation and its foreign elite advocates will cloud debate in adversary countries and thereby further complicate and slow decision-making, including on military deployments to deter conflict. In addition, state cyber capabilities—operated by both the Ministry of State Security and the PLA—are likely to disrupt communications systems and networks in potential adversary governments and their enabling industry partners. This would have the effect of disrupting command and control, operations, and logistics.

Scenarios

A Conflict over Taiwan

A Taiwan conflict is a credible scenario for China to use the weapons systems described above in a conflict. Regardless of direct Australian involvement in combat, this scenario would damage both Australia's national security and regional security.

There are five developments in Chinese government policy and action that make Taiwan a credible scenario for military conflict in the next five years. First, Xi Jinping has changed the Chinese government's long-standing policy that Taiwan is an issue to be resolved "by future generations" and has instead said that Taiwan now is a problem that should not be passed down from one generation to the next.⁶ Second, last year he called on the PLA to focus on preparing for war and visited numerous military units. One was the PLA's Marine Corps, which has a primary role of conducting amphibious assaults against islands. Xi exhorted them to prepare for war and to focus on being able to use force against Taiwan.⁷ In January 2021, he issued a mobilization order requiring the entire armed forces to "focus on war preparedness and to be primed to fight at any second."⁸ Third, Xi has continued the PLA modernization program, which has prioritized building the capability to take Taiwan by force.⁹ The fourth factor is that the Chinese government ended the "one country, two systems" model in Hong Kong—the only viable model that Taiwanese people might have considered for peaceful unification.¹⁰ Finally, incursions by PLA ships and aircraft across the mid-point of the Taiwan Strait and into Taiwan's airspace reached record levels in 2021, even measured against the high benchmark of the past four years.¹¹

These are among the reasons that Taiwan's security was on the agenda for multiple international meetings in 2021, including the U.S.-China meeting in Alaska in March, the U.S.-Japan meeting in April, and the G-7 Foreign and Development Ministers' meeting in May. Such indicators that

⁶ Xi Jinping, "Working Together to Realize Rejuvenation of the Chinese Nation and Advance China's Peaceful Reunification," January 2, 2019, http://www.gwyttb.gov.cn/wyly/201904/t20190412_12155687.htm.

⁷ John Feng, "Prepare for War, Xi Jinping Tells Elite Chinese Troops," *Newsweek*, October 14, 2020, <https://www.newsweek.com/xi-jinping-tells-troops-prepare-war-1539031>.

⁸ "Xi Jinping Signs Order No. 1 'to Focus on War Preparedness' and Refers to the U.S. as 'Enemy,'" Middle East Media Research Institute, January 13, 2021, <https://www.memri.org/reports/xi-jinping-signs-order-no-1-focus-war-preparedness-and-refers-us-enemy>.

⁹ U.S. Department of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2020* (Washington, D.C., 2020), <https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF>.

¹⁰ Tony Cheung and Kimmy Chung, "Two Sessions 2020: New Law Will 'Prevent, Frustrate and Punish' Acts in Hong Kong That Threaten National Security, Top Official Says," *South China Morning Post*, May 22, 2020, <https://www.scmp.com/news/hong-kong/politics/article/3085617/two-sessions-2020-national-security-law-hong-kong-will>.

¹¹ "Taiwan Reports Largest Ever Incursion by Chinese Air Force," Reuters, March 26, 2021, <https://www.reuters.com/article/us-taiwana-china-security/taiwan-reports-largest-ever-incursion-by-chinese-air-force-idUSKBN2BI24D>.

Taiwan's security and international isolation are a growing focus for Australia, the United States, and other allies and partners could accelerate China's timeframe for taking over the island before the heightened credibility of deterrence of China closes any perceived window of opportunity.

Xi is a risk taker after he has set the conditions, as his rapid, broad intervention in Hong Kong shows. The security crackdown and imposition of the National Security Law were not expected by most observers, but Chinese leaders are likely to assess that this policy has proceeded largely without negative consequences for Beijing.

Convincing other countries that Taiwan is far more important to China than anyone else is the policy path Beijing is taking, with some success in getting this narrative taken up in Australia's domestic debates.¹² To counter this narrative, it is critical to reverse Taiwan's international isolation and re-energize its participation in multiple international organizations and forums like the World Health Organization. These efforts will certainly be resisted by Beijing. Beyond diplomacy, credible military deterrence of the PLA by the United States and allies such as Australia is essential. A Taiwan crisis is not only credible, but it is credible earlier than is often acknowledged.¹³ The prospects that Beijing will simply continue or increase its current high level of coercion and intimidation of Taiwan, but stop short of the use of force, seem to border on the complacent best-case scenario, given the resilience that Taiwan's population and government seem to be demonstrating.

The Taiwan conflict scenario is useful for exploring the Australian policy debate regarding the U.S. will to fight. Australian analysts and policymakers continually debate what the United States might and might not do in a Northeast Asia crisis scenario, with a growing focus on Taiwan. Some observers—for example, Hugh White—have said that the United States has fewer core interests in any Taiwan crisis than Beijing and so will not fight a war over Taiwan. This belief, unfortunately, aligns well with the narrative that Beijing seeks to promote regarding its relentless determination to “reunify” the island with the mainland (by force, if necessary) and the unreliability of U.S. military power to provide security to Taiwan against this threat.¹⁴ My view, which I think is broadly shared by policy makers inside government, is that Taiwan is a core security and political issue for Australia, as it is for the United States, for four key reasons.

First, by remaining outside Beijing's control, Taiwan's strategic geography complicates PLA power projection and advantages Beijing's potential adversaries. The PLA's potential use of Taiwan as a base for power projection would undercut Japanese and South Korean security and add area-denial strength to the PLA in opposing U.S. access and operations, which would be detrimental to Australian security interests and the stability of Northeast Asia.

Second, Taiwan is an island of around 23 million people in the Indo-Pacific that serves as an example to 1.4 billion mainland Chinese that a democratic system of government is possible for them. If an island democracy of 23 million is not significant enough for the United States and Australia to protect, then why would Australia have any confidence that allies and partners would help defend Australia?

Third, Taiwan is a critical source of high technology, including much of the global production capacity for semiconductors. If controlled by Beijing, Taiwan's advantages would tip the

¹² Michael Smith, “Chinese Military Says Australia's Taiwan Comments ‘Provocative,’” *Australian Financial Review*, May 28, 2021, <https://www.afr.com/world/asia/chinese-military-says-australia-s-taiwan-comments-provocative-20210528-p57w3n>.

¹³ Hugh White, “Will America Defend Taiwan?” Lowy Institute, Interpreter, May 5, 2015, <https://www.lowyinstitute.org/the-interpreter/will-america-defend-taiwan>.

¹⁴ “Highlights of Xi's Speech at Taiwan Message Anniversary Event,” *China Daily*, January 2, 2019, <https://www.chinadaily.com.cn/a/201901/02/WS5c2c1ad2a310d91214052069.html>.

military, technological, and economic power balance in China's favor and close enduring gaps in technological capability.

Fourth, analysts who assert that Taiwan is strategically insignificant to U.S. and allied strategy and power in the Indo-Pacific are eerily reminiscent of those who dismissed the importance of Chinese island-building in the South China Sea as “just a pile of rocks” or “targets.”¹⁵ The strategic effect of China's island-building and development of PLA capabilities in the South China Sea, combined with the ineffectual response from claimant states, Australia, the United States, and other like-minded partners, has increased Chinese power in North and Southeast Asia. If Beijing were to unify with Taiwan, U.S. inaction would profoundly undercut U.S. power and show that the United States and its allies and partners—including Australia—cannot act together to secure important common interests in the face of Chinese action.

An important contribution that Australia can make to counter Beijing's efforts to unify the mainland with Taiwan is to signal that it has clear interests in the status of Taiwan not being changed by force and to work on deterrence strategies and plans with its partners. Australian domestic public debate can be an obstacle in this regard. It tends to get sidetracked into focusing on what domestic voices say and whether they are stoking anxiety in the public and has spent far less time trying to understand Chinese actions and what Australia and its partners can do to reduce the prospect of China using force.¹⁶

The implications for Australia if China were to use force against Taiwan would depend enormously on whether the conflict is localized or escalates. The likelihood of China using force against Taiwan without the United States responding militarily seems very low. Assuming the United States does act to prevent Taiwan's status from being changed by force, then Australia's useful military contribution to a localized Taiwan conflict would be small—likely comprising small numbers of “low volume, high value” capabilities contributed to the mainly U.S. forces involved. These might include Wedgetail airborne early-warning and control aircraft, air-to-air refuelers, growler electronic attack aircraft, and Aegis- and CEC-equipped air warfare destroyers. Yet, unless political decisions are taken to increase readiness levels and deploy capabilities well ahead of time to bases to operate from—probably in Guam and Japan, subject to competing priorities and government agreement—such contributions could be considerably delayed.

If the conflict were to escalate beyond Taiwan, through either miscalculation or deliberate escalation by Beijing or Washington, then Australian forces are very likely to play roles in broader interdiction and potential blockading of the PLA and seaborne supplies into mainland China. These operations would focus on Australia's near neighborhood, including the chokepoints between the Indian and Pacific Oceans.

Such a wider escalation of a conflict over Taiwan would be well beyond the discretionary deployment of the Australian Defence Force and likely compel Australia to take many measures to mobilize its economy, source various goods and services from places other than mainland China, and seriously consider the threat of direct Chinese cyberattacks and perhaps long-range missile attacks against key infrastructure.

¹⁵ Patrick Porter and Michael Mazarr, “Countering China's Adventurism over Taiwan: A Third Way,” Lowy Institute, May 20, 2021, <https://www.lowyinstitute.org/publications/countering-china-s-adventurism-over-taiwan-third-way>; and “Conquering the South China Sea,” *Wall Street Journal*, May 25, 2015, <https://www.wsj.com/articles/conquering-the-south-china-sea-1427325614>.

¹⁶ Anthony Galloway, “Call the Prime Minister Out: Wong Says Morrison Stoking Fears of China Conflict,” *Sydney Morning Herald*, May 19, 2021, <https://www.smh.com.au/politics/federal/call-the-prime-minister-out-but-wong-says-bipartisanship-on-china-still-exists-20210519-p57tb4.html>.

To begin with, the economic impact of ending trade between China and Australia would be large. Australia's focus to date has been on ending various exports to China, but Australian levels of dependence on China for a variety of goods are higher than the global average. In many cases, Australia obtains 80% or more of different items—from electronics to spectacles and leisure suits—from China.¹⁷ Although the fragility of global supply chains during the Covid-19 pandemic, combined with the now overtly coercive use of trade as a weapon against Australia by the Chinese government, has created growing momentum to diversify supply chains beyond China, there are still few concrete plans to find alternative sources of many goods.

Despite the potential economic impact, there is deep reluctance in segments of Australia's political and policymaking communities to contemplate the prospect of a conflict over Taiwan. Thus, there would be a divisive debate in the time leading into such a crisis. If a crisis were to emerge, however, and the United States call on Australia to contribute as an ally, the decision to do so would very likely be made with a majority of public support. But it is a more difficult matter to convince Australian policymakers to do things that contribute to deterring China ahead of time and so preventing such a crisis from ever occurring.

A Chinese Military Presence in Australia's Near Region

A major concern for Australian policymakers is the scenario of Beijing operating PLA systems (from places, if not bases) within Australia's own "first island chain" comprising the Pacific Island states, Papua New Guinea, Indonesia, and East Timor. Governments in this region are open to Chinese investment and presence and do not share Australia's concern about Chinese interests that extend beyond commercial ties and development.

China has floated proposals to build ports, airports, wharves, resorts, and even smart cities with regional states, including Papua New Guinea (on Manus and Daru Islands), Vanuatu, Kiribati, and the Solomon Islands. The dual-use nature of such infrastructure, along with suspect business ventures, makes increasing PLA access and presence in Australia's near region a credible prospect. China's rollout of Covid-19 vaccines in small Pacific states, while Australia failed to act to provide them with stocks of its own locally produced AstraZeneca vaccine, is a new and significant political development that makes Pacific states more receptive to Chinese overtures. Should a Chinese military presence materialize, Australian defense policy and posture would shift to the near neighborhood, devoting more time and resources to this region and less to partnering with the United States and other like-minded countries.

Australian Responses to the Principal Threats

Advanced Missiles

The *2020 Defence Strategic Update* and accompanying *2020 Force Structure Plan* identify precision weapons, notably advanced missiles, as critical capabilities.¹⁸ Investment of around AU\$100 billion across different weapon types for Australia's three services over the current and

¹⁷ David Uren, "What If...? Economic Consequences for Australia of a U.S.-China Conflict over Taiwan," ASPI, June 23, 2021, <https://www.aspi.org.au/report/what-if>.

¹⁸ Department of Defence (Australia), *2020 Defence Strategic Update* (Canberra, July 2020), https://www1.defence.gov.au/sites/default/files/2020-11/2020_Defence_Strategic_Update.pdf; and Department of Defence (Australia), *2020 Force Structure Plan* (Canberra, July 2020), https://www1.defence.gov.au/sites/default/files/2020-11/2020_Force_Structure_Plan.pdf.

next decade is funded for the next ten years in government plans. In a major shift to the approach of previous decades, AU\$800 million is allocated starting in the early part of this decade to create production capacity for advanced missiles in Australia. Australia has also partnered with the United States on hypersonic missile development and production, as well as established an investment program to acquire long-range land-based missiles, most likely for anti-ship reasons.

Yet, beyond these positive initiatives to develop missile capabilities, overall Australian defense strategy and force structure remain focused on the use of small numbers of expensive, slow-to-build manned platforms (whether aircraft, ships, or submarines). The fitted and planned capabilities for such systems suggest that they will be focused on self-protection in conflict, considering the number of launch cells, torpedo tubes, and missile bays existing across the force.

Unmanned Systems

Australian defense policy and investment lag behind in unmanned systems capabilities. Australia's purchase of the Triton system, even as the United States "pauses" its own acquisitions, is an example. So far, the Australian Defence Force has focused mainly on "experimentation and demonstration" activities with UAVs and unmanned underwater vehicles (UUVs). Unlike with multiple other areas of capability, the *2020 Force Structure Plan* establishes no broad investment program that would bring any such system into operational service in a timeframe beyond the 2030s, while Australian defense planners are reluctant to retire or disinvest in any capability areas to make investment room for such new capabilities. Although some evidence indicates that this will change, if slowly, over the next few years, Australian decision-makers will at best be "fast followers" of their U.S. counterparts. One exception is the Loyal Wingman UAV being developed for the Royal Australian Air Force by Boeing Australia. Successful test flights have been completed after three years of development, and the vehicle is designed to be able to carry ISR payloads and weapon systems.

There is no Australian counterpart to the United States' Defense Advanced Research Projects Agency (DARPA), and Australia's acquisition organization is optimized for large, slow programs. Reform efforts in Australia's new Defence Transformation Strategy released in late 2020 appear incremental and more focused on streamlining the large defense organization and its processes than making bigger changes.¹⁹

Interestingly, the cancellation of the AU\$90 billion French attack-class diesel submarine project and pursuit of 8 nuclear submarines through AUKUS creates financial headroom over the remainder of the 2020s for accelerated Australian investment in "consumable" capabilities that can be produced and replaced rapidly. That is because the cashflow of the replacement nuclear program will be larger but later than the canceled program, without the billions of dollars of annual expenditure that was already beginning over this decade.

As a result, there is now an enormous opportunity to shift Australia's slow-moving force structure set out in the long-term Integrated Investment Program that accompanied the *2020 Defence Strategic Update* by using this funding to accelerate development, procurement and deployment of unmanned systems, advanced missiles, and other technologies for the Australian, U.S., and UK militaries, taking advantage of the AUKUS framework. To do this, defense leaders must be able to pursue the political priority of nuclear submarine cooperation while still devoting

¹⁹ Department of Defence (Australia), *Lead the Way: Defence Transformation Strategy* (Canberra, November 2020), <https://www1.defence.gov.au/sites/default/files/2020-11/Defence-Transformation-Strategy.pdf>.

resources, time and attention to these other, faster-moving agenda areas of AUKUS. This is where meaningful military power that adds to deterrence of the PLA can be achieved in years, not decades.

A Less Permissive Region

Australian policies on information and cybersecurity have mainly had a domestic focus, combined with outreach to international partners on Australian analysis and directions. Australian policy and law on foreign investment in physical and digital critical infrastructure have tightened considerably since the 2015 decision to lease the port of Darwin to a Chinese operator. Security issues involving Chinese port and infrastructure operators are well understood for future decisions. Australia's decision to exclude high-risk vendors—notably Chinese companies like Huawei—from its 5G network reflects this increased understanding of the implications of China's technological reach. Opportunities may arise to work with a partner like Singapore to better understand the implications of Chinese technological penetration into regional economies and its significance for intelligence gathering and crises management, including wartime operations.

Australian defense policy, as set out in the *2020 Defence Strategic Update*, includes an increase in operational activity in Southeast Asia and the South Pacific, the posting of additional defense officials to regional nations, and a deepening of military-to-military relationships. This has had some effect in maintaining Southeast Asia as a permissive place for the Australian military, and it appears that Australia's presence and partnership are valued as contributing to regional security. None of these developments addresses the issue of Chinese technological penetration of the region. However, Australia does have a defense program to invest in communication security across systems and platforms, given the growing capabilities of Chinese technical agencies (under both the PLA and the Ministry of State Security).

Space, Nuclear, Misinformation, and Cyber Capabilities

Australia relies heavily on U.S. space systems but is also investing in its own space capabilities, including satellites, and developing a civil space sector that will complement U.S. systems. Australia has invested in space situational awareness capabilities, including a C-band radar and a DARPA-developed space surveillance telescope. These capabilities mitigate the risk of loss of access to U.S. space capabilities, but only by a limited degree.

With respect to cyber capabilities, Australia has made continual large investments into its key cyber organization, the Australian Signals Directorate, and will invest in new capabilities over the coming years. The directorate has both a cybersecurity and a foreign signals collection mission. The government also gave the Australian Signals Directorate an “offensive cyber” mission and the corresponding capabilities. Some of those capabilities have been used against Islamic State terrorists, but they are also thought of as an integrated part of the Australian military capability. There is also “cybersecurity hardening” work underway across the Australian Defence Force's platforms and systems to make individual ships and aircraft and the electronic systems on them more cyber secure, and a more rigorous approach to cybersecurity is emerging across Australia's defense industrial base. In this area, close partnerships already exist between the Australian Signals Directorate, the United States, and other Five Eyes partners. However, there are still opportunities to deepen cooperation between the services of the respective defense organizations.

Australia is also active in countering misinformation, but mainly in the area of extremist material online as part of initiatives like New Zealand's Christchurch Call.²⁰ Australia is a leading jurisdiction for law and regulation countering covert, corrupting, or coercive interference by foreign state actors in domestic decision-making and debate.²¹

Partnering with the United States

On advanced missiles, there is a major strategic opportunity for both Australia and the United States to cooperate. U.S. forces are similarly constrained in advanced missile production in times of crisis and would benefit from additional production centers in Australia. To help address both countries' needs, Australia could implement its planned missile production by coproducing U.S. missiles through partnerships with big U.S. companies based in the country. Such production would build on Australia's growing civil space sector, including launch system design and production, and transferable expertise and capabilities in advanced manufacturing in sectors like mining. The U.S. focus on domestic production, combined with commercial interests and complicated U.S. regulations and procedures, means that any real move to coproduce U.S.-designed missiles in Australia will require strong commitment and leadership in both countries. This is all the more true in light of the policy priority of rebuilding the U.S. economy during the pandemic.

To address the threat from unmanned systems, U.S. partners could support Australia's creation of an "Aussie DARPA" for more rapid development of advanced technologies with defense applications and also support a more rapid approach to development and fielding of military capability. Coproduction of systems like the Boeing Orca UUV is an initiative that would logically complement Australia's existing undersea capabilities and provide more capability long before the delivery of the first Australian nuclear submarine. Development and fielding of space capabilities are also imperative, given the reduced cost.

A renewed alliance focus on production capacity and the timely development and deployment of new capabilities is imperative, given the pace of China's technological change and military development. U.S., UK and Australian political leaders obviously recognize this. Now it is up to defense organizations, research communities, and corporate partners to deliver the deeper integration and more rapid provision of military power they demand.

Regarding a potential conflict over Taiwan, a surprising gap needs to be closed in Australian interactions with U.S. leaders so that scenarios involving Taiwan (or North Korea) are the subject of closer cooperative crisis planning. The United States still does not factor in allied contributions to core plans because there is uncertainty about whether the various governments will commit forces in any specific crisis. For their part, allies like Australia see detailed coordinated plans made between militaries and defense policy areas as implicit decisions that tie them in to involvement during crises situations.

Consequently, Beijing has the advantage of unified decision-making and possesses the ability to act rapidly, whereas U.S., Australian, and other partners' decision-making is dispersed. Partners

²⁰ "New Zealand Is Committed to the Elimination of Terrorist and Violent Extremist Content Online," Foreign Affairs and Trade (New Zealand), <https://www.mfat.govt.nz/en/peace-rights-and-security/international-security/christchurch-call>.

²¹ Department of Home Affairs (Australia), "Australia's Counter Foreign Interference Strategy," <https://www.homeaffairs.gov.au/about-us/our-portfolios/national-security/countering-foreign-interference/cfi-strategy>.

must wait for U.S. direction before calibrating a response, granting Beijing the advantage of time and exposing gaps for it to exploit to prevent effective collective responses. These gaps must be closed.

To deter a Chinese military presence in Australia's near region, Australia and the United States can accelerate and expand initiatives such as the joint project to rebuild the Manus Island naval base in Papua New Guinea and consider forward-basing Australian offshore patrol vessels (OPVs) there. Australia and the United States might also agree to more initiatives on facilities in Australia that allow increased presence of U.S. forces in Australia's near region under the new U.S. Global Force Posture Review.²² This more dispersed U.S. presence and closer working partnership with Australian forces in the near region could help deter China and shape the security environment. Australia can and should move to a much more active security posture in the South Pacific and Papua New Guinea and engage in a more frank discussion with the leadership of neighboring countries. There is no doubt that the South Pacific is an arena for strategic competition, as much as Australia might wish that this not be so. It is in the interests of Australia and its South Pacific neighbors to work much more closely together on security issues. Increased Australian, New Zealand, U.S., French, and Japanese military presence and activities in the South Pacific would contribute positively to regional security and advance the sovereign interests of South Pacific states. The goal needs to shift from seeking to make a growing Chinese military presence less likely to increasing Australian and partner presence.

Turning to the broader opportunities for Australia to partner with the United States in new ways, the political and defense environment in Australia is conducive to this. There is an echo of the line by President Joe Biden that "China is out investing us by a longshot, because their plan is to own that future."²³ That can and must change. The "us" here needs to be the United States and its allies and partners, with Australia as a prominent contributor. AUKUS is now an obvious vehicle to use, given the clear directions of all three countries' leaders and the additional research, industrial and budgetary contributions of the United Kingdom through AUKUS and the UK focus on the Indo-Pacific.

There is enormous potential for Australia to coordinate its growing defense budget with U.S. (and now UK) plans to disperse forces more broadly across the Indo-Pacific. In particular, investment in defense infrastructure in northern Australia provides a major opportunity. The naval facilities and supporting infrastructure at Darwin—physical and digital—need to be expanded to sustain the Australian Defence Force and U.S. and other partner militaries in greater numbers than in Obama-era force posture initiatives. Current plans are simply not ambitious enough and should be changed to position Australia's north as a place for much higher-tempo joint Australian and U.S. operations and exercises into Southeast Asia. Politically, there is positive public sentiment in the north, as well as in the wider Australian population, in support of increasing defense capacity and having larger rotating U.S. forces operating through northern facilities.

There is also clear potential for Australian production of OPV designs to include modular versions that have new roles, such as serving as launch platforms for missiles to deploy more weapons to sea in the 2020s rather than waiting until Australia's new frigates begin to enter

²² "Statement by Secretary of Defense Lloyd J. Austin III on the Initiation of a Global Force Posture Review," U.S. Department of Defense, Press Release, February 4, 2021, <https://www.defense.gov/Newsroom/Releases/Release/Article/2494189/statement-by-secretary-of-defense-lloyd-j-austin-iii-on-the-initiation-of-a-glo>.

²³ "Remarks by President Biden in Press Conference," White House, Office of the Press Secretary, March 25, 2021, <https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/03/25/remarks-by-president-biden-in-press-conference>.

service in the 2030s. The production tempo of OPVs can be much higher than the planned rate. As mentioned above, there are also opportunities for Australia's large planned investment in undersea capabilities to shift funds to acquire UUVs that complement Australia's current Collins submarines and that show how the future nuclear submarine can operate with such systems.

These initiatives could be successful within the current political environment because they address clear vulnerabilities in Australia's ability to engage in and sustain operations during a conflict. They also deliver increased domestic manufacturing and technology benefits from defense spending. Yet political constraints remain around the lack of U.S. bases in Australia. Instead of operating from their own bases, U.S. forces have been using Australian facilities, contributing to investment in them and rotating through. The political environment is very conducive for Australian investment in port facilities, digital connectivity with the United States that avoids the South China Sea, and domestic production of items like advanced missiles that Australian and U.S. forces could use in a conflict.

This makes Australia one of the few permissive jurisdictions for a growing U.S. military presence in the Indo-Pacific, if the clear goal is to create more credible deterrence and so reduce the risk of war. The fact that Australia will be investing in its own military and defense industry capacities in ways that advance national interests and also contribute to U.S. interests should provide opportunities for Australian and U.S. political leaders to be ambitious in their targets. Strong parliamentary and bipartisan support exists in Australia for deepening the Australia-U.S. alliance in light of the deteriorating strategic environment.

The issue that is likely to derail ambitious plans to deepen military cooperation in this way is not an Australian constraint. It is the theme of "America first" in U.S. national policy that has persisted under the Biden administration and in the U.S. Congress. Breaking through the webs of U.S. Departments of Defense, State, and Commerce rules and policies on technology cooperation and release in areas like coproduction of U.S. missile designs is one prominent example. On top of this is the challenge of overcoming the inertia in big U.S. defense companies to create additional production centers in Australia. Only presidential and prime ministerial leadership can create the required momentum. As mentioned earlier, the clear direction of the U.S. president in concert with the Australian and UK prime ministers through the AUKUS announcement helps, but continued leadership focus is necessary for implementation to be urgent and real.

Beyond naval and air facilities and supply chains available locally to sustain Australian and U.S. forces in times of conflict, Australian ranges and exercise areas could be used for joint exercises and the testing and development of new systems. There are also opportunities for the countries to work more closely together on indicators and warnings designed to understand and assess Chinese actions. A report released in late May sets this out in more detail.²⁴

Cooperating with non-U.S. partners to counter Chinese threats to Australian security is easier in the diplomatic and economic space than in the military domain. The key is to characterize the challenges that China provides as multilateral rather than bilateral—and also not to characterize the China challenge as centered on strategic competition with the United States. This has begun through multilateral efforts to counter Chinese covert interference in other nations' domestic politics, with Australia being one of a thirteen-nation grouping focused on countering foreign interference. Another example is the growing international recognition that China's coercive trade

²⁴ Paul Dibb and Richard Brabin-Smith, "Deterrence through Denial: A Strategy for an Era of Reduced Warning Time," ASPI, May 22, 2021, <https://www.aspi.org.au/report/deterrence-through-denial-strategy-era-reduced-warning-time>.

practices are a common, multilateral challenge rather than independent bilateral matters for each country. The issue's appearance on the agenda and in the communique of the G-7 meeting in May 2021 shows some momentum.²⁵ Although the difficulty of recalibrating long-standing national trade policy to weigh strategic and security factors much more than in recent decades is high, Beijing's escalating use of coercive trade measures against Australia and others could increase the prospects of success.

The Quad construct shows growing potential to move from a security dialogue to an active forum for practical cooperation between Australia, India, Japan, and the United States. The fact that there was a leaders' meeting in 2021, with another since,²⁶ combined with the practical agenda around increasing vaccine production and distribution and reducing supply chain vulnerabilities, is encouraging. In direct military terms, India's decision to invite Australian forces to participate in its Malabar exercise is another promising development.²⁷ Australia's defense relationship with Japan has also continued to deepen, as has the Australia-Japan-U.S. trilateral. The initiatives to increase Australian naval and air facilities in northern Australia create the foundation for all these relationships to grow in practical ways. Finally, the new AUKUS arrangement must be used as an enabler of these other minilateral groupings by increasing the military power of the United States, Australia, and the United Kingdom and enabling a more dispersed, active military presence in the Indo-Pacific, supported through Australia's facilities and industrial base.

The primary driver for deepening this range of partnerships will continue to be China's use of its military and coercive power. That trend shows no sign of slowing.

²⁵ "Our Shared Agenda for Global Action to Build Back Better," G-7, June 2021, <https://www.g7uk.org/wp-content/uploads/2021/06/Carbis-Bay-G7-Summit-Communique-PDF-430KB-25-pages-3-1.pdf>.

²⁶ "Joint Statement from Quad Leaders," September 24, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/09/24/joint-statement-from-quad-leaders>.

²⁷ "Strengthening Quad: Eye on China, India Invites Australia to Join Malabar Drill," *Times of India*, October 19, 2020, <https://timesofindia.indiatimes.com/india/strengthening-quad-eye-on-china-india-invites-australia-to-join-malabar-drill/articleshow/78748973.cms>.

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Threats to Taiwan's Security from China's Military Modernization

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EXECUTIVE SUMMARY

This essay assesses the principal security threats that China's military modernization poses to Taiwan, the potential responses by Taiwan, and opportunities for cooperation with the U.S.

MAIN ARGUMENT

Security is only as strong as its weakest link. In the case of Taiwan's defense against a potential attack from China, the loss of air power following a missile attack is the single point of failure that would likely cause a general collapse of Taiwan's overall defenses. To mitigate this threat, Taiwan must rethink and reformulate its defense strategy by investing in survivable platforms that can sustain the island's defense for a meaningful period of time even in the face of a modern and ever-expanding People's Liberation Army (PLA).

POLICY IMPLICATIONS

- Taiwan's air force, with only conventional fighter jets, would likely be knocked out of action at the onset of a conflict with China as the few available runways on the small island are bombarded and paralyzed by PLA ballistic missiles and other long-range munitions.
- Due to Taiwan's own limitations, yielding air and sea space completely to China is not an option. The loss of air power is expected to lead to a cascading failure of Taiwan's military defenses in the air, the sea, and across the theater.
- To prevent a quick collapse and capitulation, Taiwan's defense planners must find ways to preserve some form of air power.
- A fleet of short takeoff and landing aircraft, such as the F-35B, could improve the currently unfavorable offense-defense balance. Despite many difficulties involved, Taiwan and the U.S. should consider this as the most viable option for building Taiwan's future force structure.

China has never made its plan to “unite” Taiwan by force a secret. Preparing to thwart such an attack is the single most important mission Taiwan must undertake today to ensure its very survival. Yet there are plenty of signs that the political leaders in Taipei and the Taiwan military itself are either not doing nearly enough or going about preparing for a defense in the wrong way, such as by buying flashy, expensive conventional fighter jets when it is quite certain that there will be few available runways left to take off from when the shooting starts across the strait.

Years of refusing to adjust seriously to ever-increasing threats has resulted in few effective preparations being made in response to Taiwan’s rapidly worsening security environment. In the worst-case scenario, a series of cascading failures can be expected to follow a catastrophic loss of air power, including the loss of naval fleets, counterstrike capabilities, and control across multiple domains of operations and a general collapse of organization and morale. These outcomes would make Taiwan’s quick and complete capitulation to China inevitable.

This essay assesses the principal security threats that China’s military modernization poses to Taiwan. It then considers several scenarios involving these threats, the potential responses by Taiwan, and opportunities for cooperation with the United States.

Principal Threats for Taiwan

China’s People’s Liberation Army (PLA) has built and continues to upgrade a large arsenal of conventional ballistic missiles, cruise missiles, and long-range rockets consisting of thousands of warheads aimed at Taiwan from across the Taiwan Strait, which is only 130 kilometers (km) at its narrowest point. The PLA is expected to attack Taiwan with a sizeable portion of this massive missile arsenal at the onset of most conflict scenarios.

The exact number of missiles is a matter of educated guesswork. In the 2020 China Military Power Report by the U.S. Department of Defense, the PLA Rocket Force (PLARF) is estimated to possess hundreds of launchers of various short- and medium-range ballistic missiles and cruise missiles, while the total number of missiles is in the thousands (see **Table 1**).¹ This is likely a conservative estimate. The PLA could possess more missiles and launchers in places unidentified by U.S. satellite imagery and intelligence.

The bulk of the PLARF’s short-range ballistic missiles specifically targeting Taiwan consist of DF-15s and the older DF-11s. Some units have been active since the 1996 Taiwan Strait crisis, but it would be a mistake to assume they are outdated. With an estimated ten- to fifteen-year service life, China has likely overhauled at least a few hundred of the original DF-11/15s, replacing old missiles with newly manufactured ones—complete with updated warheads, guidance systems, and increased ballistic performance. Unconfirmed reports also surfaced in late 2020 that the PLA is in the process of replacing or augmenting DF-11s and DF-15s with the DF-17, a new ballistic missile with significantly more advanced maneuverable trajectory and guidance systems.² The DF-17 is reported to possess a range of more than 1,800 km, a significant increase from the DF-11 and the DF-15, both of which have ranges shorter than 1,000 km.

¹ U.S. Department of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2020* (Washington, D.C., 2020), 166.

² Minnie Chan, “Chinese Military Beefs Up Coastal Forces as It Prepares for Possible Invasion of Taiwan,” *South China Morning Post*, October 18, 2020, <https://www.scmp.com/news/china/diplomacy/article/3105953/chinese-military-beefs-coastal-forces-it-prepares-possible>.

TABLE 1 China's rocket force

System	Launchers	Missiles	Estimated range (km)
ICBM	100	100	>5,500
IRBM	200	200+	3,000–5,500
MRBM	150	150+	1,000–3,000
SRBM	250	600+	300–1,000
GLCM	100	300+	>1,500

SOURCE: U.S. Department of Defense.

This development could allow the PLA to relocate several of its rocket force units currently based in the coastal or near-coast provinces of Fujian, Jiangxi, and Zhejiang and move them farther inland into provinces like Hunan and Anhui. While doing so would increase the ballistic missiles' flight time to Taiwan by mere minutes, it would effectively move the launchers out of the strike range of Taiwan's air force and ground-based cruise missiles, making it nearly impossible for Taiwan to counterstrike or preemptively attack the launchers.

It is important to recognize that Beijing today has a plethora of tools when it comes to plotting and executing an attack on Taiwan, rather than needing to rely solely on missiles, as was the case during the 1996 missile crisis. Compared with two decades ago, the modern-day PLA has built up significant if not formidable warfighting capabilities across multiple domains from land, sea, air, cyber, and even potentially outer space.

However, a realistic assessment would still conclude that the PLA's missile arsenal is critical to most conceivable invasion or attack scenarios against Taiwan. The missiles provide the most reliable and straightforward path to accomplish Beijing's overarching strategic goal: to overwhelm, destroy, or otherwise paralyze Taiwan's most potent military assets, especially its air power, as quickly as possible, while limiting casualties or risk of casualties to the PLA to a minimum. Taking out Taiwan's air power is necessary—though by no means sufficient—to achieve Beijing's most desirable outcome of forcing politicians in Taipei to capitulate early in a conflict before any “foreign meddling” (i.e., a U.S.-led intervention) becomes possible.

A major cyberattack against Taiwan, for example, could significantly disrupt its civilian infrastructure and daily life for weeks or longer; however, such an attack by itself would likely have limited impact on the readiness of Taiwan's military and its offensive/defensive capabilities, and is unlikely to force a capitulation by itself. Thus, Beijing still would be far more likely to opt for a fast-paced, high-intensity attack option using primarily kinetic weapons. In such a scenario, the PLA missile arsenal would play a spearheading role.

Scenarios

The top targets for PLA missiles are believed to be Taiwan's air force bases, navy ports, surface-to-air missile (SAM) units, cruise missile and anti-ship missile units, radars, sensors, and C4ISR (command, control, communications, computers, intelligence, surveillance, and reconnaissance) infrastructure and installations. Most critically, a portion of these missiles would target the runways of air force bases and may be armed with specialized warheads for cratering purposes. Fragments and blast waves from the missiles could also inflict crippling damage on the fighter jets parked in partially open aircraft hangers, especially if a missile hits nearby. The PLA would likely strike in successive waves to prevent repairs to runways or the relocation of air assets.

Taiwan's air force is the crown jewel of its military. Despite having the smallest personnel size, the air force is considered the most well-trained and well-maintained service branch of the military and is given the highest priority for training and logistics. It also consistently receives most of the government's "special budgets" for U.S. arms purchases, as was exemplified by the single order placed in 2019 for 66 new F-16V fighter jets at a price of US\$8 billion.³

Taiwan's air force does maintain a rigorous system in which a small number of fighter jets and pilots stationed at each base are always on duty and are ready to take off at a moment's notice. After an emergency scramble to the air and firing off their anti-air missiles on intercepting the first wave of incoming PLA aircraft, however, these jets would likely find their bases heavily bombarded and would have no place to land. In all likelihood, the majority of the air force's fighter jets—the most heavily invested and coveted part of Taiwan's military—would be rendered nonoperational after just the first few rounds of missile attacks succeeded in paralyzing all Taiwan's runways. The PLA air and naval forces could then conduct aerial and sea-based operations unopposed in order to destroy the remaining Taiwan navy, SAM network, and other critical military targets.

A quick incapacitation or even outright destruction of a major portion of Taiwan's air force and navy fleet, especially the humiliating images of expensive F-16 fighter jets burning on airport tarmacs, would be a devastating blow to Taiwanese society's morale and resolve to resist. The psychological toll could even force leaders in Taipei to quickly capitulate to Beijing before a large-scale PLA amphibious invasion or meaningful U.S. military intervention occurs.

The loss of air power would have a wide range of cascading effects on Taiwan's defenses elsewhere. The air force's fleet of six E-2 Hawkeyes comprises Taiwan's only airborne early warning (AEW) assets. Their long-range detection and monitoring capabilities over sea and air contribute the lion's share of intelligence to the Taiwan military's data link and are heavily relied on by the Joint Operations Command Center to make critical theater-level decisions. Without any fighter jets in the air to provide protection for these E-2s, which normally fly at high altitude along Taiwan's east coast, they could be easily "sniped" by PLA fighters using long-range AA missiles like the PL-15.⁴ The total loss of AEW would seriously cripple the military high command's access to real-time intelligence and therefore its battlefield management and overall control of the theater.

On the other hand, the navy's standard doctrine has always called for fleets at ports to perform an "emergency deployment" at the onset of a conflict. Under this plan, all major surface combatant

³ "Taipei Economic and Cultural Representative Office in the United States (TECRO): F-16C/D Block 70 Aircraft and Related Equipment and Support," U.S. Defense Security Cooperation Agency, Press Release, August 20, 2019, https://www.dsca.mil/sites/default/files/mas/tecro_19-50.pdf.

⁴ The range of the PL-15 is reported to be upward of 200 km. See Garrett Reim, "Raytheon Looks at Integrating AMRAAM-ER in F-35A Internal Carriage," FlightGlobal, May 22, 2021, <https://www.flightglobal.com/fixed-wing/raytheon-looks-at-integrating-amraam-er-in-f-35a-internal-carriage/143866.article>.

ships would quickly make sail for the high seas east of Taiwan to avoid being bombarded by incoming PLA missiles. Yet this doctrine was developed decades ago when the PLA Air Force and Navy were still weak and unable to conduct long-range operations in the vicinity of the Philippine Sea, the Bashi Channel, or the Miyako Strait.

Today, however, both have evolved into totally different creatures. The PLA Air Force now boasts a large fleet of advanced strike fighters and bombers armed with long-range anti-ship missiles, while the PLA Navy possesses two aircraft carriers (with more in the pipeline) escorted by heavily armed missile-guided destroyers like the Type 055 that rival even the U.S. Aegis warships. At the onset of an attack, Taiwan's navy ships fleeing for the high seas could sail right into a trap set by the PLA, particularly if they do so without any fighter jets to provide air cover and no AEW aircraft to assist with scanning for over-the-horizon air and sea threats.

Some ideas proposed in recent years, such as the Overall Defense Concept introduced by retired Admiral Lee Hsi-ming, acknowledged that Taiwan's air force and major surface ships could be knocked out rather quickly at the onset of conflict. The hope, however, was that Taiwan could defeat or at least hold off a PLA offensive long enough through a combination of smaller, more survivable asymmetric platforms such as fast-attack boats, sea mines, and mobile anti-ship missile launchers.⁵ In fact, most if not all of these systems have already been extensively invested in and deployed by Taiwan. While critical in forming what could be the last line of defense in an all-out invasion, these platforms by themselves are insufficient to sustain Taiwan's overall defenses against the initial PLA onslaught of long-range, precision firepower.

Land-based anti-ship missiles, for example, are frequently cited by commentators as a fix-all solution that could attack PLA Navy amphibious fleets and even aircraft carriers before they get anywhere close to Taiwan. The Hsiung Feng II anti-ship missile indeed has a maximum theoretical range of 240 km. Yet the salient factor is less the range of the missile and more the target acquisition (i.e., the capabilities and availability of the sensors). The best sensors against air and sea threats are found on aircraft flying high in the air or warships out on the high seas. Without the air force's AEW or P-3C Orion aircraft to provide long-range scanning over the sea surface and real-time updates to the data link, the anti-ship missile units can only shoot as far as their land-based surface-search radars allow them to see.

To detect over-the-horizon targets, a land-based radar must reach higher ground to overcome geometric limitations imposed by the Earth's surface and terrain. By one calculation, Taiwan's mobile surface-search radar unit would need to reach mountain peaks as high as 3,417 meters (m) from sea level to achieve a theoretical maximum detection range of 240 km.⁶ A more realistic assumption would locate the radar at 1,000 m, which would allow a detection range of 130 km. While respectable, this distance is insufficient to deter the PLA's major surface fleets from operating near Taiwan.

Taiwan by its very nature cannot resist for a meaningful length of time if it loses all of its air force and blue water navy ships, which would put critical supply routes and sea lines of communication entirely at the mercy of China or other foreign naval powers. Taiwan, as an island nation with an advanced industrial economy, relies heavily not just on imports of energy and food

⁵ Drew Thompson, "Hope on the Horizon: Taiwan's Radical New Defense Concept," War on the Rocks, October 2, 2018, <https://warontherocks.com/2018/10/hope-on-the-horizon-taiwans-radical-new-defense-concept>.

⁶ Tsicheng Hroung, "Zhongkeyuan cangqiong leidache jixian xingneng jing yao zai hehuan shanding caineng fahui" [NCSIST's Mobile Radar System Needs to Reach Hehuan Mountain Top to Achieve Maximum Range], *United Daily News*, January 31, 2021, <https://udn.com/news/story/10930/5219303>.

for basic survival but also on exports of manufactured goods, especially semiconductor chips that power much of the world's computers and IT components.

Inexplicably, the current administration is moving forward with an energy plan that would rely on natural gas, 99% of which comes from imports, to generate 50% of Taiwan's total electricity by 2025.⁷ Transportation and storage are by far more complicated and difficult for liquefied natural gas (LNG) than they are for all other energy sources, including coal, petroleum, and even nuclear, which makes LNG the energy source most vulnerable to a disruption in supply.⁸ The current safety reserve for natural gas, as mandated by the government, can last only seven days.⁹ This means that Taiwan's decision-makers would be unlikely to commit to deploying sea mines in the Taiwan Strait against the PLA Navy until the very last minute, given that doing so would effectively cut off Taiwan's own energy supply and cause island-wide power outages and the failure of most critical infrastructure just days after LNG tankers stop coming into ports.

In sum, the idea that Taiwan could keep itself safe simply by littering the surrounding waters with sea mines, firing anti-ship missiles indiscriminately at approaching ships, and ducking and covering while waiting for the U.S. cavalry is more fantasy than reality. Taiwan's military, as well as its economy, critical infrastructure, mobilization capacity, and society as a whole, is simply not built for fighting a protracted war totally cut off from the air and the sea. To avoid a quick and humiliating capitulation, Taiwan must find ways to keep at least some of its air and naval forces operational and capable of fighting back after the first waves of a PLA attack, as difficult as that will be to accomplish.

Taiwan's Response

The threats posed by the PLA's missiles are not news to Taiwan's defense planners, as they have been looming over the Taiwan Strait ever since the 1996 missile crisis. However, Taiwan's countermeasures in response have remained largely unchanged in the last two decades: interception, force preservation, and dispersion.

In terms of interception, Taiwan has deployed an extensive anti-ballistic missile network consisting of U.S. Patriot systems (both the advanced PAC-3 and the older PAC-2) and indigenously produced Tien Kung SAM systems (TK-II and TK-III) to shoot down incoming ballistic missiles.

As to force preservation, Taiwan's air force built a large, heavily bunkered Chiashan base in the east coast county of Hualien. The base is partially built inside mountains that would serve as natural barriers to shield aircraft from missile attack. The air force also garrisons dedicated airfield repair units in all major airbases.

Third, to address the need for dispersion, sections of Taiwan's highways have been designated as "spare runways." In the ideal scenario, the busy highway can be quickly cleared of road traffic by police and military personnel in a wartime situation and converted to emergency landing strips for air force jets to land, refuel, rearm, and take off.

⁷ "Tuidong nengyuan zhuangxing 'zhanlü, zengqi, jianmei, feihe'" [Blueprint for Energy Transformation: Go Green, Go Gas, Non-Nuclear], Ministry of Economic Affairs (Taiwan), https://www.moea.gov.tw/MNS/populace/Policy/Policy.aspx?menu_id=32800&policy_id=9.

⁸ Angelica Oung, "Blackouts Cast Doubt over Energy Transition Policy," *Taipei Times*, May 31, 2021, <https://www.taipeitimes.com/News/biz/archives/2021/05/31/2003758318>.

⁹ T.M. Hsieh, W.C. Hsu, and C.C. Wen, "Taiwan tianranqi anquan culian guifan tianshu zhi yanjiu" [Study on Taiwan's Natural Gas Safety Reserve Regulations], Taiwan Institute of Economic Research, February 2019, https://km.twenergy.org.tw/KnowledgeFree/knowledge_more?id=4746.

However, all three countermeasures fall short of what is required to meet the challenge of the PLA's rapid increases in both the quantity and quality of its missile arsenal and other offensive weapons. In this respect, the theory of offense-defense balance, defined as "what the defender has to outspend the attacker to offset an investment in offensive forces," provides a useful framework.¹⁰ Most available data supports the assessment that offense-defense balance strongly favors the offensive side—which in this case is the PLA.

It is far more costly for Taiwan to purchase additional Patriot missiles from the United States than for Beijing to simply build more DF-series ballistic missiles and launchers. Compared to the PLA, Taiwan's military is also much more constrained by the availability of land and manpower. It is, therefore, unlikely that Taiwan could field many more Patriot or other SAM units. In recent years, the PLA reportedly has also made significant advances in developing Weishi-family long-range rockets and other multiple-launch rocket systems capable of attacking a target area hundreds of kilometers away, although their deployment and exact accuracy have not yet been confirmed.¹¹ In a conflict with Taiwan, the PLA could exploit these less accurate but even cheaper and more numerous projectiles as a suppression weapon in the first waves of attack. Taiwan's SAM units would be forced to intercept them with the precious interceptors loaded in the launchers, only to be overwhelmed by more accurate DF missiles coming in immediately afterward. Taiwan is playing a losing economic game and will never build up sufficient interceptors to match the number of PLA missiles and other offensive weapons.

In a 2017 study using geographic information system techniques, I identified that the most advanced PAC-3 missile units of Taiwan's military were all deployed near major cities.¹² Taiwan's defense planners apparently intend to use their most capable anti-ballistic missile interceptors to protect population centers rather than air force bases. However, there is no evidence suggesting that Beijing intends to use ballistic missiles armed with conventional warheads to attack Taiwan's major cities, a move that would be wasteful, ineffective, and serve no apparent military purpose. By contrast, in 2019 Taiwanese media reported that during the computer simulation phase of the annual Han Kuang exercise, "almost all the airbases on the west coast" were paralyzed by PLA missile attacks and rendered inoperative.¹³

A little-known 2017 study conducted by two Taiwanese naval officers, Chen Chen-kuo and Du Chien-ming, estimated that it would take just 62 to 81 PLA ballistic missiles to fully paralyze or destroy all the runways of Taiwan's seven major air force bases that host fighter jets.¹⁴ To fully paralyze or destroy the runways of all thirteen bases, it would take 104 to 137 missiles (**Table 2**).

The number of aircraft housed in the massive bunker at the Chiashan air force base is not known publicly, but the PLA could still paralyze Chiashan's runway with a tiny fraction of its

¹⁰ Charles L. Glaser and Chaim Kaufmann, "What Is the Offense-Defense Balance and Can We Measure It?" *International Security* 22, no. 4 (1998): 44–82.

¹¹ Minnie Chan, "China's New PCL191 Multiple Launch Rocket System Casts Shadow over Taiwan Strait," *South China Morning Post*, December 9, 2019, <https://www.scmp.com/news/china/military/article/3041007/chinas-new-pcl191-multiple-launch-rocket-system-casts-shadow>.

¹² Po-Chang (Paul) Huang, "Who to Protect? Taiwan's SAM Systems and the Distribution of Protection," Tufts University, 2017 GIS Poster Expo Gallery, May 9, 2017, https://sites.tufts.edu/gis/files/2017/06/Huang_Po-Chang_DHP_207_Spring_2017.pdf. While the GIS study was conducted in 2017, its major finding remains relevant today because little has changed in the deployment pattern of Taiwan's PAC-3 units. There are unconfirmed reports that some PAC-3 units have been temporarily and experimentally deployed to Taiwan's east coast but are still permanently based around major cities on the west coast.

¹³ Chu Ming, "Hanguang bingtui zhongchuang hongguang 'hongjun' denglu chuantuan xionger, xionsan, fanjian feidan cang shanqu shi zhisheng guanjian" [Han Kuang Exercise Shows OPFOR Landing Fleet Hit Hard by Hsiung Feng Anti-Ship Missiles Hiding in the Mountains], Upmedia, April 29, 2019, https://www.upmedia.mg/news_info.php?SerialNo=62234.

¹⁴ C.K. Chen and C.M. Du, "Zhonggong huojianjun zhanshu dandao daodan dui wo junshi zhi weixie yuying duice" [Military Threats Posed by PLA Rocket Force Tactical Ballistic Missiles and Our Potential Responses], *Navy Professional Journal* 51, no. 6 (2017): 70–84.

TABLE 2 Projected number of ballistic missiles needed to paralyze Taiwan's air force bases

Airbase/airport name	Runway length and width (m)	Missiles needed to paralyze	Note
Hsinchu	3,750 x 75	10–16	Major airbases hosting fighter jets
Ching Chuan Kang	3,750 x 60	10–16	
Chiayi	3,150 x 45	9–10	
Tainan	3,150 x 45	9–10	
Hualien	2,800 x 45	8–10	
Chaishan	2,450 x 45	7–9	
Zhi-hang	3,450 x 45	9–10	
Kangshan	2,350 x 45	6–9	–
Pingtung (South)	2,450 x 60	6–9	
Pingtung (North)	2,450 x 60	6–9	
Songshan	2,650 x 60	6–10	
Taoyuan	3,150 x 45	9–10	
Penghu	3,400 x 45	9–10	
Total	2.07 million square meters	104–37	62–81 major airbases only

SOURCE: C.K. Chen and C.M. Du, “Zhonggong huojianjun zhanshu dandao daodan dui wo junshi zhi weixie yuying duice” [Military Threats Posed by PLA Rocket Force Tactical Ballistic Missiles and Our Potential Responses], *Navy Professional Journal* 51, no. 6 (2017): 70–84.

missile arsenal (estimated to take only 7 to 9 missiles in the study cited above), making the aircraft hidden inside the mountain useless. The air force's runway repair units in bases across Taiwan are also likely to be ineffective in such a scenario, as incoming waves of PLA missiles would quickly force these units to retreat before any meaningful repair could be done to the battered runway.

As to clearing off highways to be used as spare runways, the plan was first designed based on conditions in the 1970s and is now extremely outdated and unrealistic. For starters, traffic on Taiwan's national highways has effectively tripled in volume in just three decades,¹⁵ while the designated “spare runway” sections and the original infrastructure built to support their military conversion have remained largely the same, with little improvement and expansion. Taiwan's military exercises simulating the use of these highway sections are always planned in advance and bear little resemblance to the chaotic conditions Taiwan would likely experience in wartime, especially if China were to attack unexpectedly.

Many of these half-hearted preparations suggest that Taiwan's defense planners probably understand the dire reality they are facing but still have refused to accept its implications: Taiwan's air force as it currently stands will be rendered nonoperational at the onset of potential war. On the other hand, Beijing and the PLA have correctly identified air power as the center of gravity and

¹⁵ “2019 nian gaosu gonglu junianbao” [2019 National Freeway Annual Report], Freeway Bureau, Ministry of Transportation and Communications (Taiwan), 2019, <https://www.freeway.gov.tw/Mp/MPPeriodical.aspx?id=36&RID=47&cnid=1644>.

the most critical single point of failure of Taiwan's military and are fully geared up to exploit this weakest link and tear up the rest of Taiwan's defenses.

Partnering with the United States

While Taiwan's political and military leaders are ultimately responsible for the island's defense, the United States should strongly recommend and persuade Taipei to completely reformulate its defensive strategy and avoid the nightmare scenario outlined above. It is extremely unlikely that Taiwan's leaders will ever consider doing so on their own—let alone actually move forward to entirely abandon a fleet of fighter jets that forms the crown jewel of Taiwan's military and stands out as perhaps the most high-profile defense investment. For political, military, and strategic reasons, Taiwan will and must maintain an effective air force. The question is how to ensure that some of it would survive the first rounds of a PLA attack.

At the very least, Taipei should consider cutting back on several ill-conceived, objectively pointless investments and arms procurements from the United States, especially the 2019 order for 66 new F-16Vs. The additional F-16Vs, regardless of their capabilities in the air, would add no defensive value because of the lack of a usable runway from which to take off.

All previous discussion of the PLA's ability to paralyze Taiwan's air force assumes that Taiwan does not acquire any short takeoff and landing (STOL) aircraft. Should Taiwan acquire even a small fleet of STOL-capable F-35B fighter jets, it would drastically alter all the calculations involved. An F-16 requires a runway with a minimum of 500 m–1,000 m to take off successfully (depending on loadout), whereas a fully loaded F-35B requires only 167 m to execute a short takeoff. The PLA would need to score many more hits on the same runway to ensure that the F-35B is nonoperational, requiring exponentially more ballistic missiles.

By virtue of a drastically shorter runway requirement, it would become feasible for Taiwan's military to build several additional “mini airbases” across the island to accommodate the emergency landing, refueling, and rearming of the F-35B fleet during wartime. While still vulnerable to missile attack, the small size of these bases means they could be more easily and cheaply constructed and maintained at different locations, perhaps as many as several dozen.

The author's private conversations with Taiwanese air force personnel have suggested that significant voices in the air force understand and greatly desire the benefits that could be gained from the F-35B's STOL capability.¹⁶ The stealth capability of the F-35s is also a desirable benefit, as they are much harder to detect and would be more survivable against the onslaught of numerically superior PLA fighters. They would stand a far better chance against the PLA Air Force's stealthy fifth-generation fighters like the J-20 and J-31, which are still in development but can be expected to enter service in the next decade or two.

Yet despite such benefits, there is inexplicably no serious public discussion in Taiwan concerning the acquisition of the F-35B. Washington should therefore offer to replace the unfulfilled order for F-16Vs with an upgrade to F-35Bs, even if it means that Taiwan's air force has to live with a smaller (but more survivable) fleet of jets in the years to come. Admittedly, such a proposal must overcome a wide range of difficulties and obstacles, both practically and politically. For one thing, there is currently a long wait time for even “partner countries” of the F-35 program to receive delivery of

¹⁶ Author's private conversations with an active-service air force signals intelligence officer and a recently retired air force lieutenant general who held a senior post in the Air Force Command Headquarters.

their fair share of the coveted jets. Based on the current production and delivery schedule, it could take over a decade for Taiwan to receive delivery even if an order were placed today.¹⁷

One solution that has been proposed by Stephen Bryen, a former U.S. deputy under secretary of defense, is to allow Taiwanese pilots access to the existing F-35s in the U.S. inventory through a “training and lease program” on U.S. soil.¹⁸ Taiwan’s F-35B fleet would then become immediately operational once final delivery takes place. In fact, a similar arrangement for Taiwan’s F-16 pilots has existed for many years, under which they are regularly trained in U.S. bases, though neither the Taiwan nor U.S. government publicly acknowledges the program’s existence.¹⁹

Last, Washington should recommend that Taiwan commit to a complete reform and civilian audit of its military. Taiwan’s Ministry of National Defense has almost always been headed by senior generals. Historically, only two defense ministers ever came from a civilian background, and one was forced to resign after just six days.²⁰ The lack of civilian leadership means that the president relies exclusively on generals-turned-ministers to lead the military and to implement policies, which is a recipe for failure. Generals almost always have been encumbered by existing factional interests and interservice rivalries, and few have shown any interest in committing to real reform.

Particular attention should also be paid to improving the readiness and capabilities of the ground forces. Taiwan’s army is currently the most neglected of all three branches, with extremely poor force level, training, reserves, and logistics.²¹ Since the army is where most active-service soldiers and veterans served, its dismal state has also taken a heavy toll on Taiwanese society’s morale and confidence in the military as a whole.²² This is ironic given that the army is conceivably the most resilient of all three branches to a massive PLA aerial attack and is likely to be the only branch that is still operational after a complete loss of air and naval superiority. The United States should strongly recommend that Taipei completely overhaul the army’s training, organization, and doctrines based on a thorough and realistic review of all of its existing issues and weaknesses. Only after such reform can defense planners start contemplating how the army can fit into Taiwan’s overall defense posture.

Ultimately, the U.S. strategic goal for Taiwan’s defense is to ensure that Taipei resists Beijing long enough to inflict a heavy price on the attacking PLA forces. Taiwan’s political and military leadership must come to terms with reality and commit to a drastic reform plan that can prevent or at least mitigate the expected, catastrophic losses of its air force and navy at the onset of conflict. This is essential to preserve public morale and resolve long enough for possible U.S. assistance, even if such help cannot be taken for granted and may not arrive at all.

¹⁷ While any potential F-35 purchases and delivery timeline for Taiwan is pure speculation at this point, the lowest “level 3” partner nations of the F-35 program, such as Denmark and Canada, received their first jet at least half a decade after the initial firm order was placed. Denmark committed to purchasing the F-35 in June 2016 and received the first jet in April 2021, which should become operational by 2023. See Craig Hoyle, “Lockheed Delivers First F-35 for Royal Danish Air Force,” *FlightGlobal*, April 8, 2021, <https://www.flightglobal.com/defence/lockheed-delivers-first-f-35-for-royal-danish-air-force/143220.article>.

¹⁸ Stephen Bryen, “Lease F-35s to Taiwan to Counter China’s Threats,” *Newsweek*, August 10, 2020, <https://www.newsweek.com/lease-f-35s-taiwan-counter-chinas-threats-opinion-1537127>.

¹⁹ Tsicheng Hroung, “Wo F-16 didiao fei Mei ‘Meijun xiezhu Tai Mei wanli huanfang you xuanji’” [Taiwan’s F-16s Head to the U.S.: How U.S. Helps Taiwan’s Deployment and Training], *United Daily News*, May 26, 2021, <https://vip.udn.com/vip/story/121160/5485403>.

²⁰ In 2013, then president Ma Ying-jeou appointed Andrew Yang, a respected scholar in strategic studies, as the new minister amid escalating domestic protests over the death of an army corporal. Yang resigned just six days later due to allegations of plagiarism in one of his publications. A number of political insiders attributed intense opposition from the military’s senior generals as the real reason behind his quick ouster, though this claim was never conclusively proved.

²¹ See Paul Huang, “Taiwan’s Military Has Flashy American Weapons but No Ammo,” *Foreign Policy*, August 20, 2020, <https://foreignpolicy.com/2020/08/20/taiwan-military-flashy-american-weapons-no-ammo>; and Paul Huang, “Taiwan’s Military Is a Hollow Shell,” *Foreign Policy*, February 15, 2020, <https://foreignpolicy.com/2020/02/15/china-threat-invasion-conscription-taiwans-military-is-a-hollow-shell>.

²² For an informed discussion on the poor state of morale in Taiwan’s military and its consequences for Taiwanese society, see Tanner Greer, “Why I Fear for Taiwan,” *Scholars Stage*, September 11, 2020, <https://scholars-stage.org/why-i-fear-for-taiwan>.

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An Indian Perspective on China's Military Modernization

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EXECUTIVE SUMMARY

This essay examines India's key concerns about China's military modernization, the Indian response, and the opportunities for enhancing cooperation with the U.S.

MAIN ARGUMENT

China's military modernization directly affects India, which has responded in several ways. China's military reforms since 2015 have improved the jointness and integration of the Chinese military forces, especially the People's Liberation Army (PLA) Ground Force and the PLA Air Force. India has responded by increasing its own military capabilities, which include augmenting its infrastructure network along the Sino-Indian border, raising a new mountain strike corps, enhancing its strategic forces, and beefing up its naval forces. It is also building a strong strategic partnership with the U.S. Alongside these efforts, India has strengthened other regional strategic partnerships to complement this strategic partnership.

POLICY IMPLICATIONS

- China's modernization and India's response will likely result in heightened and enduring tension between the two countries.
- The Quad and other minilaterals, including trilateral groupings among key strategic partners such as Australia and Japan, have the potential to emerge as military partnerships in the future.
- Increased military spending in the region is propelling greater military modernization and buildups that could worsen the security dilemma that is already playing out in the Indo-Pacific.

Since coming into office, President Xi Jinping has talked of strengthening the Chinese military and its overall strategic power by fulfilling the “China dream” and achieving national rejuvenation.¹ To this end, the People’s Liberation Army (PLA) has received renewed attention through significant reforms and reorganization. During this period of reform, China has exercised a more aggressive foreign policy in its neighborhood and beyond.

China’s military reforms and reorganization have had a significant impact on the PLA’s training and jointness in the Tibet Autonomous Region and along the Sino-Indian border. Further, the military imbalance that prevails in the border areas, in terms of both physical infrastructure and equipment, puts India on the defensive. India’s concerns stem from the strategic consequences of a more modern PLA that has created its own security dynamics both in the border areas and on the maritime front in the Indian Ocean. This essay will examine these concerns, the Indian response, and the opportunities for enhancing cooperation with the United States.

Key Indian Concerns

India has become increasingly concerned about its growing power asymmetry with China, especially given China’s rapidly developing warfighting capabilities and the implications for the disputed Sino-Indian border and the Indian Ocean. So far, India has resisted China’s coercive efforts, as evidenced by the strong response to the PLA’s intrusion in the Ladakh sector of the Line of Actual Control (LAC) in 2020. But the PLA’s growing sophistication, augmented training, and institutional reforms will likely make it a more formidable adversary. This section discusses four critical issues for India.²

A More Modern Force

Over the last several years, the PLA has deployed more modernized forces in the Tibet Autonomous Region and along the LAC, including both ground and air forces. Reports in 2017 indicated that the PLA deployed lighter mobile artillery and tanks equipped with hydropneumatic suspension systems to the Tibetan Plateau, improving maneuverability and survivability in mountainous areas.³ The PLA Air Force has also increased the number of aircraft and helicopters deployed to Tibet and the surrounding border areas, including J-10, J-11, and Su-27 fighter jets. Even China’s most modern, fifth-generation stealth fighter, the J-20, was used in training missions. China’s Z-18 White Heron military transport aircraft has also been sighted in the Tibet Autonomous Region, and the PLA has rapid reaction forces that can be airlifted within ten hours of an order. These steps have strengthened China’s ability to undertake short and swift operations—a point of emphasis in Chinese military strategy since the late 1990s.⁴

¹ “Full Text: China’s New Party Chief Xi Jinping’s Speech,” BBC News, November 15, 2012, <https://www.bbc.com/news/world-asia-china-20338586>; and Xi Jinping, “Secure a Decisive Victory in Building a Moderately Prosperous Society in All Respects and Strive for the Great Success of Socialism with Chinese Characteristics for a New Era” (speech delivered at the 19th National Congress, Beijing, October 18, 2017), available at https://www.chinadaily.com.cn/china/19thcpcnationalcongress/2017-11/04/content_34115212.htm.

² Parts of this section draw on Rajeswari Pillai Rajagopalan and Pulkit Mohan, “PLA Joint Exercises in Tibet: Implications for India,” Observer Research Foundation, Occasional Paper, no. 238, February 2020.

³ Lu Zhen, “The Cheap, Light Howitzer China Is Rolling Out in Tibet,” *South China Morning Post*, June 29, 2020, <https://www.scmp.com/news/china/military/article/3090924/cheap-light-howitzer-china-rolling-out-tibet>; and Zhao Lei, “Qinghai-Tibet Plateau Site of PLA War Games,” *China Daily*, July 17, 2017, http://www.chinadaily.com.cn/china/2017-07/17/content_30133519.htm.

⁴ Suman Sharma, “China’s War Plan,” *Open*, April 10, 2010, <http://www.openthemagazine.com/article/india/china-s-war-plan>.

Nuclear and missile forces. China is reportedly deploying more advanced missiles in Delingha in Tibet, including the DF-4 and DF-21 intermediate-range ballistic missiles and the DF-31 and DF-31A intercontinental-range ballistic missiles.⁵ Most concerning to India is the possibility that these missiles are nuclear-tipped. With improved road and rail connectivity, China can now move missiles to prevent a preemptive strike. Moreover, at least some of the approximately 1,200 shorter-range missiles targeting Taiwan can be shifted to the Tibetan theater with the PLA's increased mobilization capability.

PLA reorganization. The reorganization of the PLA has the potential to make it a much more effective fighting force. Since 2012, the PLA has conducted a series of training exercises involving all services and arms, including 80 joint exercises at and above the brigade or division level, simulating real combat conditions.⁶ Among the aspects of reorganization, the PLA's emphasis on joint operations receives special prominence because of the need "to improve the capabilities of joint operations command to exercise reliable and efficient command over emergency responses, and to effectively accomplish urgent, tough, and dangerous tasks."⁷ Though China is reforming in order to achieve parity with the United States, the reorganization affects India because it creates a more effective PLA combat force that jeopardizes Indian security.

The PLA's new Western Theater Command, which encompasses more than half the country, is a striking new feature because of the vast resources at its disposal, making it consequential in the event of a conflict on the Sino-Indian border.⁸ This theater command includes Xinjiang, Tibet, the erstwhile Chengdu Military Region (which had responsibility for most of the Sino-Indian border), and the Lanzhou Military Region (which oversaw the Aksai Chin region).

Changes in military command structure also interest Indian analysts. All new military commands are now integrated under the National Defense Mobilization Department of the Central Military Commission, while the Tibet Military District is still under the direct control of the PLA.⁹ The PLA Strategic Support Force, which is responsible for electronic, space, and cyber warfare and psychological operations, along with the Joint Logistic Support Force, would aid in fostering jointness.¹⁰ The Strategic Support Force concerns India because of China's growing electronic and cyber capabilities, which would have a decisive effect on the battlefield. For instance, the PLA could use cyber warfare to target logistics and support systems of adversaries and interfere with the fuel supply systems and sensors of combat aircraft, neutralizing without destroying them.

⁵ Hans M. Kristensen, "Increasing Nuclear Transparency: Using Satellite Imagery and Freedom of Information Act to Monitor Chinese and Russian Nuclear Forces" (conference presentation at the Federation of American Scientists, Washington, D.C., June 7, 2012).

⁶ State Council Information Office of the People's Republic of China (PRC), *China's National Defense in the New Era* (Beijing, July 2019), http://english.www.gov.cn/archive/whitepaper/201907/24/content_WS5d3941ddc6d08408f502283d.html.

⁷ Ibid.

⁸ As part of its military reorganization, China has moved from the earlier seven military regions to five theater commands, with the goal of establishing a more joint command structure with ground, naval, air, and rocket forces. The Western Command, Northern Command, Eastern Command, Southern Command, and Central Command all report directly to the Central Military Commission. This reorganization also shifts the PLA's focus from the ground force to mobile and coordinated movement of all services. Ibid.; and Minnie Chan, "PLA to Announce Overhaul: Five 'Strategic Zones' Will Replace Regional Commands, Most Army HQ to Be Scrapped," *South China Morning Post*, December 20, 2015, <https://www.scmp.com/news/china/diplomacy-defence/article/1893468/peoples-liberation-army-be-split-five-combat-regions>.

⁹ See, for example, Srikanth Kondapalli, "Is India Ready? China Steps Up Military Build-up in Tibet as America Passes Law of Reciprocal Access," *Financial Express*, January 14, 2019, <https://www.financialexpress.com/defence/is-india-ready-china-steps-up-military-build-up-in-tibet-as-america-passes-law-of-reciprocal-access/1443394>.

¹⁰ State Council Information Office (PRC), *China's National Defense*; and Adam Ni, "China's Information Warfare Force Gets a New Commander," *Diplomat*, May 24, 2019, <https://thediplomat.com/2019/05/chinas-information-warfare-force-gets-a-new-commander>.

PLA Joint Exercises

For nearly a decade, China has increased the number of joint exercises between the PLA Ground Force and Air Force in the Tibet Autonomous Region and along the Sino-Indian border. The PLA has emphasized “the training of air battle at night,” which is reportedly now part of its annual training program.¹¹ The PLA has also been conducting regular training and live-fire exercises in Tibet, which include “the regiments of the Second Artillery, Rocket Artillery, and Armoured Brigade.”¹² In order to gain sufficient expertise in effective battle command and experience in warlike conditions, the PLA has conducted simulation exercises that feature more realistic scenarios. Increasing engagement in combat-like situations, including during severe weather, is meant to address its lack of operational experience. The PLA’s better preparedness levels and potential gains in combat effectiveness need to be monitored carefully after China used an exercise in 2020 to mask preparations for its operations in Ladakh.¹³

In addition to significantly increasing service-specific and joint exercises by the PLA Ground Force and Air Force, the PLA heavily publicizes these developments in state-run media and military publications, suggesting a possible signaling effort by China to India of its military capability along the LAC.¹⁴ Analysts cannot dismiss the possibility of inadvertent conflict and accidents when such exercises take place in a heavily militarized border area.

Border Infrastructure

India’s lagging border infrastructure significantly advantages China because the PLA can amass troops on the border in a relatively short period of time. China has already established a 96,000-kilometer (km) road network in Tibet and a 2,000-km rail line from Xining in Qinghai to Lhasa in Tibet.¹⁵ In August 2014, China extended the railway line to Shigatse, a border town close to the Indian state of Sikkim. It is also developing a railway line between Lhasa and Nyingchi in Tibet, close to Arunachal Pradesh. China reportedly completed laying track for the railway line in December 2020, with an expected completion date in 2021, and plans to connect the line to Sichuan and Yunnan Provinces.¹⁶ The 1,700-km Sichuan-Tibet line will also be ready by 2026, allowing the PLA to mobilize troops of the 14th Group Army from Yunnan and the 13th Group Army from Sichuan.¹⁷

Following the Doklam crisis in 2017, the PLA improved its air infrastructure. In 2019, it established four airbases, four air defense sites, one heliport, and one electronic warfare station near the LAC. While India and China engaged in conflict, China reportedly developed an additional

¹¹ Jayadeva Ranade, “China’s Focus on Military Activities in Tibet,” Centre for China Analysis and Strategy, August 21, 2015, https://ccasindia.org/issue_policy.php?ipid=36.

¹² Ibid.

¹³ Rahul Singh, “China May Have Posted 5,000 Soldiers across LAC, Officials Say as Tension Grows along Border,” *Hindustan Times*, May 26, 2020, <https://www.hindustantimes.com/india-news/china-may-have-posted-5-000-soldiers-on-lac-officials-say-as-tension-grows-along-border-in-ladakh/story-MrbTCUNY6ihfTNUgK40XcM.html>.

¹⁴ Tom O’Connor, “China Shows Off Air Force in Direct Challenge to India Military Power in Asia,” *Newsweek*, February 21, 2018, <https://www.newsweek.com/china-shows-air-force-direct-challengeindia-military-power-asia-814896>.

¹⁵ “New Roads Make a More Dynamic Tibet,” Xinhua, February 2, 2018, http://www.xinhuanet.com/english/2018-02/07/c_136956380.htm.

¹⁶ “China Completes Track-Laying Work for Railway Line in Tibet Close to Arunachal Pradesh,” *Economic Times*, December 31, 2020, <https://economictimes.indiatimes.com/news/international/world-news/china-completes-track-laying-work-for-railway-line-in-tibet-close-to-arunachal-pradesh/articleshow/80049246.cms>; Keith Barrow, “Construction Begins on Lhasa-Nyingchi Line,” *International Railway Journal*, December 19, 2014, <https://www.railjournal.com/regions/asia/construction-begins-on-lhasa-nyingchi-line>; and Atul Aneja, “Integrating Tibet with the World,” *Hindu*, July 13, 2015, <https://www.thehindu.com/opinion/op-ed/sichuantibet-railway-project-integrating-tibet-with-the-world/article7414017.ece>.

¹⁷ Kondapalli, “Is India Ready?”

four airbases, four heliports, and one air defense site in Tibet.¹⁸ China also appears to be building underground facilities in the small military town of Lhoka, possibly for the accommodation of troops as well as for storage of artillery, ammunition, and missiles.¹⁹ Furthermore, China has access to a 1,080-km oil pipeline from Golmud to Lhasa, which can carry up to a half million tonnes per year.²⁰

Recently, many border towns have become zones of military activity, as exemplified by Shigatse in Tibet. Since 2017, PLA activities have increased, including periodic operations with unmanned aerial vehicles (UAVs) at the Shigatse airbase. China suspended civilian flights at the airbase, with reports suggesting that it is now a full-fledged military facility.²¹ China is also reportedly building another airstrip at Shigatse for possible UAV operations. Reports in 2018 indicated that the airbase had nine aprons and eight new helipads.²² Satellite imagery in January 2021 suggests that China is converting Shigatse into a major PLA logistics hub, linking the aerodrome to a railway terminal.²³

China has also deployed heavy-lift planes in Tibet and invested in the China Advanced Info-Optical Network (CAINONET) project linking the Tibet Autonomous Region with the mainland through an optical-fiber cable network. According to reports, China has very-small-aperture terminal satellite stations, feeding into an effective command-and-control network in Tibet, and has also established comprehensive broadband connections and secure communication channels in the region.²⁴ The improved rail and road infrastructure and air connectivity, along with oil and logistics depots, have boosted China's capacity to deploy and sustain military forces against India along the disputed border.

China's augmented border infrastructure makes the PLA presence near India worrisome. For around a decade, China has built several military camps close to border areas, allowing PLA forces to acclimatize to high-altitude conditions on a more regular basis. This puts the Indian military at an additional disadvantage because Indian armed border forces are mostly located on the plains of Assam. There are only a few divisions deployed on the border in locations that are 9,000 feet above sea level or higher. Indian forces thus would be at a disadvantage during the initial stages of a potential border conflict with China because they would need to go through several stages of acclimatization before deployment.

¹⁸ Rezaul H. Laskar, "China Doubled Its Air Bases, Air Defences and Heliports Near LAC in Three Years: Report," *Hindustan Times*, September 22, 2020, <https://www.hindustantimes.com/india-news/china-doubled-its-air-bases-air-defences-and-heliports-near-lac-in-three-years-report/story-LgpbHDWgdfuh4cHwgyeQXP.html>. Some of these developments have been part of the PLA plans. See Tenzin Desai, "China's New Infrastructure Projects at India's Doorstep," Central Tibetan Administration, June 15, 2018, <https://tibet.net/2018/06/chinas-new-infrastructure-projects-at-indias-doorstep>.

¹⁹ Vinayak Bhat, "China Is Reinforcing Underground Military Facilities Near Tibet-Arunachal Border," *Print*, April 8, 2019, <https://theprint.in/defence/china-is-reinforcing-underground-military-facilities-near-tibet-arunachal-border/217826>.

²⁰ "Oil Pipelines," China Internet and Information Center, Tibet Facts and Figures 2005, <http://www.china.org.cn/english/zhuanti/tibet%20facts/163784.htm>.

²¹ Manjeet Negi, "India Keeps Close Watch on 7 Chinese Military Airbases," *India Today*, August 20, 2020, <https://www.indiatoday.in/india/story/7-active-chinese-military-air-bases-under-india-s-close-watch-1713263-2020-08-20>.

²² Vinayak Bhat, "Tibet Sees Sharp Jump in Chinese Air Force Activity after Doklam Standoff with India," *Print*, February 14, 2018, <https://theprint.in/defence/tibet-sees-jump-in-chinese-air-force-activity-after-doklam-standoff/35368>.

²³ Damien Symon, "Infrastructure upgrades south of Xigaze Airport, #Tibet show the aerodrome being linked to a rail terminal, possibly developing it into a future logistics hub," Twitter, January 11, 2021, https://twitter.com/detresfa_/status/1348502398604517379; and Rezaul H. Laskar, "Satellite Imagery Shows China Creating New Military Logistics Hub in Tibet," *Hindustan Times*, January 11, 2021, <https://www.hindustantimes.com/world-news/satellite-imagery-shows-china-creating-new-military-logistics-hub-in-tibet-101610376985245.html>.

²⁴ *China's Strategic Posture in Tibet Autonomous Region and India's Response* (New Delhi: Vivekananda International Foundation, 2012), <https://www.vifindia.org/sites/default/files/china-s-strategic-posture-in-tibet-autonomous-region-and-india-s-response.pdf>.

China's Presence in the Indian Ocean

China's growing footprint in the Indian Ocean also concerns India. In late 2011 the China Ocean Mineral Resources Research and Development Association signed a fifteen-year contract with the International Seabed Authority for exclusive rights to explore 10,000 km² of seabed in the southwest Indian Ocean off the coast of Africa for polymetallic sulfide ore deposits.²⁵ However, China's interests were not limited to seabed mining according to its 2013 "blue book" on the Indian Ocean.²⁶ The document predicted a struggle among the great powers for strategic space in the Indian Ocean. More importantly, it also predicted that no single world or regional power (including the United States, Russia, China, Australia, and India) would exercise control of the Indian Ocean in the future. In a pertinent reference to India, the document asserted that even if India claims the Indian Ocean as its sphere of influence, New Delhi will be unable to manage security over the region by itself.

Over the last few years, China has increasingly threatened Indian interests in the Indian Ocean region. Its expanding presence not only challenges India but exemplifies China's aim to consolidate its role as a global maritime power and emerge as a credible actor in the Indian Ocean.²⁷ Along with the PLA Navy's growing strength, China's maritime partnerships with a number of regional countries and frequent visits to areas within India's exclusive economic zone (EEZ) concern New Delhi. In 2020, Indian Navy chief Admiral Karambir Singh expressed concerns about the presence of both Chinese research vessels and fishing boats in the Indian Ocean, including in India's EEZ.²⁸ In September 2019 a Chinese research vessel, *Shiyan 1*, came close to India's Andaman and Nicobar Islands.²⁹ Similarly, even in the middle of the conflict in eastern Ladakh in August 2020, China sent its *Yuan Wang*-class research vessel into the Indian Ocean.³⁰ Most concerning is that Chinese research vessels appear to be studying the seawater features and surveying the ocean floor—data that would help China improve its submarine operations.

Furthermore, India harbors specific concerns about China's growing naval and maritime presence (particularly its submarine activity) in Pakistan, Sri Lanka, and Bangladesh.³¹ Chinese access to civilian ports in Gwadar in Pakistan, Hambantota in Sri Lanka, and Chittagong in Bangladesh, as well as Sittwe in Myanmar, could have military implications in a conflict. China is also attempting to strengthen its naval presence in the Indian Ocean by investing in strategic bases at home, such as the underground submarine base at Yulin base in Hainan, which is closer to the Indian Ocean than other Chinese naval bases. The Maritime Silk Road, part of the Belt

²⁵ Ananth Krishnan, "China Signs Contract for Indian Ocean Mining Rights," *Hindu*, November 19, 2011, <http://www.thehindu.com/news/national/agniii-ballistic-missile-succesfully-testfired/article6580146.ece>.

²⁶ Ananth Krishnan, "China Details Indian Ocean Strategy and Interests," *Hindu*, June 9, 2013, <http://www.thehindu.com/news/international/world/china-details-indian-ocean-strategy-and-interests/article4795550.ece>.

²⁷ Darshana M. Baruah, "Strengthening Delhi's Strategic Partnerships in the Indian Ocean," Center for a New American Security, October 23, 2020, <https://www.cnas.org/publications/reports/strengthening-delhis-strategic-partnerships-in-the-indian-ocean>.

²⁸ Shaurya Karanbir Gurung, "Alarm over Chinese Research Ships in Indian Ocean Region," *Economic Times*, January 30, 2020, <https://economictimes.indiatimes.com/news/defence/alarm-over-chinese-research-ships-in-indian-ocean-region/articleshow/73755293.cms>.

²⁹ Liu Zhen, "Chinese Research Vessel Expelled by Indian Warship for Operating Near Andaman and Nicobar Islands," *South China Morning Post*, December 4, 2019, <https://www.scmp.com/news/china/diplomacy/article/3040638/chinese-research-vessel-expelled-indian-warship-operating-near>.

³⁰ "Amid Tensions on Border, Indian Navy Tracks Chinese Research Vessel in Indian Ocean," ANI News, September 17, 2020, available at <https://timesofindia.indiatimes.com/india/amid-tensions-on-border-indian-navy-tracks-chinese-research-vessel-in-indian-ocean/articleshow/78167898.cms>.

³¹ "With Chinese Submarines Spotted Near Andamans, India Turns to U.S.," Reuters, May 2, 2016, available at <https://www.ndtv.com/india-news/wary-of-chinas-indian-ocean-activities-us-india-discuss-anti-submarine-warfare-1401595>.

and Road Initiative, adds to these concerns because its maritime linkages could augment China's strategic reach.

Security Scenarios

China's growing military capabilities might allow the country to more rapidly apply military pressure on India. The Doklam crisis in 2017 and the Galwan clash in June 2020 exemplify the kinds of challenges India faces. In both crises, China's improved infrastructure capabilities allowed for rapid deployment of forces and movement of equipment. These crises also demonstrate that China is making impressive progress at jointness and integration between military services. Given China's improved aerial, road, and rail infrastructure, India should prepare for a significant increase in speedy PLA deployment across the LAC, including aerial intrusion. In the current crisis in eastern Ladakh, China has used air power for both transportation and deployment.

One way in which China can use its enhanced military capabilities at the border is by employing salami-slicing tactics. China could use its infrastructural superiority to rapidly possess an area and then use its superior military capabilities to deter any reversal of such an incursion or to retaliate with similar salami-slicing tactics. China has successfully used this tactic in the South China Sea by employing significant resources to create facts on the ground, such as artificial islands, and by deterring other countries from attempting to reverse or copy these tactics.

Salami-slicing tactics proved less effective in Ladakh. Though China staged a *fait accompli* by moving into the unoccupied neutral zone, it was unable to deter India from retaliating with its own *fait accompli* or prevent India from building up its military strength and infrastructure development in the area. While there is a considerable power gap between the two countries, the military gap along the LAC is less lopsided than the gap between China and its smaller opponents in the South China Sea. Nevertheless, if the military balance continues to shift in China's favor, India may choose to undertake similar salami-slicing responses in the future.

It is unclear whether China is using these frequent probes and intrusions to wear down Indian forces. This is one of the hypotheses about China's behavior against Taiwan and Japan. Yet, even if this were so, this strategy is unlikely to work in the Indian case. India has experience with sustained military commitment, including along the Line of Control with Pakistan and during decades-old military deployments to deal with domestic insurgencies in its northeast and Kashmir. India is unlikely to reduce its commitment to the LAC because of China's salami-slicing tactics.

In the event that China were to decide to launch a full-scale military attack along the entire border, as happened in 1962, its enhanced military and infrastructure capability could be a decisive factor. When India responded to China's salami-slicing tactics in 1962 with a "forward policy," China escalated to a forceful attack against the thinly stretched Indian forces.³² Today, India possesses greater military strength along the LAC, making massive deployment of forces a far riskier proposition for China. Yet its growing military capabilities could convince Beijing to undertake such an initiative, despite the higher risks.

A final scenario is a combined Sino-Pakistani assault, either coordinated or opportunistic. Given the already tense Line of Control with Pakistan, India would find it hard to deploy a large, permanent force on the LAC, presenting a tempting opportunity for Pakistan and China.

³² Rajesh Rajagopalan, "Re-examining the Forward Policy," in *Security Beyond Survival: Essays for K. Subrahmanyam*, ed. P.R. Kumaraswamy (New Delhi: Sage, 2004).

Sino-Pakistani strategic cooperation is closer today than in 1962, further tilting the military balance toward China while reducing its risk.

On the maritime front, the PLA's enhanced naval capabilities may not lead to a seaborne assault on India; however, these capabilities could have the effect of bottling up the Indian Navy to defend its coast rather than challenge the PLA Navy in the Indian Ocean. If Chinese supercarriers and accompanying battlegroups were to enter the Indian Ocean, the Indian Navy would likely be unable to challenge or counter them, resulting in a defensive, brown water Indian Navy.

The Indian Response

India has responded to China's challenges in many ways, including by developing infrastructure along the border, creating a new strike corps, and strengthening strategic forces. In the maritime domain, India has gradually enhanced its naval forces (restricted due to budgetary constraints) and enhanced its maritime partnerships.

Infrastructure development. The development of India's border infrastructure has become a priority within the government. After ignoring the issue for decades, the Cabinet Committee on Security sanctioned the development of 73 strategic roads on the Sino-Indian border in 1999, which were to be completed by 2012. Although the plan failed, the Ministry of Defence claims that a revised infrastructure development plan (2018–19 to 2022–23) is in place for the construction of a road network spanning 14,545 km. Out of the 73 strategic roads, India had completed only 27 as of 2017, and the rest have deadlines of December 2022.³³ Similarly, tunnel work in Jammu and Kashmir, Sikkim, and Arunachal Pradesh has faced significant delays and remains stuck in the early stages. The Ministry of Defence's proposal for 14 strategic railway lines also has met delays.³⁴

Nevertheless, there has been progress. The crucial Darbuk-Shyok-Daulat Beg Oldie road (255 km) in eastern Ladakh initially faced significant delays due to realignment problems and poor construction but was finally completed in April 2019.³⁵ Similarly, the conclusion in December 2018 of the 9.2-km Bogibeel Bridge in Assam (begun in September 2001), enhanced India's ability to move troops and supplies to the border areas, especially Arunachal Pradesh.³⁶ India also has strengthened its air infrastructure in Ladakh and other border areas and started constructing 36 new helipads, with a goal of linking remote parts across the border (especially in the western sector).³⁷

New mountain strike corps. In 2013, India decided to establish a new mountain strike corps, the XVII Corps, but budget constraints kept it from coming to fruition.³⁸ However, following the Galwan clash, the government decided to go ahead with building the new strike corps. As of

³³ Lok Sabha, "Infrastructure Development in Border Areas," Ministry of Defence (India), July 28, 2017, <http://164.100.47.194/Loksabha/Questions/QResult15.aspx?qref=55446&lsno=16>.

³⁴ Anurag Kotoky and N.C. Bipindra, "India Builds Roads along China Border," *Economic Times*, July 12, 2018, <https://m.economictimes.com/news/defence/after-decades-of-neglect-india-builds-roads-along-china-border/articleshow/58833597.cms>.

³⁵ Ajay Banerjee, "India Completes Vital Ladakh Road," *Tribune*, April 23, 2019, <https://www.tribuneindia.com/news/archive/nation/india-completes-vital-ladakh-road-762332>.

³⁶ "PM Modi Inaugurates Bogibeel Bridge, India's Longest Bridge; Opens for Traffic," *Times of India*, December 26, 2018, <https://timesofindia.indiatimes.com/travel/destinations/pm-modi-inaugurates-bogibeel-bridge-indias-longest-bridge-opens-for-traffic/as67255123.cms>.

³⁷ @deteresfa_, "Cited as #Ladakh's biggest helipad project, #India is constructing 36 new helipads to connect remote locations across the region," Twitter, December 19, 2020, https://twitter.com/deteresfa_/status/1340152377131692033.

³⁸ Sushant Singh, "Explained: What Happened to the Mountain Strike Corps?" *Indian Express*, June 19, 2020, <https://indianexpress.com/article/explained/explained-what-happened-to-the-mountain-strike-corps-6465221>.

January 2021, the Indian Army has two strike corps on the Sino-Indian border, and the Pakistan-facing I Corps will also relocate to the border with China.³⁹

Maritime capacity development. For decades, the Indian Navy suffered from poor budgetary allocations, particularly in the submarine category. The navy has an approximate total of 130 ships and submarines, including 14 operational submarines, many of which are outdated. Its plans to increase its fleet to 200 ships by 2027 appear unrealistic, as do plans to induct 24 new submarines by 2030. The growing strength of the PLA Navy has pushed India to invest more in anti-submarine ships, long-range maritime reconnaissance aircraft, Saryu-class patrol vessels, and UAVs, including the IAI Heron. Its persistent naval weakness has led India to recognize the usefulness of cooperating with other navies in the Indian Ocean region and sign logistics cooperation agreements with Australia, France, Japan, South Korea, and the United States.

Strengthening of nuclear capabilities. India's primary concerns stem more from China's conventional military modernization than from its growing nuclear capabilities. While India's nuclear weapons program is evolving at a slow but steady pace, one can expect the country to continue to expand its nuclear capabilities in both quantitative and qualitative terms. This expansion will be driven primarily by the need to build adequate deterrent capacity against China. India faces a significant gap in terms of its long-range missiles, which still do not have sufficient range to cover all of China. For this capability, India would need to develop missiles with a range of 7,000 km or more. The longest of its deployed missiles—Agni-II—has a range of only 2,000 km.⁴⁰ India has a longer-range missile—Agni-V (with a range of 5,000 km)—that is to be deployed in the future, while its Agni-VI (with a range of 6,000 km) is still in development.⁴¹

India is also developing a submarine-based nuclear force to achieve a nuclear triad, but the two missiles with which the submarine may be armed—the 700-km-range K-15 and the 3,500-km-range K-4—are clearly inadequate to target most of China, especially from a submarine deployed in the Bay of Bengal. Given the long-term nature of the threat from China, India will continue expanding its nuclear forces.

Enhancing the Partnership with the United States

New Delhi remains hesitant about a security partnership with the United States. India's acquisition of U.S. military equipment remains confined to a few niche areas (such as the AH-64 helicopter-gunships and P-8I surveillance aircraft). India purchased \$20 billion worth of military equipment from the United States and was designated a U.S. Major Defense Partner in 2016, which was later upgraded to Strategic Trade Authorization Tier 1. India also signed foundational defense agreements with the United States, including the Logistics Exchange Memorandum of Agreement, the Industrial Security Agreement, and the Communications Compatibility and Security Agreement, which elevated the quality of defense engagement between India and the United States. This collaboration was made possible by a common threat perception of China and a shared vision for a free and open Indo-Pacific.

³⁹ Amrita Nayak Dutta, "Army Plans to Keep 2 Strike Corps for Mountains Facing China amid Ladakh Crisis," *Print*, January 6, 2021, <https://theprint.in/defence/army-plans-to-deploy-2-strike-corps-in-mountains-facing-china-amid-ladakh-crisis/579924>.

⁴⁰ Y. Mallikarjun, "Agni-II Test-Fired for Full 2,000-Kilometer Strike Range," *Hindu*, November 9, 2014, <http://www.thehindu.com/news/national/agnii-ballistic-missile-successfully-testfired/article6580146.ece>.

⁴¹ Hemant Kumar Rout, "India Plans Deployment of Nuclear-Capable Agni-V This Year," *New Indian Express*, January 4, 2021, <https://www.newindianexpress.com/nation/2021/jan/04/india-plans-deployment-of-nuclear-capable-agni-v-this-year-2245188.html>.

Despite these developments, Russian weaponry remains the largest part of India's defense inventory. In 2020, India requested the speedy delivery from Russia of 33 new fighter aircraft (including 21 MiG-29s and 12 Su-30MKIs) worth around \$793 million.⁴² India is also in the process of buying a Russian S-400 air defense system, despite the threat of U.S. sanctions under the Countering America's Adversaries Through Sanctions Act. This high level of dependence on Russia is a source of ongoing concern, but also one that India finds difficult to overcome because of various advantages in the defense sector. In particular, Russia's willingness to lease nuclear submarines to India, which no other country is willing to do, is an important strategic rationale for their continuing defense trade. On the other hand, Russia's growing closeness to China, including through the sale of advanced weapons platforms such as Su-35 fighter aircraft and Kilo-class submarines, and increasing disagreements with India on the Indo-Pacific raise questions about Russian dependability in the coming years. Nonetheless, during the last two Sino-Indian border crises, Russia has hastened arms supplies to India. New Delhi's calculation appears to be that Russia would not want to jeopardize its arms deals with India—not only because of the financial benefits to the Russian arms industry but also because of Indian political support.

It remains unclear how the Indian procurement of the S-400s and other weapons platforms will affect the U.S.-India strategic partnership, including whether India will be sanctioned. Another round of sanctions could damage the perception within India of the United States as a reliable partner and hinder further developments in the relationship. Despite these differences over Russian arms procurement and other minor irritants on the Iran front, concern about China keeps the United States and India together.

For example, they have substantially increased intelligence sharing and joint military exercises. The Basic Exchange and Cooperation Agreement has facilitated intelligence sharing by providing real-time access to U.S. geospatial data, which improves the precision of automated systems as well as armed drones. In October 2020, on the sidelines of the Quad foreign ministers' meeting, India received an invitation for the first time to the Five Eyes meeting, indicating that New Delhi and Washington have built considerable mutual trust and confidence.⁴³ The joint military exercise in 2020 involving the four Quad countries—Australia, India, Japan, and the United States—likewise signified an emerging healthy and mature partnership in the Indo-Pacific.

More broadly, shared concerns about China have changed the character of bilateral interactions, spanning expanded security and political dialogues, high-level ministerial meetings such as through 2+2 formats, defense trade, and annual military exercises involving the army, air force, and navy as well as the special forces. Nevertheless, providing access for the U.S. military involves complex domestic political challenges because of India's traditional opposition to military alliances and particularly military bases. Even though the Modi government recognizes the significant strategic benefits of the partnership, the Cold War legacy of nonalignment continues to be an issue dogging Indian foreign policy, complicated by new questions about the credibility of the United States as a security partner. But as China becomes more confrontational on the border

⁴² "Amid Row with China, IAF Pushes Proposal for Acquiring 33 New Russian Fighter Aircraft," ANI News, June 18, 2020, available at <http://www.businessworld.in/article/Amid-row-with-China-IAF-pushes-proposal-for-acquiring-33-new-Russian-fighter-aircraft/18-06-2020-288689>.

⁴³ "India Joins Five Eyes, Japan in Demanding Backdoor into WhatsApp End-to-End Encrypted Chats," *India Today*, October 12, 2020, <https://www.indiatoday.in/technology/news/story/india-joins-five-eyes-japan-in-demanding-backdoor-into-whatsapp-end-to-end-encrypted-chats-1730681-2020-10-12>.

and in the Indian Ocean, India's wariness is being diluted and there is greater willingness in New Delhi to embrace the United States and U.S. allies such as Japan and Australia.

While building a strong strategic partnership with the United States will remain a key goal in India's strategy to counter China's political, economic, and military coercion, India has shown greater flexibility in developing other strategic engagements in the region. The India-Japan, India-Australia, and Japan-Australia partnerships are a few examples of emerging synergistic relationships in the Indo-Pacific. These new partnerships have grown beyond bilateral modes to include multilateral formats like the India-Japan-Australia and India-Australia-Indonesia trilaterals. The partnerships are not meant to replace the United States as the principal strategic partner for these countries but rather to supplement the U.S. role and influence in the region. India is likely to strengthen such engagement in the future and create and sustain more minilateral groupings with likeminded partners to temper Chinese power.

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China's Military Modernization in Space and Cyber and the Implications for the U.S.–Japan Alliance

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EXECUTIVE SUMMARY


This essay discusses why China's rapid development of space and cyber capabilities poses security threats for Japan, how Japan is trying to respond, and what Japan and the U.S. could do to address these new challenges.

MAIN ARGUMENT

China's rapid development of military and technology capabilities in new domains, especially in the realms of space and cyber, poses serious security concerns for the U.S.-Japan alliance. First, the development and deployment of offensive capabilities in these domains could give China an asymmetrical advantage to challenge existing deterrence created by the alliance in the Indo-Pacific region. Second, China's Military-Civil Fusion strategy and the dual-use nature of these domains expand the security concerns into the civilian and commercial realms. Third, Japan's unique constitutional, legal, and political constraints challenge the country to effectively respond to such new security requirements in diverse scenarios from peacetime to conflict. Beijing's increasing use of cyber tools during peacetime to prepare for the future annexation of Taiwan further underscores the need for the U.S. and Japan to coordinate on responses and define their roles and missions under the alliance in a wide range of scenarios.

POLICY IMPLICATIONS

- On the strategic level, the U.S. and Japan should coordinate a whole-of-government approach beyond their existing defense-focused cooperation in order to deal with the multidimensional challenges posed by China's pursuit of "information dominance" beyond the military realm.
- On the military level, the U.S. and Japan should enhance the credibility of deterrence against cyberattacks through greater coordination in high-level dialogues. Linking Japan with like-minded U.S. allies beyond the region could further strengthen Japan's operational capabilities.
- On the economic-security level, the U.S. and Japan should encourage public-private cooperation in order to facilitate real-time information sharing on trends in cyberdefense and maintain technology superiority in advanced dual-use technologies in the new domains.

n April 21, 2021, the Japanese Metropolitan Police filed a case against a member of the Chinese Communist Party (CCP) for an alleged cyberattack against the Japan Aerospace Exploration Agency (JAXA) in 2016. The individual is thought to be affiliated with a Chinese hacker group (Tick) that has allegedly carried out cyberattacks against almost two hundred companies and research institutes in Japan on the instructions of People's Liberation Army (PLA) Unit 61419.¹ The case is significant because it is the first time the Japanese government has publicly stated that the PLA was involved in a cyberattack against a Japanese government organization. More importantly, the incident appears to reveal Beijing's willingness and ability to penetrate Japanese networks to gain access to cutting-edge dual-use technology in pursuit of a military advantage.

In recent years, the ambitious national goals and rapidly advancing military capabilities of the People's Republic of China (PRC) have heightened security concerns among Asian countries, including Japan.² Various statements from Chinese leaders, such as Xi Jinping's speech to the 18th National Congress of the CCP in 2012 announcing the "China dream" or "great rejuvenation of the Chinese nation," have also provoked concerns. The speech suggested that Beijing's goals include resolving in its favor reunification with Taiwan and the territorial disputes in the South and East China Seas, including over the Senkaku Islands (known as the Diaoyu Islands in China) that Japan administers and China claims as its territory. Another concern is the pace and scope of China's military modernization. In 2017, Xi stated the goal of developing a "world-class military" by 2049, the centenary of the PRC.³ Authoritative Chinese sources confirm that the goal is to develop military capabilities comparable to or surpassing those of the United States in order to deter it from intervening in regional conflicts.⁴

Among the various deterrent, coercive, and warfighting capabilities developed, China's rapid development of capabilities in the new domains of space and cyber merit further attention for the following reasons. The first reason is that the changing military strategy, doctrine, and warfighting capabilities put new information technology at the center of China's military strategy. While "active defense" has been the core of Chinese military strategy, assets in the new domains are allowing Beijing to emphasize preemptive attack capabilities in the early stages of a conflict.⁵

The second is the dual-use nature of cyber and space capabilities. Studies show that information technologies are important tools used by China in its strategic competition with the United States, not only with regard to a potential conflict but also in peacetime and gray zones.⁶ Analysts do not rule out the potential for the PLA to target civilian and commercial spaces to achieve its larger and long-term strategic goal of becoming a top-tier military, economic, and technological power.

¹ "Chinese Military Seen Behind Japan Cyberattacks," *Japan Times*, April 20, 2021, <https://www.japantimes.co.jp/news/2021/04/20/national/chinese-military-japan-cyberattacks>.

² See, for example, Ministry of Foreign Affairs (Japan), *Diplomatic Blue Book 2021* (Tokyo, April 2021), <https://www.mofa.go.jp/mofaj/files/100181433.pdf>.

³ U.S. Department of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2020* (Washington, D.C., 2020), <https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF>.

⁴ National Institute for Defense Studies (NIDS), *NIDS China Security Report 2021: China's Military Strategy in the New Era*, trans. INTERBOOKS (Tokyo: NIDS, 2020), 18–21, http://www.nids.mod.go.jp/english/publication/chinareport/pdf/china_report_EN_web_2011_A01.pdf.

⁵ *Ibid.*

⁶ See, for example, *ibid.*; U.S. Department of Defense, *Annual Report to Congress* (2020); and International Institute for Strategic Studies (IISS), "Cyber Capabilities and National Power: A Net Assessment," June 2021, <https://www.iiss.org/-/media/files/research-papers/cyber-capabilities-and-national-power---a-net-assessment.pdf>.

Challenges in terms of attribution and cost-effectiveness add further incentives for China to exploit its new capabilities.

A third reason concerns the difficulties facing Japan and the United States in responding effectively to these new domain challenges. There are no agreed-on international norms or rules that define how countries should or should not use the cyber or space realms for their security. Despite confirmation in 2019 that cyberattacks fall under Article 5 of the U.S.–Japan alliance, there is no consensus between the two allies, or even within either country, about what kind of state-sponsored cyberattacks would make military retaliation permissible. The existing interpretations of Japan’s constitution and its security-related laws further constrain any response to Beijing’s activities in the new domains, cyberattacks against Japan, or even a potential Taiwan contingency.

This essay discusses (1) why China’s rapid development of space and cyber capabilities are principal security threats for Japan, (2) the potential scenarios in which China would most likely deploy these capabilities, (3) Japan’s responses to these threats, and (4) steps the United States and Japan could take to better deal with the new challenges to Japanese and regional security in the space and cyber domains. The essay aims to contribute to the debate on the implications of Chinese military modernization by taking a holistic approach to the multidimensional security threat that Beijing’s focus on the digital domain poses to Japan’s defense posture, economy, and society. It concludes by arguing that greater U.S.–Japan cooperation is needed beyond the traditional military and defense realm.

China’s Goals and Capabilities in the New Domains

Official military-strategy papers, along with assessments from authoritative Chinese experts, suggest that the cyber and space domains play a central role in China’s national ambition to become a great power comparable to the United States. These new domains are identified as key for China to achieve its military strategy of prevailing in informatized war and intelligentized warfare in the future.⁷ In particular, the 2015 edition of the Chinese Defense White Paper recognized the centrality of the cyber domain for the first time, stating that “outer space and cyber space have become new commanding heights in strategic competition among all parties.”⁸ The annual China Security Report published by Japan’s National Institute for Defense Studies (NIDS)—a leading think tank affiliated with the Japanese Ministry of Defense—underscores Tokyo’s growing perception of the threat posed by China’s military modernization in new domains.

China’s Strategic Goals and Military Capabilities in the New Domains

Beijing’s emphasis on achieving “information dominance” through the cyber and space domains is driven by its perception of the threat posed by the U.S. military’s operational and technological capabilities. The U.S. victories (alongside its European allies) in the Gulf War, Kosovo, and the Iraq War revealed that U.S. high-tech warfighting capabilities were significantly superior to those

⁷ According to the “Glossary of the Chinese People’s Liberation Army,” “informatized warfare” refers to “wars that use informatized weaponry and equipment and related operational methods based on networked information systems, and take place mainly in the form of systems confrontation in land, sea, air, space, cyber and electromagnetic spaces and the cognitive domain.” NIDS, *NIDS China Security Report 2021*, 13. “Intelligentized warfare” is an advanced form of informatized warfare in which artificial intelligence is used in military operations, intelligence collection, and decision-making. IISS, “Cyber Capabilities and National Power: A Net Assessment,” 91.

⁸ NIDS, *NIDS China Security Report 2021*, 13.

of the PLA and that achieving “information dominance” is key to victory in modern warfare.⁹ At the same time, China’s cyber strategy in 2016 recognized the importance of cyber sovereignty in order to maintain information dominance.¹⁰ Furthermore, Beijing considered that the cyber and space domains were cost-effective means of deterring U.S. involvement in regional conflict, due to the asymmetrical security impact on U.S. military networks and targets. Even if China equals or surpasses U.S. military capabilities, studies reveal that there will still be incentives to use the new domains for warfighting, due to their cost-efficiency and greater potential to control escalation.¹¹ The establishment of the PLA Strategic Support Force in 2015, directly under the Central Military Commission, is another indicator of Xi Jinping’s emphasis on utilizing the new domains. It also reflects China’s focus on improving the jointness of the different branches of the PLA, including in the space and cyber domains, in order to enhance military readiness and potentially achieve a swift transition from a peacetime to a wartime posture.¹²

Studies suggest that Beijing has developed, or is in the process of developing, capabilities that could pose a threat to the military advantage created by the U.S.-Japan alliance.¹³ These include offensive weapons systems that pose asymmetrical threats to the existing U.S. and Japanese defense posture. Such systems could also enable Beijing to prevent the United States and Japan from using the cyber and space domains in contingencies. For instance, through its rapid development of capabilities in kinetic and nonkinetic anti-satellite, cyber, and electronic warfare, China can now target the command and control (C2) of the United States and its allies in order to disrupt their military operations and exploit weaknesses in the early stages of a conflict.¹⁴ In the realm of space, the United States assesses that with Beijing’s first test of the SC-19 ground-launched satellite interceptor, China is likely to have developed an anti-satellite system that could reach geostationary orbit, where the Japan Self-Defense Forces (JSDF) X-band communications satellites and Quasi-Zenith Satellite Systems—the supplement of the U.S. GPS system—are located. China has also developed laser and nonkinetic countermeasures, such as signal-jamming and spoofing capabilities with potential threats to military communications systems in the region.¹⁵ As the U.S. Space Force chief General Jay Raymond suggested in October 2020, space is now a “warfighting domain.”¹⁶

Chinese capabilities in these new domains also pose challenges to U.S. and Japanese military operations by dramatically enhancing the efficiency and effectiveness of the PLA. In the realm of space, a Chinese expert has claimed that the Chinese positioning satellite, the BeiDou Navigation Satellite System, would “double the combat capability and effectiveness of the Chinese military.”¹⁷ In the cyber realm, the U.S. Department of Defense assesses that the PLA plans to use cyberwarfare

⁹ NIDS, *NIDS China Security Report 2021*, 46.

¹⁰ Ministry of Defense (Japan), *Defense of Japan 2020* (Tokyo, 2020), 174, https://www.mod.go.jp/en/publ/w_paper/wp2020/pdf/R02010303.pdf.

¹¹ NIDS, *NIDS China Security Report 2021*, 32–34.

¹² IISS, “Cyber Capabilities and National Power: A Net Assessment,” 91.

¹³ For further discussion of Chinese anti-satellite capabilities, see Todd Harrison, “Space Threat Assessment 2021,” Center for Strategic and International Studies, 10. For further discussion of Chinese offensive cyber capabilities, see IISS, “Cyber Capabilities and National Power: A Net Assessment,” 97.

¹⁴ U.S. Department of Defense, *Annual Report to Congress* (2020).

¹⁵ A 2019 assessment by the Japanese Cabinet Office highlighted China’s establishment of vehicle-mounted long-range jammers on Fiery Cross Reef and the Spratly Islands in the South China Sea. See, for example, Yuka Koshino, “Japan’s New Space Domain Mission Unit and Security in the Indo-Pacific region,” IISS, Military Balance blog, May 1, 2020, <https://www.iiss.org/blogs/military-balance/2020/05/japan-space-domain-mission-unit-security>.

¹⁶ “U.S. Space Force Chief: Space Is ‘A Warfighting Domain,’” Forces, October 26, 2020, <https://www.forces.net/news/head-us-space-force-space-warfighting-domain>.

¹⁷ NIDS, *NIDS China Security Report 2021*, 47.

to create militarily favorable environments in case of armed conflict. To this end, the PLA seeks to “collect data for intelligence and cyberattack purposes; constrain an adversary’s actions by targeting network-based logistics, C2, communications, commercial activities, and civilian and defense critical infrastructure; and serve as a force-multiplier when coupled with kinetic attacks during armed conflict.”¹⁸ The incorporation of artificial intelligence (AI) will dramatically improve China’s ability to develop offensive capabilities with disruptive impact.

Beyond Military: The Military-Civil Fusion Strategy

It is important to note that Beijing’s pursuit of information dominance, or cyber or space dominance, goes beyond the military realm. Using economic and diplomatic means is an essential pathway for Beijing’s military modernization effort to win in the current informatized war and in a future intelligitized war. This includes reducing the dependency of its communications systems on foreign technology, utilizing civilian technologies for military purposes under its Military-Civil Fusion strategy, and promoting the Chinese model of internet governance. China’s 12th Five Year Plan, for 2011–15, identified next-generation information and communications technologies—including Internet of Things devices, cloud computing, and other digital technologies for mobile and internet communications—as one of China’s strategic emerging industries on which efforts to achieve growth needed to be focused.¹⁹ Xi’s “Made in China 2025,” announced in 2015, further accelerated that effort. Having received massive government subsidies and also favorable lending from the state-owned banks, Chinese companies such as Huawei and ZTE have become some of the world’s largest equipment providers for 5G wireless networks and are also emerging actors in the development of undersea communications cables.²⁰ Chinese companies such as Alibaba and Tencent have likewise become some of the world’s leading providers of digital platforms and cloud services.

China’s ambitions to achieve “information security” and to protect its cyberspace from foreign interference go further than the indigenization of digital technology. Statements and activities suggest that, to bolster its own security, China is seeking to promote its digital infrastructure in foreign markets and to shape future rules, norms, and standards concerning cyber and space. The Digital Silk Road, the digital dimension of the Belt and Road Initiative, has reportedly served as a vehicle for this effort to “construct a community of common destiny in cyberspace.”²¹ China’s Global Initiative on Data Security originated from the Cybersecurity Law enacted in 2017, which displayed an appetite for restricting transnational flows of data. The Standards 2035, announced by Beijing in 2020, further underscores China’s aspiration to promote its own standards in future communications technology.²² For this purpose, Beijing is actively pushing its own officials toward positions of responsibility in international organizations such as the International Telecommunication Union. The spread of Chinese communications systems has become

¹⁸ U.S. Department of Defense, *Annual Report to Congress* (2020).

¹⁹ See, for example, “China’s 12th Five-Year Plan: How It actually Works and What’s in Store for the Next Five Years,” APCO Worldwide, December 10, 2010, 9, http://www.export.gov.il/UploadFiles/03_2012/Chinas12thFive-YearPlan.pdf.

²⁰ See, for example, Jeremy Page, Kate O’Keeffe, and Rob Taylor, “America’s Undersea Battle with China for Control of the Global Internet Grid,” *Wall Street Journal*, March 12, 2019, <https://www.wsj.com/articles/u-s-takes-on-chinas-huawei-in-undersea-battle-over-the-global-internet-grid-11552407466>; and Doug Brake, “Submarine Cables: Critical Infrastructure for Global Communications,” Information Technology and Innovation Foundation, April 2019, <http://www2.itif.org/2019-submarine-cables.pdf>.

²¹ U.S.-China Economic and Security Review Commission, “2018 Report to Congress,” November 2018, 266, https://www.uscc.gov/sites/default/files/annual_reports/2018%20Annual%20Report%20to%20Congress.pdf.

²² Naomi Wilson, “China Standards 2035 and the Plan for World Domination—Don’t Believe China’s Hype,” Council on Foreign Relations, June 3, 2020, <https://www.cfr.org/blog/china-standards-2035-and-plan-world-domination-dont-believe-chinas-hype>.

an increasing security concern internationally. For example, Article 7 of the PRC's National Intelligence Law that went into effect in 2017 mandates private firms and individuals to cooperate with Chinese state agencies' intelligence operations whenever required.²³

Potential Scenarios for Deployment in the New Domains

China's goals are expanding and its capabilities are growing in the cyber and space domains. Against this backdrop, this section considers four scenarios, ranging from peacetime to conflict, in which Beijing might use these new capabilities to threaten or attack Japanese economic and security interests.

Scenario 1: Cyber-Enabled Economic Espionage against Japanese Defense Contractors and Technology Firms in Peacetime Competition

The first peacetime scenario is the exploitation of defense and military networks to gain technological superiority over Japanese and U.S. armed forces. This would be aimed at winning a longer-term strategic competition with the United States and its allies. In fact, China has a track record of penetrating civilian and commercial networks to gain access to sensitive information on the development of advanced military technologies. For instance, in the alleged hack of Lockheed Martin's server in Australia, the PLA attempted to steal sensitive information on the F-35 program, the most sophisticated fighter-jet program in history, in which Japan is a participant.²⁴ In another case, a PLA-affiliated group hacked Japanese defense contractors' networks, potentially accessing the R&D specifications for Japan's hypersonic-weapons system along with information on more than eight thousand people connected to the defense ministry.²⁵ These examples suggest that Beijing has the intent and capabilities to use espionage to gain a military advantage over the United States and Japan.

Scenario 2: Exploitation of Asymmetric Capabilities for Political Coercion or Deterrence in Peacetime or Gray-Zone Competition

The second scenario in peacetime involves China gaining access to critical infrastructure or targeting space assets to coerce Japanese policy. In this scenario, Beijing would conduct low-intensity daily cyberattacks against the Japanese private sector—including critical infrastructure, companies, and the defense industry—to test the weaknesses of networks and to access the technologies developed by those firms.²⁶ Beijing would seek to coerce Tokyo into acceding to an action that strategically benefits China. This could involve preventing Japanese involvement in military conflicts that are not directly aimed at attacking Japan.

While the Japanese government has publicly recognized neither the PLA's access to Japanese military or civilian networks nor Beijing's use of cyberspace to coerce Japan's actions, the rapid

²³ For analysis, see, for example, Danielle Cave, "Huawei Highlights China's Expansion Dilemma: Espionage or Profit," Australian Strategic Policy Institute, Strategist, June 15, 2018, <https://www.aspistrategist.org.au/huawei-highlights-chinas-expansion-dilemma-espionage-or-profit>.

²⁴ Philip Dorling, "China Stole Plans for a New Fighter Plane, Spy Documents Have Revealed," *Age*, January 18, 2015, <https://www.theage.com.au/national/china-stole-plans-for-a-new-fighter-plane-spy-documents-have-revealed-20150118-12sp1o.html>.

²⁵ Franz-Stefan Gady and Yuka Koshino, "Japan and Cyber Capabilities: How Much Is Enough?" IISS, Military Balance blog, August 28, 2020, <https://www.iiss.org/blogs/military-balance/2020/08/japan-cyber-capabilities>; and Industry Control Solutions Laboratory, "Cases of Cyber Attacks," January 27, 2020, <https://www.ics-lab.com/pdf/journal/28/journal-28-20200127.pdf>.

²⁶ NIDS, *NIDS China Security Report 2021*, 35.

increase in reported cyberattacks against both the government and the private sector already suggests that those networks are at high risk. The Japanese government's attribution of the 2021 hacking of JAXA to Chinese actors further suggests the intent of Beijing to access Japanese networks. The lack of norms and rules in cyberspace is an incentive for it to pursue such activities.

Scenario 3: Using Kinetic or Nonkinetic Capabilities to Disrupt JSDF or Japan Coast Guard Operations in Gray-Zone Competition in the East China Sea

The third scenario is the use of asymmetric cyber and space capabilities to gain a military advantage in the “first island chain,” which encompasses the Senkaku/Diaoyu Islands, Taiwan, and some disputed areas of the South China Sea. In recent years, China has become increasingly assertive around the Senkaku/Diaoyu Islands and the Ryukyu island chain in the East China Sea.²⁷ The risk of conflict in the Taiwan Strait is also growing.²⁸ To avoid direct military conflict, China exploits vulnerabilities in Japanese and U.S. operations through gray-zone tactics, employing nonkinetic cyber-, space-, and electronic-warfare capabilities to disrupt military communications systems or neutralize ground-, sea-, and air-based missile-defense systems.

Scenario 4: Using Kinetic or Nonkinetic Capabilities for a First Strike in the First Island Chain

In the fourth scenario, China uses its capabilities to neutralize Japanese C2 systems in order to manage escalation and succeed in warfighting. Such an approach would exploit the challenges Japan faces in responding effectively to the security threats in the new domains. It would also exploit the obstacles to Japan getting involved in a Taiwan contingency. For China, direct military conflict with Japan and the United States would be costly due to the gap in conventional military capabilities between U.S. and PLA forces, as well as China's significant economic ties with both countries. A scenario in which Beijing only invades the Senkaku/Diaoyu Islands is thus unrealistic. An invasion of the islands would be more likely to occur in conjunction with other contingencies in the Taiwan Strait, with Beijing seeking to project tighter control over the first island chain. A covert operation that penetrates civilian and commercial networks would be a more economical and effective way for Beijing to pursue its strategic and political goals.

Japan's Response and the U.S.-Japan Alliance

This section considers the steps Tokyo has taken to address the threats posed by China's increasing emphasis on the new domains. These include enhancing defense cooperation under the U.S.-Japan alliance and building up domestic capabilities, among other measures.

Enhancing the U.S.-Japan Alliance: Interoperability and Alliance Networking

The first step was to deepen security cooperation with the United States and its regional alliances. A series of security reforms under Prime Minister Shinzo Abe were aimed at addressing emerging challenges in gray-zone competition in the space and cyber domains and at improving

²⁷ Ministry of Defense (Japan), *Defense of Japan 2020*, 70–74.

²⁸ “CFR Rates Taiwan Conflict Top Concern,” *Taipei Times*, January 16, 2021, <https://taipeitimes.com/News/front/archives/2021/01/16/2003750670>.

defense cooperation with the United States. In 2013, Japan adopted its first National Security Strategy, which addressed the changing security environment, the threats in the new domains, and the importance of the U.S.-Japan alliance.²⁹ At the same time, the government established a National Security Council—modeled on its U.S. counterpart—and its administrative body, the National Security Secretariat. These agencies allowed Tokyo to enhance interagency coordination on pressing matters of national security and also, more importantly, to enhance coordination with the United States’ National Security Council. In 2014 the Cabinet reinterpreted Article 9 of Japan’s constitution to allow the country to exercise collective self-defense in limited terms and to provide a constitutional basis for Japanese support of U.S. military forces.³⁰ In 2015 the parliament passed a set of security bills that amended the Japanese self-defense law to offer a legal basis for operational cooperation with the United States under the new guidelines.

The upgrading of the U.S.-Japan Defense Cooperation Guidelines in 2015 for the first time since 1996 was the culmination of Japan’s efforts to enhance interoperability in response to the deteriorating security environment in the region and to ensure “seamless” cooperation from peacetime to contingencies and across all domains.³¹ The new guidelines have led to closer cooperation in the space domain—for example, in enhancing space situational awareness capabilities through information sharing and agreements to host U.S. payloads in Japanese satellite constellations and also exploration of technologies to strengthen the resilience and redundancy of assets.

In cyberspace, the United States and Japan have cooperated by improving information sharing so as to enhance situational awareness. The U.S. commitment at the Japan-U.S. Security Consultative Committee (2+2) in April 2019 to responding to state-sponsored cyberattacks against Japan under certain conditions has enhanced deterrence. Such improved defense cooperation is facilitating Japan’s cooperation with U.S. allies and partners. In U.S.-Japan space cooperation, notable achievements have included Japanese participation in U.S.-led multilateral tabletop exercises, such as the Schriever Wargame, for the first time in 2018. In 2019, Japan also officially participated in a North Atlantic Treaty Organization (NATO) cyberdefense exercise for the first time.³²

Updating Defense Strategy and Capabilities in New Domains

The second step was to update the domestic defense strategies and capabilities required to meet challenges in the new domains in situations ranging from peacetime to wartime. In the cyber domain, Japan published its first military cyber doctrine in 2012, addressing how the country could respond effectively to cyberattacks and focusing on cyberdefense.³³ Subsequently, in 2014 Japan set up a cyberdefense unit within the JSDF to protect its military network. To better deal with challenges in the new domains, Japan has also increased its efforts to enhance JSDF operational and technological capabilities. In 2018, it revised the National Defense Program Guidelines (NDPG), emphasizing the maintenance of “superiority” in the space and cyber domains and

²⁹ Cabinet Office (Japan), *National Security Strategy* (Tokyo, December 2013), <https://www.cas.go.jp/jp/siryoku/131217anzenhoshou/nss-e.pdf>.

³⁰ Cabinet Office (Japan), “Cabinet Decision on Development of Seamless Security Legislation to Ensure Japan’s Survival and Protect Its People,” July 1, 2014, http://www.cas.go.jp/jp/gaiyou/jimu/pdf/anpohosei_eng.pdf.

³¹ Ministry of Foreign Affairs (Japan), “The Guidelines for Japan-U.S. Defense Cooperation,” April 27, 2015, <https://www.mofa.go.jp/region/n-america/us/security/guideline2.html>.

³² Ministry of Defense (Japan), *Defense of Japan 2020*, 272.

³³ Ministry of Defense (Japan), “Toward Stable and Effective Use of Cyberspace,” September 2012, https://warrior.da.ndl.go.jp/info:ndljp/pid/11591426/www.mod.go.jp/e/d_act/others/pdf/stable_and_effective_use_cyberspace.pdf.

the electromagnetic spectrum, alongside other domains.³⁴ To achieve this goal, the government introduced a new concept of building a “multidomain defense force,” which aims to enhance “jointness” across the JSDF branches and between them and their U.S. counterparts. This concept essentially follows the U.S. model of multidomain operations, while still in the phase of improving cross-domain operations in traditional and new domains. The new defense concept further covers operations from peacetime to contingencies and adds the use of limited offensive capabilities, or active defense, in cyberspace.

Alongside the NDPG, the government also updated the Mid-Term Defense Program to expand and accelerate the buildup of domestic military capabilities necessary to meet the challenges of the new domains. In the cyber domain, the focus has been on enhancing resilience and defenses against attacks on military networks. Tokyo is expected to establish a new cyberdefense unit within the JSDF to integrate the cyberdefense units of each of the services by the end of fiscal year 2021 and to enhance active cyberdefense capabilities, such as R&D programs aimed at making it possible to disrupt opponents’ use of cyberspace in potential armed attacks against Japan.³⁵ Tokyo has also announced plans to expand the number of existing cyberdefense units from 220 to 290 by the end of 2021 and to 500 by the spring of 2024.³⁶

In the space domain, Japan has made progress in developing and enhancing the resilience and reconstitution of its capabilities. In May 2020 the Ministry of Defense established a space-operations squadron for persistent space-monitoring aimed at enhancing space situational awareness. This represented a major expansion of Japan’s space activities for defense purposes. Previously, it was JAXA, the civil space agency, that oversaw these activities, including space situational awareness and coordination with U.S. Strategic Command. However, the fact that JAXA is a civilian entity limited the United States’ ability to share classified information. The development of the Quasi-Zenith Satellite System constellation was another important effort and will contribute to enhancing the resilience of Japan’s positioning, navigation, and timing services.

Recent budget documents suggest that Japan currently has several R&D projects focused on space, including space-based ballistic-missile early-warning systems and space situational awareness satellites.³⁷ These are aimed at countering future hypersonic-missile challenges and Chinese kinetic and nonkinetic anti-satellite systems. The escalating tensions in the East China Sea are further driving Japan to give greater consideration to scenario-specific capabilities with cross-domain capabilities, using the new domains for defense purposes in the Ryukyu island chain. This underscores Japanese views that the new domains could play a major role in contingencies in the East China Sea.³⁸ Recent statements by senior officials suggest that Japan is determined to expand and accelerate its military buildup. In a joint statement released after the first summit between President Joe Biden and Prime Minister Yoshihide Suga in April 2021, Tokyo undertook to “bolster its own national defense capabilities to further strengthen the

³⁴ Ministry of Defense (Japan), *National Defense Program Guidelines* (Tokyo, December 2018), https://warp.da.ndl.go.jp/info:ndljp/pid/11591426/www.mod.go.jp/j/approach/agenda/guideline/2019/pdf/20181218_e.pdf.

³⁵ “Japan’s National Defense Strategy,” Center for Strategic and International Studies, Transcript, January 16, 2019, <https://www.csis.org/analysis/japans-national-defense-strategy>.

³⁶ Daishi Abe, “Lagging China and the U.S., Japan to Beef up Cyberdefense,” *Nikkei Asia*, June 20, 2020, <https://asia.nikkei.com/Politics/Lagging-China-and-the-US-Japan-to-beef-up-cyberdefense>.

³⁷ Ministry of Defense (Japan), “Defense Programs and Budget of Japan: Overview of FY2021 Budget,” December 2020, 4, https://www.mod.go.jp/en/d_act/d_budget/pdf/210331a.pdf.

³⁸ Junnosuke Kobara, “Japan to Scrap 1% GDP Cap on Defense Spending: Minister Kishi,” *Nikkei Asia*, May 20, 2021, <https://asia.nikkei.com/Editor-s-Picks/Interview/Japan-to-scrap-1-GDP-cap-on-defense-spending-Minister-Kishi>.

Alliance and regional security.”³⁹ Defense Minister Nobuo Kishi’s interview the following month with Nikkei further implied that Japan is finally ready to scrap the historic and normative cap that limits the size of its defense budget to less than 1% of GDP.⁴⁰

Addressing Challenges of Military-Civil Fusion

Finally, in recent years Tokyo has increasingly focused its attention on tackling the security and military implications of China’s economic and technological ambitions in the digital domain. The first step included linking economic security to the national-security apparatus. Tokyo has upgraded economic-security tools, aiming at maintaining an economic and technological advantage over China, and has advocated for upholding a rules-based order in the space and cyber domains. In April 2020, Japan established an economic-security division within the National Security Secretariat tasked with identifying and limiting technology outflows to China and with investing in emerging critical technologies with dual-use implications, such as AI, quantum computing, and advanced semiconductors. In 2019, Tokyo passed the Foreign Exchange and Foreign Trade Act, lowering the threshold of foreign investment that would trigger screening from a 10% stake to only a 1% stake.⁴¹ The Japanese government is reportedly considering limitations on the amount of foreign information technology that can be incorporated into its digital infrastructure and networks.⁴² Regulations on foreign funding for academic institutions are another priority area. The 6th Science and Technology Basic Plan, adopted by the Cabinet in March 2021, indicates that limiting technology outflows to foreign countries, rather than boosting its own R&D capabilities, is at the core of Japan’s technology policy. Tokyo’s prioritization of enhancing defensive economic-security measures is also driven by an awareness that the insufficient level of cybersecurity in Japanese academic and research institutions could become an obstacle to Japan increasing cooperation with the United States and other like-minded countries on joint R&D of critical and emerging technologies.⁴³

A second step has been to prevent the spread of Chinese digital technologies, and more generally the Chinese vision of digital governance, across the region and beyond. One Japanese initiative promotes “data free flow with trust” to counter the spread of the authoritarian model of cyberspace governance. A major achievement for Japan was the adoption of this principle at the G-20 summit in Osaka in 2019 and the launch of the “Osaka track” that will promote the principle under the World Trade Organization, aiming to set rules for e-commerce and data governance.⁴⁴ Japan has also been engaging with regional countries to offer alternatives to China’s cheap digital technologies. In recent years, this effort has expanded to include financial and technical support to assist regional countries in establishing digital networks without Chinese technology. One example involving the United States is infrastructure development in third countries through

³⁹ “U.S.- Japan Joint Leaders’ Statement,” White House, April 16, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/16/u-s-japan-joint-leaders-statement-u-s-japan-global-partnership-for-a-new-era>.

⁴⁰ Kobara, “Japan to Scrap 1% GDP Cap on Defense Spending.”

⁴¹ Ministry of Finance (Japan), “Rules and Regulations of the Foreign Exchange and Foreign Trade Act,” April 24, 2020, https://www.mof.go.jp/english/policy/international_policy/fdi/kanrenshiryoku01_20200424.pdf.

⁴² “Japan to Restrict Use of Foreign Tech in Telecom, Power Grids,” *Nikkei Asia*, May 18, 2021, <https://asia.nikkei.com/Business/Technology/Japan-to-restrict-use-of-foreign-tech-in-telecom-power-grids>.

⁴³ “Gijutsu ryushutsu taisaku ni jutten: Seifu, kagi kihon keikaku wo kettei” [Focus on Measures to Prevent Technology Outflow: The Japanese Government Adopts the Science and Technology Basic Plan], *Nikkei Asia*, March 26, 2021, <https://www.nikkei.com/article/DGXZQODE24D5Q0U1A320C2000000>.

⁴⁴ Ministry of Foreign Affairs (Japan), *Diplomatic Blue Book 2021*, 22.

a trilateral infrastructure partnership between Japanese, U.S., and Australian public-financing institutions. In 2020, Japan supported undersea-cable development in countries such as Chile and Palau so as to discourage them from using Chinese vendors.⁴⁵ At the core of Tokyo's cybersecurity policy is the recognition that vulnerabilities in the networks of other countries are also a security challenge for Japan itself. That is why Japan has actively pursued cybersecurity capacity-building efforts in the Indo-Pacific region under the free and open Indo-Pacific vision laid out by Abe in 2016.⁴⁶

The third step has been the acceleration of domestic investment aimed at raising Japan's global competitiveness in information technology. The government has also actively supported domestic and international efforts to create and deploy alternatives to the 5G provided by the Chinese telecom companies with alleged ties with the Chinese government, such as Huawei. One example is the successful development and deployment of a disaggregated 5G network, the Open Radio Access Network (O-RAN) architecture, by Japanese companies to add vendor diversity in the concentrated 5G market. The Biden administration's increasing interest in expanding cooperation with allies and partners in the realm of economic security and technology is creating opportunities for Japan to accelerate its efforts to address military-civil fusion challenges bilaterally and multilaterally, such as by using the framework of the Quad. For instance, the U.S. Competitiveness and Resilience Partnership affirmed the promotion of O-RAN 5G to advance the security and openness of the network. The U.S. and Japanese governments have together committed a total of \$4.5 billion for R&D, testing, and deployment of 5G and next-generation mobile networks ("6G" or "beyond 5G").⁴⁷ At the first-ever Quad summit in March 2021, participants committed to establishing a working group to focus on standard-setting and R&D in critical and emerging technology.⁴⁸

Despite these steps, various challenges remain. Regarding military operations, the JSDF faces legal, political, and operational barriers to enhance the jointness of different branches, which is a necessary component for the implementation of a multidomain concept outlined in the NDPG. For instance, it remains ambiguous what kind of cyberattack amounts to the "use of force" stated in Japan's current Self-Defense Forces Law to be able to deploy a more offensive cyber capability. In the nonmilitary space, Japan's law enforcement also faces constitutional barriers when attempting to protect civilian and commercial networks from intelligence and economic espionage. Japanese institutions developed over the past decade to facilitate interagency cooperation for cybersecurity, such as the National Center of Incident Readiness and Strategy for Cybersecurity, are still nascent compared to the United States or its close intelligence partners in the Five Eyes.⁴⁹ Japan also

⁴⁵ For Palau's case, see Yohei Hirose, "Japan, U.S. and Australia to Finance Undersea Cable for Palau," *Nikkei Asia*, October 28, 2020, <https://asia.nikkei.com/Politics/International-relations/Japan-US-and-Australia-to-finance-undersea-cable-for-Palau>. For Chile's case, see, for example, Yohei Hirose and Naoyuki Toyama, "Chile Picks Japan's Trans-Pacific Cable Route in Snub to China," *Nikkei Asia*, July 29, 2020, <https://asia.nikkei.com/Business/Telecommunication/Chile-picks-Japan-s-trans-Pacific-cable-route-in-snub-to-China> AO.

⁴⁶ See, for example, Mihoko Matsubara, "Japan's Cybersecurity Capacity-Building Support for ASEAN—Shifting from What to Do to How to Do It," Palo Alto Networks blog, July 26, 2017, <https://www.paloaltonetworks.com/blog/2017/07/cso-japans-cybersecurity-capacity-building-support-asean-shifting>.

⁴⁷ "U.S.-Japan Competitiveness and Resilience (CoRe) Partnership," White House, Fact Sheet, April 16, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/16/fact-sheet-u-s-japan-competitiveness-and-resilience-core-partnership>.

⁴⁸ "Quad Summit," White House, Fact Sheet, March 12, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/12/fact-sheet-quad-summit>.

⁴⁹ IISS, "Cyber Capabilities and National Power: A Net Assessment."

faces fiscal and political challenges to investment in advanced technology R&D with military implications, jeopardizing its ability to remain competitive in dual-use technologies.⁵⁰

Recommendations for U.S.-Japan Cooperation

The Biden-Suga summit in April 2021 demonstrated that cooperation in the U.S.-Japan alliance is expanding beyond traditional defense issues and elevating the relationship to the global stage. The Biden administration's commitment and eagerness to work with Japan, other regional allies and partners, and multilateral institutions to achieve a free and open Indo-Pacific creates great opportunities to explore how the alliance could better serve regional and global interests. Senior Japanese officials' increasing awareness of the need to accelerate their country's military buildup and to take a holistic approach that extends beyond traditional military affairs adds to the momentum.⁵¹ The following eight proposals suggest ways in which the two countries can strengthen cooperation on the security, military, and economic-security levels to meet the challenges emanating from the new domains.

Strategic Level

Coordinate a whole-of-government approach to China. A purely military response is insufficient to meet the multidimensional challenges that China poses in the cyber and space domains. The two governments, therefore, need to take a whole-of-government approach to defending, deterring, and deflecting cyber and space challenges in the areas of defense, economic security, and technology competitiveness. With the newly established economic division within Japan's National Security Secretariat, as well as the newly established Indo-Pacific coordinator role in the U.S. National Security Council, the two governments should leverage the national security councils on both sides to enhance information sharing and coordinate policy responses toward Chinese activities in the new domains.

Military Level

Enhance the credibility of deterrence against cyberattacks under the alliance, both in gray-zone situations and in contingencies. The 2019 2+2 meeting, with its statement of the U.S. commitment to respond to state-sponsored cyberattacks against Japan under certain conditions, was an important deterrent against China. However, there is no agreement internationally or between the United States and Japan bilaterally on what kinds of state-sponsored cyberattack should prompt a military response. While it could deter kinetic or nonkinetic cyberattacks against military targets or critical infrastructure in times of conflict, the credibility of deterrence remains uncertain in gray-zone situations, such as kinetic or nonkinetic cyberattacks against critical infrastructure in a situation that does not constitute an act of war. Most importantly, the two countries diverge on the definition of critical infrastructure and the responding agencies in the case of an attack on such infrastructure. The two governments should utilize interagency bilateral dialogues, such

⁵⁰ Yuka Koshino, "Is Japan Ready for Civil-Military 'Integration'?" IISS, August 3, 2021, <https://www.iiss.org/blogs/analysis/2021/08/japan-civil-military-integration>.

⁵¹ Kobara, "Japan to Scrap 1% GDP Cap on Defense Spending."

as the Japan-U.S. Cyber Dialogue, and high-level meetings, such as the 2+2, to overcome these differences and make the existing deterrence more credible.

Consider cyber deterrence to defend Taiwan. Beijing has increasingly been using its cyber tools to gradually penetrate Taiwanese society in preparation for future annexation through either nonmilitary or military means. While Japanese ministers' statements, Japan's 2021 defense white paper, and high-level meetings between the United States and Japan all suggest that Japan is much more willing than before to play a role in preserving the stability of the Taiwan Strait, there has not yet been discussion of what kind of attacks against Taiwan or the United States would constitute an existential security threat to Japan, and thus the conditions under which the JSDF could become involved militarily. Tokyo and Washington should discuss various scenarios in which Tokyo could support a U.S. response, especially in the case of cyberattacks against Taiwan in gray-zone situations where Japan's ability to respond becomes ambiguous under the current bilateral defense guidelines and domestic laws.

Utilize the minilateral and multilateral frameworks to enhance cooperation with like-minded partners in the cyber and space domains. Enhancing cooperation for space situational awareness and space domain awareness between the countries in the Quad—Japan, the United States, Australia, and India—is strategically and geographically critical. The Indo-Pacific is the center of geopolitical competition between the United States and China, and the Quad members' geographic locations are ideal for monitoring the position and trajectory of space objects orbiting the region. The United States and Japan could leverage existing bilateral and trilateral policies, as well as operational cooperation and information-sharing agreements, to utilize the Quad for both security and technology coordination in the new domains.

Link with other, like-minded U.S. allies beyond the region to strengthen Japan's capabilities. As Japan's participation in the U.S. Strategic Command's Schriever Wargame shows, the country's growing capabilities in the space and cyber domains create opportunities for it to deepen security cooperation with other U.S. allies in the region and beyond, such as NATO members. The two countries could consider utilizing frameworks such as the Combined Space Operations Center to promote exchanges on future joint R&D programs related to space-based capabilities. These could include missile interceptors, which are effective in meeting the security challenges but costly for either country to develop on its own.

Economic-Security Level

Encourage public-private cooperation in order to maintain superiority in technology with dual-use implications in the cyber and space domains. The U.S.-Japan summit joint statement—which included science-and-technology cooperation in areas such as 6G, AI, quantum information and technology, and civilian space programs—is an important step in maintaining technological superiority over China in the cyber and space domains. The Quad's working group on emerging and critical technology creates further opportunities for public-private cooperation between like-minded regional countries. The United States and Japan could also consider expanding technology partnerships with other like-minded technology powers, such as the United Kingdom, France, Germany, South Korea, and Taiwan.

Invite Japanese firms to partner with U.S.-based nonprofits that share real-time information on trends in cyberdefense. Inadequate network-security levels among Japanese defense contractors and commercial companies undermine private-sector cooperation between U.S. and Japanese

defense and civilian technology firms. To prevent espionage and technology outflow to China, Washington could encourage U.S. industrial consortiums and nonprofits with capabilities for real-time information sharing on cyber incidents to partner with Japanese private companies and thereby boost their cyberdefense capabilities.

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The Implications of China's Military Modernization for Vietnam's Security

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EXECUTIVE SUMMARY

This essay examines the threats to Vietnam from China's military modernization and considers the scenarios for conflict between the two countries, Vietnam's potential responses, and opportunities for Vietnam to cooperate with the U.S. and other countries.

MAIN ARGUMENT

The military modernization of the People's Republic of China has caused worries for countries in the region, including Vietnam. The bilateral relationship has been normalized and developed strongly since 1991, but China's use of force against Vietnam in 1979 and 1988 has not been erased from the Vietnamese people's memory. Although Vietnam, as a peace-loving country, does not want war, it remains vigilant about the threats from China to its security and national interests. Any use of force or threat of use of force by China would be detrimental for regional security and the interests of countries in the region, including Vietnam.

POLICY IMPLICATIONS

- Vietnam's defense strategy is based on three pillars: internationalization of disputes for gaining international support; preventive diplomacy and peaceful settlement of disputes on the basis of international law, especially the United Nations Convention on the Law of the Sea (UNCLOS); and a "four no's" policy. However, if attacked, Vietnam is ready to engage with other countries to counter a common enemy based on the legitimate right to self-defense.
- Aware of possible threats to its security, Vietnam has undertaken various measures to maintain autonomy in its strategic political, military, and economic relationships with China as well as the United States and other states.

The military modernization of the People's Republic of China (PRC) affects the stability of the Indo-Pacific region and the world.¹ However, the country most directly affected is arguably Vietnam.² Despite its vulnerabilities, Vietnam is considered an important deterrent to China's southward strategic ambitions and goal of becoming a global sea power. Vietnam has multiple sovereignty disputes with China over both the Paracel and Spratly Islands and has the most maritime disputes in the area. It is also increasingly viewed as a "middle power" with a potentially major role in shaping regional integration policies. If Vietnam yields or is subdued, other regional countries will be reluctant to oppose China. Imposing its will on Vietnam in the South China Sea would send a powerful signal from China to every other claimant country.

China could ignite a war with Vietnam if there were a legitimate pretext for "active defense."³ For example, China initiated a "self-defense counterattack" against Vietnam in 1979 after Vietnam signed a treaty of friendship and cooperation with the former Soviet Union. China is currently a strategic partner with Vietnam, while the United States is only a comprehensive partner. But if Vietnam were to participate in a U.S. strategy of encircling China, the 1979 scenario could happen again.

The first section of this essay considers the principal threats that China poses to Vietnam. The subsequent sections then look at the scenarios for conflict between the two countries, Vietnam's potential responses, and opportunities for Vietnam to cooperate with the United States and other countries.

Principal Threats from China

Unlike the Philippines or Taiwan, Vietnam does not have any military alliance or other security arrangements in place with major powers to counterbalance China. Vietnam is also highly vulnerable to an attack due to its 1,500 kilometer (km) land border with China, a long coastline (3,360 km), and large maritime zones paired with a limited defense capacity. China could deploy military forces along the land border, in the air, and at sea simultaneously; exert pressure through official diplomacy and party-to-party channels; and use economic leverage, given that Vietnam's economy depends heavily on Chinese markets and raw materials. China would likely be able to anticipate Vietnam's military tactics in a conflict when the two militaries share the same Russia-sourced military equipment and similar military doctrines and warfighting styles.

Indeed, Vietnamese and PRC infantries faced each other in the 1979 war when Vietnam's land force was estimated to have more battlefield experience. The Vietnamese air force's advantage from its proximity to the mainland and offshore features is diminished by the Chinese land reclamation in the Spratly Islands and the appearance of new Chinese aircraft carriers. However, weather conditions challenge the quality of Chinese runways on artificially constructed islands in the South China Sea and could undermine the effectiveness of PRC air operations. Ground-launched

¹ U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China 2020* (Washington, D.C., 2020), iii, <https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF>.

² Carlyle A. Thayer, *Vietnam People's Army: Development and Modernization* (Bandar Seri Begawan: Sultan Haji Bokiah Institute of Defence and Strategic Studies, 2009). "Vietnam's strategic environment has become more complex due to the rise of China and the modernization of the People's Liberation Army....[G]reater emphasis has been placed on Vietnam's capabilities to protect its offshore territorial claims."

³ Stacy A. Pedroza, "China's Active Defense Strategy and Its Regional Impact," statement before the U.S.-China Economic and Security Review Commission, Washington, D.C., January 27, 2011, <https://www.uscc.gov/sites/default/files/1.27.11Pedroza.pdf>; M. Taylor Fravel, *Active Defense: China's Military Strategy Since 1949* (Princeton: Princeton University Press, 2019), 376; and Ministry of Foreign Affairs of the People's Republic of China (PRC), *China's National Defense* (Beijing, 1998), available at <https://www.fmprc.gov.cn/ce/celt/eng/zt/zfbps/t125252.htm>.

ballistic missiles and ground-launched cruise missiles with ranges between 500 and 5,500 km could be a deterrent tool because their range covers the whole Vietnamese land territory. But these missile systems are effective only against fixed targets. China is apparently building a mixed military base for surface-to-air missiles and helicopters 20 km from its border with Vietnam in Ningming County of Guangxi Province.⁴ Another military base for surface-to-air missiles was built in Yunnan Province 70 km from the border.⁵ The bases are believed to be part of a pressure campaign against Vietnam and could be used in times of increased tension or conflict. With the deployment of ground-to-ground missiles and air forces in the north of the country, Vietnam could presumably manage a land attack in the case of a war. As two of the leading countries applying 5G in the region, China and Vietnam could be considered worthy opponents in an electronic war. Cyberattacks would not have a significant impact on Vietnam's military command operating system and electronic warfare because Vietnamese systems are based on traditional means such as Morse code rather than high-end internet technology. Asymmetric warfare would be used to interfere with the adversary's command system as well as the electronic equipment.

The People's Liberation Army (PLA) Navy has 350 ships and submarines, including over 130 major surface combatants, ten times the size of Vietnam's naval capacity.⁶ That imbalance could be the greatest threat to Vietnamese and regional security. The Chinese submarine fleet includes 48 operational diesel submarines and 10 to 13 nuclear submarines.⁷ By contrast, Vietnam's submarine force is small and capable of carrying out only a few tactical campaigns. The South China Sea, however, is not a deep sea and is unsuitable for deploying multiple submarines except around the Spratly Islands. Moreover, China's submarine-launched missile capabilities are still questionable. To effectively counter the threat from the PLA Navy, Vietnam needs to develop surface-to-sea missile systems, torpedoes, and smart mines. It also needs to fortify stationed garrisons in the Spratly Islands for any skirmishes similar to those in 1988.⁸

The 2021 Maritime Police Law has upgraded the China Coast Guard (CCG) as a basic component of the Chinese armed forces.⁹ It has the right to use force, including armed force and operations, to destroy other countries' economic structures in defending China's maritime claims in disputed areas. The CCG, scientific research ships, and maritime militias will be the main tools that the PRC uses to intimidate its maritime neighbors according to the doctrine of "winning without fighting."¹⁰

While PLA Navy surface ships and the PLA Navy Marine Corps remain the biggest threat to regional security, the PLA Navy's involvement could escalate into an uncontrolled conflict requiring U.S. intervention, with great political and diplomatic losses.¹¹ As such, the best option

⁴ Vu Anh, "Vietnam to Investigate China's Missile Base Near Its Border," *VNExpress*, February 4, 2021, <https://e.vnexpress.net/news/news/vietnam-to-investigate-china-s-missile-base-near-its-border-4231752.html>.

⁵ Ralph Jennings, "China Said to Be Installing Missile Base Near Border with Vietnam," *Voice of America*, February 26, 2021, <https://www.voanews.com/east-asia-pacific/china-said-be-installing-missile-base-near-border-vietnam>.

⁶ U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China 2020*, iii.

⁷ Tyler Headley, "Submarines in the South China Sea Conflict," *Diplomat*, August 10, 2018, <https://thediplomat.com/2018/08/submarines-in-the-south-china-sea-conflict>.

⁸ Richard Javad Heydarian, "Vietnam, Philippines Fortify South China Sea Bases," *Asia Times*, February 24, 2021, <https://asiatimes.com/2021/02/vietnam-philippines-fortify-south-china-sea-bases>.

⁹ "China Adopts Law Letting Coast Guard Fire on Foreign Vessels," *Bloomberg*, January 23, 2021, <https://www.bloombergquint.com/global-economics/china-adopts-law-letting-coast-guard-fire-on-foreign-vessels>.

¹⁰ Ned Price, "Department Press Briefing—February 19, 2021," U.S. Department of State, February 19, 2021, <https://www.state.gov/briefings/departments-press-briefing-february-19-2021>.

¹¹ Rick Joe, "The Chinese Navy's Destroyer Fleet Will Double by 2025. Then What?" *Diplomat*, July 12, 2020, <https://thediplomat.com/2020/07/the-chinese-navys-destroyer-fleet-will-double-by-2025-then-what>.

for China is to steadily increase coercive measures by the CCG and paramilitary forces, including through the use of gray-zone tactics against Vietnam, to advance its economic and national security interests. China will not only use coercive measures but also implement a combination of the “three warfares” (public opinion warfare, psychological warfare, and legal warfare), skillfully using both carrots and sticks to achieve its goals.¹² A major propaganda campaign is already underway to persuade Vietnam that the two countries share the same long-term goals and that the South China Sea dispute has been a small matter in their bilateral comprehensive and strategic relationship.

Based on the analysis above, the maritime threats to Vietnam from China are more formidable than the threats over land. The delimited and demarcated land boundary between the two countries has not been the subject of a conflict like the Sino-Indian dispute, despite some minor violations of the China-Vietnam treaty on the land boundary management.¹³ Yet, with a coastline twice as long as its land borders and a narrow national territory in its central region, Vietnam could easily be divided during wartime by attacks from the sea. The reputed Vietnamese people’s war strategy and guerrilla warfare are not as easily applied at sea as on land.¹⁴

China possesses several tools to curb Vietnam at sea. Vietnam depends heavily on sea lanes to import oil and gas, export food, conduct maritime transport, and access undersea internet cables. Collisions at sea have less impact on people, so it would not be difficult for China to falsify information and conduct a “three warfares” campaign. China could also take advantage of hesitant attitudes within the Association of Southeast Asian Nations (ASEAN) on maritime issues rather than frighten ASEAN over the land sovereignty of a member state. As discussed above, China has a significant advantage in naval, coast guard, and maritime militia forces, while Vietnam’s capacity for sea denial and the quality and quantity of its equipment and logistic supplies are weak. China continuously employs gray-zone tactics beneath the threshold of conflict as part of a strategy of “winning without fighting.”

In sum, Vietnam cannot dismiss the possibility of a land invasion by China, but the likelihood is low. The closure of land borders as a punitive economic measure is more likely than a military attack. In that unwanted situation, however, an invasion over the land boundary would likely only be realized simultaneously with an attack from the sea. The situation in the South China Sea shows that the best option for China is the steady increase of coercive measures by its coast guard and militia alongside other gray-zone tactics, especially to threaten Vietnam’s economy and national security. The most contested areas will likely be Tu Chinh Bank and the Spratly Islands.

Scenarios

Based on the analysis above, this section considers several scenarios involving the principal PRC threats facing Vietnamese national defense security and stability in the South China Sea over the next decade.

¹² Tasha Wibawa, “China’s National Security and the ‘Three Warfares’: How Beijing Decides Who or What to Target,” ABC News (Australia), February 25, 2019, <https://www.abc.net.au/news/2019-02-26/chinas-three-warfares-how-does-beijing-decide-who-or-what-to/10825448>; and Dean Cheng, “Winning Without Fighting: Chinese Legal Warfare,” Heritage Foundation, Backgrounder, May 18, 2012, <https://www.heritage.org/asia/report/winning-without-fighting-chinese-legal-warfare>.

¹³ The Sino-Vietnam Protocol on Border Demarcation and Marker Planting, the Agreement on Border Management, and the Agreement on Border Gates and Border Gate Management were concluded in 2009.

¹⁴ Vo Nguyen Giap, *People’s War, People’s Army* (Hanoi: Gioi Publishers, 2004); and Vo Nguyen Giap, interview, *People’s Century: Guerilla Wars*, PBS, <https://www.pbs.org/wgbh/peoplescentury/episodes/guerrillawars/giaptranscript.html>.

Waging local and limited war under high-tech conditions. China could pursue this option in order to take possession of new nonoccupied low-tide elevations or strategic insular features from rival claimants in the South China Sea at an opportune time. Coast guard and maritime militia would be the main forces in this scenario, with the backing of military units. New military technologies such as unmanned aerial vehicles (UAVs), unmanned underwater vehicles, and cyberattack devices would likely be utilized by China. Such local and limited conflicts, however, would only occur if Beijing believes it would win and could do so without provoking the involvement of the United States and U.S. partners.

Taking control of nonoccupied features in the South China Sea by the permanent and continuous presence of militia. The recent events around Whitsun Reef at Union Banks in the Spratly Islands in the South China Sea are one example of this scenario.¹⁵ The model applied for Mischief Reef and Scarborough Shoal could be implemented: the shelter of fishermen, media campaigns to establish the “truth,” coercive actions to deter other claimants, and exercise of control without any violation of the Declaration on the Conduct of the Parties in the South China Sea (DOC) commitment. The reliance on tactics “under the threshold of war” would tie the hands of both powerful and weak countries by using forces with an indistinguishable nature, combatant and noncombatant alike, so that China gains ground in disputed areas without paying any price.

Cutting off supplies to the garrisoned troops of other parties. The CCG has applied this tactic to prevent the Philippines from rotating troops and supplying provisions to the Second Thomas Shoal since 1998.¹⁶ The overuse of this measure could eventually lead to a local conflict and violation of the DOC. This tactic also has little effect in shallow water, where the CCG’s access is limited. However, it could become more effective due to the increased access of militias to shallower seas with additional backing from the CCG.

Declaring an air defense identification zone (ADIZ). Declaring an ADIZ over the South China Sea would present some unique challenges. The South China Sea is wider and surrounded by more countries and air commercial routes than the East China Sea. Control of the air would require large numbers of military planes and surveillance installations, which the occupied features in the Spratly Islands currently cannot sustain. Moreover, no country has changed its stance on sovereignty and maritime claims in the eight years since China implemented an ADIZ in the East China Sea.¹⁷ On the contrary, trust in China is decreasing.

Establishing straight archipelagic baselines for the “four sha” or just the Spratly Islands. China may attempt to apply the archipelagic baselines to the offshore island groups, including the “four sha” (Pratas Island, Paracel Islands, Spratly Islands, and the Macclesfield Bank area), that enlarges the Chinese maritime claim in the South China Sea by replacing the nine-dash-line claim rejected by the 2016 tribunal award.¹⁸ However, this action is opposed by many countries both in and beyond the region because it violates the United Nations Convention on the Law of the Sea (UNCLOS). The United States, Australia, France, the United Kingdom, Germany, and Japan all

¹⁵ Ankit Panda, “China’s Maritime Militia at Whitsun Reef: Trouble in the South China Sea,” *Diplomat*, April 3, 2021, <https://thediplomat.com/2021/04/chinas-maritime-militia-at-whitsun-reef-trouble-in-the-south-china-sea>.

¹⁶ “Philippines Reinforces Its Claim to South China Sea Outpost,” Reuters, July 14, 2015, available at <https://www.theguardian.com/world/2015/jul/14/philippines-reinforces-its-claim-to-south-china-sea-outpost-according-to-reports>.

¹⁷ Chang Ching, “Why Is There No South China Sea Air Defense Identification Zone?” SCSPI, November 23, 2020, <http://www.scspi.org/en/dtfx/why-there-no-south-china-sea-air-defense-identification-zone>.

¹⁸ Permanent Mission of the PRC to the United Nations, Note Verbale, December 12, 2019, https://www.un.org/Depts/los/clcs_new/submissions_files/mys85_2019/CML_14_2019_E.pdf.

sent *notes verbales* to protest this potential tactic in 2020 and 2021.¹⁹ In addition, this same tactic has already been applied to the Paracels since 1996 and did not prevent Vietnamese fishing vessels from operating in the area. Yet China could try to find another way to legalize the application of straight baselines for offshore archipelagoes.

Forcing foreign countries and companies to give up oil and gas activities. China has gradually increased pressure on foreign oil and gas companies operating on coastal continental shelves but within China's illegal nine-dash line. The Spanish energy company Repsol, London-based drilling contractor Noble Corp., and even the U.S. ExxonMobil drilling project in the Blue Whale field temporarily halted their contracts with Vietnam.²⁰ This cat-and-mouse tactic was also used in the incident involving the Malaysian-contracted drillship West Capella off Luconia Shoals in 2020 and 2021. China utilizes its CCG, in addition to purchasing shares of foreign oil and gas companies operating in the exclusive economic zones (EEZs) and continental shelves of Vietnam and other countries, in order to push them out of the region. Meanwhile, China has sought to force Vietnam and other claimants to accept the idea of "Chinese sovereignty, setting aside disputes for joint exploitation." In the negotiations for a code of conduct in the South China Sea, Beijing seeks to limit the oil deals only between China and Southeast Asian countries.

Threatening the fisheries of other countries. China could try to implement annual fishing bans under the pretext of promoting the sustainable development of biological resources. Backed up by the increasing presence of the CCG, these bans could gradually result in a PRC fishing permit system covering the entire South China Sea.

Managing other countries' freedom of navigation, freedom of overflight, and scientific research activities according to Chinese interests. The Maritime Police Law and other legislation will have a serious impact on the freedom of navigation and overflight in the South China Sea. The CCG is now empowered to prevent, halt, and eliminate acts of foreign vessels that "endanger national sovereignty, security, and maritime rights and interests" in China's "jurisdictional waters," even if they are rightfully in the EEZs and continental shelves of Vietnam and other Southeast Asian nations.²¹ The newly amended Maritime Traffic Safety Law imposes fines ranging from \$7,700 to \$77,000 on foreign-flagged vessels for sailing in waters China claims as its own.²² In this way, Beijing is developing a legal basis to reduce the freedom of the sea and the presence of foreign vessels, including U.S. vessels, in the South China Sea. The increase of freedom of navigation activities will be responded to by the continuous presence of Chinese carrier groups and military drills.

What these scenarios individually and collectively show is that regional security is only guaranteed when countries have effective strategies to limit China's gray-zone tactics and the role of the CCG and maritime militia.

¹⁹ See U.S. Mission to the United Nations, June 1, 2020, https://usun.usmission.gov/wp-content/uploads/sites/296/200602_KDC_ChinasUnlawful.pdf; Permanent Mission of the Commonwealth of Australia to the United Nations, Note Verbale, July 23, 2020, https://www.un.org/depts/los/clcs_new/submissions_files/mys_12_12_2019/2020_07_23_AUS_NV_UN_001_OLA-2020-00373.pdf; Permanent Mission of the United Kingdom of Great Britain and Northern Ireland to the United Nations, Note Verbale, September 16, 2020, https://www.un.org/Depts/los/clcs_new/submissions_files/mys_12_12_2019/2020_09_16_GBR_NV_UN_001.pdf; and Permanent Mission of Japan to the United Nations, Note Verbale, January 19, 2021, https://www.un.org/Depts/los/clcs_new/submissions_files/mys_12_12_2019/20210119JpnNvUn001OLA202000373.pdf.

²⁰ Ralph Jennings, "Did China Block Vietnam Offshore Oil Contract?" Voice of America, July 20, 2020, <https://www.voanews.com/east-asia-pacific/did-china-block-vietnam-offshore-oil-contract>.

²¹ "China Adopts Law Letting Coast Guard Fire."

²² Tsukasa Hadano, "China's New Maritime Law Fines Ships that Violate Its Waters," *Nikkei Asia*, April 30, 2021, <https://asia.nikkei.com/Politics/International-relations/Indo-Pacific/China-s-new-maritime-law-fines-ships-that-violate-its-waters>.

Vietnam's National Defense Policy and Operational Capacities for Responding to China

China's goal has always been to monopolize the South China Sea, even prior to the existence of the nine-dash line. Therefore, Vietnam defines its long-term relations with China through both cooperation and struggle, a combination of smart preventive diplomacy and defense modernization.

Vietnam's defense strategy is based on three pillars: internationalization of disputes for gaining international support; preventive diplomacy and peaceful settlement of disputes on the basis of international law, especially UNCLOS; and a policy of not firing first but maintaining readiness for self-defense. Since the onset of a policy of *doimoi* (renovation), Vietnam has diversified relations with other countries to balance the pressure of superpowers, but it has not created alliances with one side against any other. Vietnam's 2019 defense white paper, which follows the 2009 version, delineated a "four no's" policy: no military alliance, no siding with one country against another, no permission to set up military bases or use its territory to carry out military activities against other countries, and no use or threat of force in international relations.²³ It also adds a provision for "acting together," meaning that if Vietnam is attacked it will review its four no's policy and be ready to engage with other countries to counter a common enemy based on the legitimate right to self-defense. Under specific conditions, Vietnam will consider developing necessary defense relations at the appropriate levels based on respect for other countries' independence, sovereignty, and territorial integrity, as well as for the basic principles of international law and the common interest of the region and the international community.

Vietnam stresses the need for persistent asymmetric warfare against an enemy through conducting three combined attacks (diplomacy, public opinion, and military) and taking the battlefield to win a short battle. As noted earlier, the long coastline is a weak point in Vietnam's defense strategy, but it also complicates the calculations of an adversary that seeks to impose sea control. To safeguard the supply of energy and goods through the South China Sea in wartime, China would need more aircraft carriers, upgraded runways, and a range of missiles deployed on occupied features in the Spratly Islands. In the past two decades, Vietnam has put greater emphasis on modernizing its naval, air, and shore-based anti-ship missiles as well as information warfare forces. It has also created new civilian maritime enforcement forces in parallel with military modernization. During the May 2014 oil rig incident with China, the Vietnam Fisheries Surveillance Force and the Vietnam Coast Guard worked closely with the Vietnam People's Navy to monitor and prevent encroachment on sovereign and jurisdictional rights. Vietnam continues to employ its people's war doctrine and its denial capabilities, including anti-cyberwarfare and UAV forces, to neutralize potential adversary superiority across a range of warfare scenarios.

In consolidating its defense capacity, Vietnam has advanced the idea of internationalization of South China Sea disputes as a way to counter political, economic, and military coercion from China, including through multilateralizing relations with other countries in the region. This goal has been pursued through three approaches.

First, Vietnam endeavors to expand its network of strategic partners and integrate South China Sea issues and the role of UNCLOS into bilateral and multilateral statements and high-level

²³ Ministry of National Defence (Vietnam), *2019 Viet Nam National Defence* (Hanoi, 2019), http://news.chinhphu.vn/Uploaded_VGP/phamvathua/20191220/2019VietnamNationalDefence.pdf; and Ministry of National Defence (Vietnam), *Vietnam National Defence* (Hanoi, 2009), available at <https://www.scribd.com/document/33312005/Vietnam-Defence-White-Paper-2009>.

agreements. Vietnam has comprehensive strategic partnerships with three countries, strategic partnerships with fourteen others, and comprehensive partnerships with thirteen others.²⁴ While continuing to maintain its friendship with China, Vietnam has sought to engage other powers, notably the United States, Japan, South Korea, the European Union, India, Russia, and ASEAN members, to discourage China's assertive behavior and intimidation. However, in any partnership, Vietnam will prioritize maintaining its autonomy and independence.

Second, Vietnam actively uses international and regional forums and organizations to disseminate its policy on the South China Sea and encourage the use of UNCLOS as the sole legal basis for the peaceful settlement of maritime disputes. The Shangri-La Dialogue is one of the region's key geopolitical dialogues suitable for defending UNCLOS and explaining Vietnam's views on the South China Sea situation.²⁵

Third, Vietnam strives to cooperate with other claimants to settle the South China Sea disputes on a legal basis rather than by force and other coercive actions. The Malaysia-Vietnam joint submission and Vietnam's submission on the outer limits of its continental shelf to the UN Commission on the Limits of the Continental Shelf in May 2009 forced China to clarify its own claims. More recently, a battle of diplomatic notes in 2019–21 has helped expand and diversify the range of official statements on the South China Sea disputes, with 26 notes verbales, two diplomatic letters, and one statement.²⁶ With the exception of China, almost all states through their notes agreed to the following: (1) it is necessary to accept the universal and unified character of UNCLOS that sets out the legal framework with which all activities in the oceans and seas must comply, (2) the award in the South China Sea arbitration between the Philippines and China is final and binding on the parties to the dispute, (3) the freedom of navigation and overflight in the South China Sea must be respected, (4) the method of archipelagic baselines applies only to archipelagic states and cannot be applied in an unlawful way to the offshore islands of a coastal country, (5) land-building activities or other forms of artificial transformation cannot change the classification of a feature under UNCLOS, and (6) claims concerning the exercise of "historic rights" over the waters in the South China Sea do not comply with international law and UNCLOS. Vietnam aims to reach a code of conduct that is substantive and effective, in accordance with international law, especially UNCLOS. A long list of 27 points introduced by Vietnam in negotiations for the purpose of improving the code of conduct draft text aims to overcome the 2002 DOC's limitations in constraining China's maritime assertiveness.²⁷

With such efforts by Vietnam and other countries, the internationalization of the South China Sea disputes is becoming a realistic approach. It has helped raise the awareness in the international community that even as disputes on the sovereignty over insular features are waiting for a final solution by the agreement of directly concerned parties, some maritime disputes and issues of freedom of navigation and overflight can be settled on the basis of UNCLOS. This approach

²⁴ "Infographics: Strategic and Comprehensive Partners of Viet Nam," VGP News, April 23, 2019, <http://news.chinhphu.vn/Home/Infographics-Strategic-and-comprehensive-partners-of-Viet-Nam/20194/36441.vgp>.

²⁵ Dipanjan Roy Chaudhury, "South China Sea in Spotlight Ahead of Shangri-La Dialogue," *Economic Times*, March 25, 2019, <https://economictimes.indiatimes.com/news/defence/south-china-sea-in-spotlight-ahead-of-shangri-la-dialogue/articleshow/69491395.cms>.

²⁶ This includes one statement from Brunei, nine notes and one letter from China, three notes from Malaysia, three notes from the Philippines, three notes from Vietnam, two notes from Indonesia, one letter from the United States, and one note from Australia, France, the United Kingdom, Germany, Japan, and New Zealand. See "Commission on the Limits of the Continental Shelf (CLCS) Outer Limits of the Continental Shelf beyond 200 Nautical Miles from the Baselines: Submissions to the Commission," Division for Ocean Affairs and the Law of the Sea of the United Nations, updated March 8 2021, https://www.un.org/Depts/los/clcs_new/submissions_files/submission_mys_12_12_2019.html.

²⁷ Carl Thayer, "A Closer Look at the ASEAN-China Single Draft South China Sea Code of Conduct," *Diplomat*, August 3, 2018, <https://thediplomat.com/2018/08/a-closer-look-at-the-asean-china-single-draft-south-china-sea-code-of-conduct>.

endorses a rules-based international order to cope with any attempt to nationalize or militarize the South China Sea. In adopting this stance to settle all disputes by peaceful means, even in the hypothetical case of the PRC's reunification with Taiwan by force, Vietnam will respect the PRC's internal affairs and would not likely try to retake the Paracels by force.

Cooperation with the United States and Other Countries

Given their increasing strategic alignment vis-à-vis China, Vietnam has emerged as a vital security partner of the United States and other states outside the South China Sea region. Aware of China's long-term intentions, Vietnam wishes to maintain autonomy in its strategic political, military, and economic relationships with China as well as with the United States. Helping Vietnam do so is of clear benefit to other powerful partners, including the United States, Australia, New Zealand, European countries, Russia, India, and Japan, who share the same anxiety about China's rise.²⁸ Access by the United States and other national armed forces—e.g., for port visits, joint training, and maritime surveillance assistance—is welcomed. It is mutually beneficial, helping Vietnam fill the gap in its capacity for sea denial. On the other hand, such cooperative activities with outside powers will result in “reprisal measures” from China, which has a range of coercive tools it can use against neighboring countries. Following the visits to Vietnam of the USS *Carl Vinson* in March 2018 and USS *Theodore Roosevelt* in March 2020, Vietnamese fishing boats were increasingly harassed by Chinese forces. Therefore, Vietnam must exercise caution. Bilateral cooperation on defense, diplomacy, and development could be enacted through the following actions.

Clear re-engagement. Vietnam will continue to internationalize the South China Sea issue and redouble its legal and diplomatic efforts. Cooperation with the United States, the United Kingdom, France, Germany, Australia, New Zealand, Japan, India, and other countries in the region is one of the most effective tools against China's attempts to legalize the nine-dash line and “four sha” claims as well as the establishment of an ADIZ and a straight archipelagic baseline for offshore archipelagoes in the South China Sea.

Elevation of the Vietnam-U.S. relationship to “strategic partner” status. Vietnam-U.S. relations have grown over the 25 years since normalization. The status of strategic partner would allow Vietnam to diversify its cooperation options and also allow the United States the opportunity to expand its network of regional partnerships. Regardless of the China issue, this status change would be advantageous for both Vietnam and the United States.²⁹

Advance arms sales discussions. Vietnam is the eighth-largest importer of weapons in the world.³⁰ The country should diversify its Russia-sourced weapon systems, which the PLA already knows well. As a result, Washington and Hanoi should further advance discussions on U.S. arms sales to Vietnam. While some exports have proceeded following the Obama administration's decision to lift the embargo on lethal arms sales to Vietnam in 2016, more should be done to overcome

²⁸ Michael J. Green and Gregory B. Poling, “Biden Can Engage Southeast Asia and Still Promote Good Governance,” Center for Strategic and International Studies, Commentary, November 13, 2020, <https://mailchi.mp/csis/biden-engage-southeast-asia-201113?e=d6c4759c85>.

²⁹ Prashanch Parameswaran, “What Would a U.S.-Vietnam Strategic Partnership Really Mean?” *Diplomat*, September 12, 2019, <https://thediplomat.com/2019/09/what-would-a-us-vietnam-strategic-partnership-really-mean>.

³⁰ Nga Pham, “Why Vietnam Wants U.S. Weapons,” BBC News, May 23, 2016, <https://www.bbc.com/news/world-asia-36360005>.

apparent reluctance in both capitals.³¹ Persistent roadblocks include Vietnam's continuing strong reliance on Russian systems, the high cost of U.S. weaponry, and lingering legacies of mistrust between the two countries.

Increasing U.S. arms exports would help Vietnam access missile-armed patrol boats, torpedo boats, mini-submarines, mine-sweeping and mine-laying vessels, anti-submarine warfare systems, fighter bombers, and radars, among other systems, all to strengthen its sea-denial capability. Anti-ship and air-defense missiles are a priority for deployment along Vietnam's coast and offshore islands. The Vietnam Coast Guard and Vietnam Fisheries Surveillance Force need to acquire lower-cost, more durable vessels with hard steel hulls for the purpose of countering ramming actions at sea. In waiting for such U.S. assistance, Vietnam will intensify its traditional military cooperation with Israel for infantry weapons and with India, which provides Brahmos and Akash missiles, cybersecurity, and submarine training services.³²

Accelerated assistance to the Vietnam Coast Guard, Vietnam Fisheries Surveillance Force, and Vietnam Navy. The U.S. and other coast guards could host a training program with Vietnamese partners and implement joint exercises with the aim to increase the presence of the United States and its partners in the region. Used U.S. vessels and professional equipment of good quality could be transferred to maritime enforcement forces of coastal states in the South China Sea, including Vietnam. Japan and India, for example, are already transferring technology for building high-speed patrol and coast guard vessels to some of these coastal states.³³

Port visits and freedom of navigation operations. The navies and coast guards of the United States and other countries could be engaged in regular exchange of ship visits and port calls in the region to show their solidarity and discourage Chinese bullying in the region. Since 2016, Cam Ranh international port has hosted several ships from various countries, including China, the United States, Russia, France, Australia, Japan, India, and Singapore.³⁴ Vietnam is willing to use the port for commercial but not for military purposes. The port is not leased or used as a foreign naval base against any country. Foreign vessels, including military ships, can enter for repair, refueling, and docking. Nonetheless, greater access for foreign naval ship visits and port calls in Vietnamese ports could support Vietnam's diplomatic goals of balancing relations with the United States and China and deterring possible adversaries. Likewise, freedom of navigation activities will be more effective with the participation of the navies of coastal countries in the South China Sea.

Safeguarding of fisheries. Safeguarding normal and legal fishing activities in the South China Sea in accordance with UNCLOS against the CCG's coercive measures has become all the more imperative in recent years. China's new Maritime Police Law could provide a reason for countries to unite against China to deter provocative behavior on this and other maritime issues.

³¹ Aaron Mehta, "Obama Announces Full Lifting of Vietnam Arms Embargo," *DefenseNews*, May 18, 2016 <https://www.defensenews.com/2016/05/18/obama-announces-full-lifting-of-vietnam-arms-embargo>.

³² Saurav Jha, "Can India Break into Vietnam's Defense Market?" *Diplomat*, December 5, 2018, <https://thediplomat.com/2018/12/can-india-break-into-vietnams-defense-market>.

³³ Embassy of India, Hanoi, Vietnam, "India-Vietnam Relations," <https://www.indembassyhanoi.gov.in/page/india-vietnam-relations>; and Xavier Vavasseur, "Japan to Build Six Patrol Vessels for Vietnam's Coast Guard," *Naval News*, August 8, 2020, <https://www.navalnews.com/naval-news/2020/08/japan-to-build-six-patrol-ships-for-vietnams-coast-guard>.

³⁴ Niranjana Chandrashekhara Oak, "Cam Ranh Port: A Lever in Vietnam's Naval Diplomacy," *Observer Research Foundation*, October 6, 2018, <https://www.orfonline.org/expert-speak/cam-ranh-port-lever-vietnam-naval-diplomacy>.

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Philippine Security Implications from China's Growing Maritime Capabilities

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EXECUTIVE SUMMARY

This essay examines the principal threats to the Philippines brought about by China's maritime forces, assesses the Philippines' responses to these threats, and considers options for cooperation with the U.S.

MAIN ARGUMENT

As the Philippines continues to face Chinese military assertiveness in the South China Sea, its weak maritime capabilities further reinforce the value of maintaining its security alliance with the U.S. despite President Rodrigo Duterte's "independent" foreign policy. Even with the modernization efforts of its military, the Philippines cannot match China's powerful navy, coast guard, and maritime militia. These Chinese maritime forces have almost crossed the red lines that the Duterte administration drew to warn against China's provocative actions at sea. Thus, to confront Chinese maritime threats, the Philippines carried on with its security cooperation with the U.S. through an institutionalized alliance that insulated relations from Duterte's anti-U.S. sentiments. As his term draws to a close, the Philippines looks forward to a new administration that will reset bilateral relations and support more security engagement to address maritime issues in the South China Sea.

POLICY IMPLICATIONS

- The Philippines must contend with Chinese maritime forces that have become more aggressive and unhindered in recent years, endangering the country's territorial sovereignty and maritime rights, despite its arbitration victory over China in 2016.
- The Philippines' inadequate maritime capabilities yet vital geostrategic location present opportunities to pursue security engagement with regional stakeholders and other countries to counter Chinese maritime threats.
- The Philippines-U.S. alliance can be elevated from modest security cooperation under Duterte to an enhanced military collaboration under his successor, which can serve as a counterweight to China's maritime force.

As China accelerates its military modernization, its maritime capabilities are one of the crucial elements bolstering its great-power status. In its immediate maritime domain, China seeks greater control in the South China Sea and regulates foreign activities within its nine-dash line in violation of existing international law. These actions threaten unimpeded trade and commerce, compromise freedom of navigation and overflight, and encroach on the territorial sovereignty and maritime rights of claimant states such as the Philippines.

Confronted with persistent threats from China in the South China Sea, the Philippines is upgrading its maritime capabilities, albeit at a slow pace. Yet these efforts are merely aimed at developing a credible defense posture. It cannot match China's military clout nor deter Chinese illegal activities at sea. In fact, the Philippines has long been regarded as having one of the weakest militaries in Asia. Thus, aside from upgrading its maritime force, the country has traditionally banked on its U.S. security alliance in dealing with China.

However, the shift toward an "independent" foreign policy under President Rodrigo Duterte has undermined security ties with the United States. His motive is based both on personal grievances with the United States and on a desire to renew strategic and economic relations with China. Yet the institutionalization of the alliance has made Philippines-U.S. relations resilient, and the alliance is expected to outlast the Duterte administration.

With Duterte's term coming to an end in 2022, the Philippines is looking forward to a new president that will revive bilateral relations with the Biden administration. This presents a strategic opportunity for the United States to advance the alliance through various programs that not only enhance the Philippines' maritime capabilities but also expand U.S. military presence and influence in the region.

This essay examines the principal threats to the Philippines brought about by China's maritime forces and the possible scenarios that would increase maritime tensions. It then assesses the Philippines' response to China's maritime threats and proposes cooperative endeavors that the United States could initiate with the Philippines to counter Chinese assertiveness in the South China Sea.

Principal Threats: Chinese Maritime Forces in Philippine Waters

The Philippines regards China's growing maritime capabilities as a grave threat to its national security. Confronted with an apparent power asymmetry, it has to contend with China's formidable naval force, along with a Chinese coast guard and maritime militia that are the largest in Asia. Despite having one of the world's longest coastlines, the Philippine archipelago has one of the weakest maritime forces in the region. Thus, it cannot deter China from encroaching on its exclusive economic zone (EEZ) along the West Philippine Sea, notwithstanding the 2016 arbitration ruling declaring China's actions as illegal.¹

China's growing confidence in its maritime capabilities has emboldened the country to adopt more assertive tactics to protect and advance its interests. In particular, its maritime actors have worked collectively to incrementally seize territorial control along the Philippines' EEZ.

¹ The West Philippine Sea refers merely to portions of the South China Sea, particularly parts of the area within the Philippines' EEZ. Under Administrative Order No. 29 issued in 2012 by former president Benigno Aquino III, the Philippines has the "inherent power and right to designate its maritime areas with appropriate nomenclature for purposes of the national mapping system," based on the 1982 United Nations Convention on the Law of the Sea (UNCLOS).

These include the People's Liberation Army (PLA) Navy, the China Coast Guard (CCG), and the People's Armed Forces Maritime Militia (PAFMM).

The PLA Navy is considered the foundation of China's maritime power as it provides security guarantees for Chinese maritime activities. With modern naval capabilities, China is expected to easily carry out its objective of maintaining sovereignty over its territorial waters and asserting its economic and security interests in the South China Sea. It conducts numerous naval exercises employing modern surface combatants and submarines "to show China's determination to unilaterally and militarily resolve the dispute, to flaunt its naval preponderance and to impress upon the other claimant states its de facto ownership of these contested maritime territories."²

In contrast to the militaristic warfighting impression projected by the PLA Navy, the CCG is employed during peacetime to impose Chinese laws over disputed waters. Its vessels regularly sail through and linger along China's nine-dash line to bolster China's maritime presence and "declare sovereignty, manifest jurisdiction," a useful approach known as "declaratory law enforcement."³ The CCG is also routinely deployed to ensure the security of Chinese state and private vessels. With China's newly established base facilities in the Spratly Islands, the CCG has been regularly intruding in the Philippines' EEZ, which makes its presence more pervasive and aggressive than the PLA Navy's.

With China's new coast guard law that took effect in February 2021, the Philippines is confronted with additional threats from the CCG. The law allows the CCG to fire on any fishing boats and coast guard vessels, board and inspect them, and demolish structures built on Chinese-claimed reefs and islands.⁴ While China regards the law as normal domestic legislation, the Philippine government views it as a "verbal threat of war"⁵ that not only raises the possibility of shooting incidents at sea, but also threatens food security by endangering the lives of Filipinos in the fishing industry.⁶

Another Chinese maritime agency is the PAFMM, a government-funded maritime militia that operates as a vanguard of naval auxiliaries to assist the PLA Navy and the CCG in the South China Sea. While most of its vessels operate on the high seas and are usually engaged in commercial fishing, the PAFMM is one of China's "gray zone" tools, meaning that it can provoke maritime conflicts without crossing the threshold of open warfare.⁷

The PAFMM also performs an important function in supporting China's sovereignty claims that has contributed to the increasing maritime tensions in the South China Sea. Most of its civilian vessels are able to conduct maritime surveillance, initiate reef and island development, and harass foreign vessels and fishing boats. The PAFMM's operations are designed to "win without fighting," as it is notorious for "overwhelming the adversary with swarms of fishing vessels usually bolstered

² Renato Cruz De Castro, "Facing Up to China's Realpolitik Approach in the South China Sea Dispute: The Case of the 2012 Scarborough Shoal Stand-off and Its Aftermath," *Journal of Asian Security and International Affairs* 3, no. 2 (2016): 167.

³ Ryan Martinson, "China's Second Navy," *Proceedings*, April 2015, <https://www.usni.org/magazines/proceedings/2015/april/chinas-second-navy>.

⁴ Yew Lun Tian, "China Authorizes Coast Guard to Fire on Foreign Vessels If Needed," Reuters, January 22, 2021, <https://www.reuters.com/article/us-china-coastguard-law-idUSKBN29R1ER>.

⁵ Joyce Ann L. Rocamora, "PH Issues Diplomatic Protest over New Chinese Coast Guard Law," Philippine News Agency, January 27, 2021, <https://www.pna.gov.ph/articles/1128769>.

⁶ "China Coast Guard Law Affects Poor Filipino Fishermen, Food Security: Analyst," ABS-CBN News, February 11, 2021, <https://news.abs-cbn.com/news/02/11/21/china-coast-guard-law-affects-poor-filipino-fishermen-food-security-analyst>.

⁷ Abhijit Singh, "Between War and Peace: Grey-Zone Operations in Asia," Australian Institute of International Affairs, Australian Outlook, February 13, 2018, <https://www.internationalaffairs.org.au/australianoutlook/paramilitaries-grey-zone-operations-asia>.

from the rear together with the CCG and possibly PLA Navy ships, depending on the contingency, in escalatory concentric rings.”⁸

In recent years, China has deployed flotillas of fishing vessels to harass Filipino fishermen and to block supplies from reaching Thitu Island, an isolated feature in the Spratlys under the Philippines’ administrative control.⁹ In March 2021 the Philippine Coast Guard (PCG) detected around 220 Chinese vessels crewed by China’s militia forces near Whitsun Reef. Their massive presence seeks to effectively isolate the reef within the Philippines’ EEZ and bring it under de facto Chinese control.¹⁰

Possible Scenarios: Maritime Tensions between China and the Philippines

Using the advanced capabilities of its maritime forces, China may further initiate illegal activities that increase bilateral tensions. The scenarios that are most concerning to the Philippines include but are not limited to the seizure of islands, reefs, and maritime features within the Philippines’ EEZ; the ramming of Philippine fishing vessels in the West Philippine Sea, leading to casualties; and the driving out of the military and civilian presence in Philippine-controlled islands. The likelihood of these scenarios occurring or repeating themselves is high, given the dominant presence of China in the Philippines’ EEZ. Incidents involving the first two scenarios have occurred, such as China’s seizure of Philippine maritime features (Scarborough Shoal in 2012) and the sinking of local fishing vessels (Gem Ver-1 in Reed Bank in 2019) in the West Philippine Sea.

In addition, the Duterte administration has previously identified its red lines in the West Philippine Sea and warned China that these should not be crossed. Given China’s renewed bilateral relations with the Philippines, the Chinese government is expected not to breach the following red lines during Duterte’s term: unilateral exploitation of natural resources; construction of Chinese facilities on Scarborough Shoal; removal from Second Thomas Shoal of the BRP *Sierra Madre*, a grounded ship that the Philippine Navy (PN) uses as a military outpost; and harassment of Filipino soldiers on resupply or repair missions.¹¹ These scenarios would likely be instigated by the combined forces of the CCG and the PAFMM, while keeping the PLA Navy in the background in case a confrontation escalates into a military conflict. As the front-line force tasked to impose Chinese laws, the CCG tracks, monitors, and even obstructs Philippine naval and coast guard vessels in the West Philippine Sea. Meanwhile, the PAFMM’s commercial fishing vessels are deployed to chase off Philippine fishing boats and harass Filipino fishermen operating within the country’s EEZ.

The constant presence of these maritime forces is crucial in China’s “cabbage strategy” to “assert a territorial claim and gradually surround the area with multiple layers of security, thus denying

⁸ Derek Grossman and Logan Ma, “A Short History of China’s Fishing Militia and What It May Tell Us,” *Maritime Issues*, April 6, 2020, <http://www.maritimeissues.com/history/a-short-history-of-chinas-fishing-militia-and-what-it-may-tell-us.html>.

⁹ Sebastian Strangio, “Philippines Shelves Plan for South China Sea Fishing Militia,” *Diplomat*, November 6, 2020, <https://thediplomat.com/2020/11/philippines-shelves-plan-for-south-china-sea-fishing-militia>.

¹⁰ Brad Lendon, “Beijing Has a Navy It Doesn’t Even Admit Exists, Experts Say. And It’s Swarming Parts of the South China Sea,” *CNN*, April 13, 2021, <https://edition.cnn.com/2021/04/12/china/china-maritime-militia-explainer-intl-hnk-ml-dst/index.html>.

¹¹ Patricia Lourdes Viray, “Philippines, China Draw ‘Red Lines’ in South China Sea Dispute,” *Philippine Star*, May 29, 2018, <https://www.philstar.com/headlines/2018/05/29/1819745/philippines-china-draw-red-lines-south-china-sea-dispute>.

access to a rival.”¹² This is achieved through the deployment of Chinese naval ships, coast guard vessels, and maritime militia boats, which overwhelm islands and maritime features in Philippine waters to effectively isolate them. The goal of the strategy is to “take full control,” particularly over areas surrounding Thitu Island near Palawan.¹³

Pushback from the Philippines: Developing Its Maritime Forces

With China’s superior maritime capabilities and dominant presence at sea, the Philippines is hard-pressed to prevent the Chinese from instigating the above scenarios. With a fleet of aging warships, inferior aircraft, and archaic weaponry, the Philippines’ firepower pales in comparison with neighbors such as Vietnam, Singapore, Malaysia, and Indonesia, which already have their own submarines. Though there is already a significant increase in the defense budget for military modernization, the Philippines is upgrading from a very low base of 1% GDP, which is less than the average in Southeast Asia of over 2% of GDP.¹⁴ Yet despite these shortcomings, the Philippine government is committed to developing a minimum credible defense posture, albeit at a rather slow pace given China’s persistent threats.

Modernization of the Philippine Navy

According to the PN, its vision is that “by 2028, we shall be a modern, multi-capable naval force responsive to our maritime nation’s defense and development.”¹⁵ However, reality falls far short of this vision. The PN “does not just have antiquated equipment, but it is preoccupied in performing maritime law enforcement roles and other constabulary functions.”¹⁶ When the U.S. military left the Philippines in 1992, the PN was forced to fulfill its external defense duties with limited skills and resources. It is upgrading its maritime capabilities to go beyond “being a transport arm of the Philippine Army to become a naval force that can stand up to the security challenge posed by an expansionist China.”¹⁷

To fulfill this mandate, the PN launched a fifteen-year acquisition plan called the “Philippine Fleet Desired Force Mix” in 2012. An important item on the list is the two diesel-electric submarines, along with an integrated logistics support package, seen as a “game changer” for the PN.¹⁸ The Philippines’ plan to acquire submarines is intended to better equip the navy and to develop a credible defense posture that can inflict damage when necessary against a threat in the West Philippine Sea.

However, these modernization efforts are hampered by domestic security issues. The recurring local insurgency and domestic terrorist threats in the Philippines have long distracted the PN from

¹² Brahma Chellaney, “China’s Creeping ‘Cabbage’ Strategy,” *Taipei Times*, December 1, 2013, <https://www.taipetimes.com/News/editorials/archives/2013/12/01/2003578036>.

¹³ Federico D. Pascual Jr., “China’s Swarming: ‘Cabbage Strategy,’” *Philippine Star*, April 11, 2019, <https://www.philstar.com/opinion/2019/04/11/1909011/chinas-swarming-cabbage-strategy>.

¹⁴ Prashanth Parameswaran, “How Much Can the Philippines Boost Its Military Budget under Duterte?” *Diplomat*, January 31, 2017, <https://thediplomat.com/2017/01/how-much-can-the-philippines-boost-its-military-budget-under-duterte>.

¹⁵ “Vision,” Philippine Navy, https://navy.mil.ph/pn_web_pnmissionvision.php.

¹⁶ Jay Tristan Tarriela, “Recalibrate the Philippine Navy’s Compass before It Even Sets Sail,” *Rappler*, March 3, 2020, <https://www.rappler.com/voices/imho/analysis-recalibrate-philippine-navy-compass-before-sets-sail>.

¹⁷ Renato Cruz De Castro, “The Philippines Discovers Its Maritime Domain: The Aquino Administration’s Shift in Strategic Focus from Internal to Maritime Security,” *Asian Security* 12, no. 2 (2016): 112.

¹⁸ Priam Nepomuceno, “PH Would Have Inked Submarine Deal Sans Pandemic: Navy Chief,” Philippine News Agency, June 7, 2021, <https://www.pna.gov.ph/articles/1142811>.

focusing on external threats. This is regarded as “counterproductive,” since the PN’s capability and training emphasize warfighting and territorial defense rather than law enforcement.¹⁹

In addition, the navy’s modernization initiatives face budgetary constraints and a tedious procurement process, particularly related to its acquisition of naval assets. The government can only afford second-hand military equipment from Japan and the United States, and some of the purchase deals proposed by the Philippine Department of National Defense have not yet been finalized because of the high costs required for operation and maintenance. As the procurement process drags on year after year, the Philippine government is likely to be disinclined to allot funds for expensive acquisitions, especially amid competing funding priorities such as education, infrastructure, and public health. In fact, the PN would have signed an acquisition contract for its first submarine in late 2021 or early 2022, but much of the funds have been diverted to the country’s Covid-19 response.²⁰ Given these manifold challenges, the PN’s modernization efforts can hardly be expected to deter the PLA Navy from encroaching on Philippine waters.

The Procurement Plan of the Philippine Coast Guard

To boost its capacity, the PCG has acquired multi-role response vessels from Japan and has commissioned fast patrol boats from France.²¹ It is also planning to procure high-endurance boats, rigid inflatable boats, and smaller watercraft from other countries. These floating assets will be useful to support the PCG’s functions in maritime safety and security, marine environmental protection, law enforcement, and search-and-rescue operations.²² The PCG is also constructing additional substations and provincial stations to house these vessels. One of these substations will be located in Zambales, approximately 250 kilometers from Scarborough Shoal. The construction of this substation is intended to enforce faster response on any maritime incidents in the West Philippine Sea and to proactively monitor the safety of fishermen in Zambales.²³

In addition to limited government funding and financial assistance from other countries, a significant constraint for the PCG is the shortage of capable personnel to operate its vessels. In 2019, the PCG announced its goal to recruit around 25,000 additional personnel by 2025 to augment its coast guard from 13,000 personnel.²⁴ The demand for more recruits increases with the arrival of new vessels, construction of new radar stations, and surge in maritime activities. This personnel shortage limits the PCG’s ability to carry out its mandate of maritime law enforcement within Philippine waters. With its modest number of personnel and vessels compared to its Chinese counterpart, the PCG will continue to be overwhelmed by the CCG’s dominant presence within the country’s EEZ.

¹⁹ Diane Despi, “A Framework to Strengthen Philippine Institutional Capacity for Maritime Security Cooperation,” in *Toward an Enhanced Strategic Policy in the Philippines*, ed. Aries Arugay and Herman Krafy (Quezon City: University of the Philippines, 2020), 54.

²⁰ Frances Mangosing, “Covid-19 Pushes Back PH Navy Upgrade,” *Inquirer.net*, June 7, 2021, <https://newsinfo.inquirer.net/1442862/covid-19-pushes-back-ph-navy-upgrade>.

²¹ “PCG Acquires Its Biggest Patrol Ships,” *Philippine Coast Guard*, September 2, 2021, <https://coastguard.gov.ph/index.php/districts/cgd-northeastern-luzon/11-news/3687-pcg-acquires-its-biggest-patrol-ships>; and “PCG Commissions Last Two 24-Meter Fast Patrol Boats from France,” *Philippine Coast Guard*, <https://coastguard.gov.ph/index.php/news/news-2019/145-news/news-2019/2785-pcg-commissions-last-two-24-meter-fast-patrol-boats-from-france>.

²² “Functions,” *Philippine Coast Guard*, <https://coastguard.gov.ph/index.php/transparency/functions>.

²³ Richa Noriega, “Guarding West PH Sea: PCG to Build Substation in Zambales,” *Manila Bulletin*, June 18, 2021, <https://mb.com.ph/2021/06/18/guarding-west-ph-sea-pcg-to-build-substation-in-zambales>.

²⁴ Frances Mangosing, “PH Coast Guard Looking for 4,000 New Recruits,” *Inquirer.net*, November 15, 2019, <https://newsinfo.inquirer.net/1190304/ph-coast-guard-looking-for-4000-new-recruits>.

Proposed Establishment of Philippine Maritime Militia

In October 2020 the PN announced a plan to assemble a militia sea force. Under the plan, the Armed Forces of the Philippines will recruit fishermen who will then be trained by the PN to serve as militia forces. The goal is for the Philippines to have “the capability to be everywhere,” with the new militia units acting as “force multipliers” within the country’s EEZ to augment the presence of the navy and coast guard when they are otherwise unavailable.²⁵

However, the plan was postponed in November 2020 due to financial, strategic, and political concerns. For one, the Philippine Department of National Defense announced that it does not have the budget to sustain the initiative. Second, a maritime militia heightens the risk of miscalculations and could even trigger a “shooting war” with China.²⁶ Last, the militia could be misconstrued by Beijing as a provocation. The suspension of this plan is consistent with Duterte’s “appeasement” policy toward China.

U.S. Strategic Involvement: Countering China, Supporting the Philippines

Maintaining U.S. Security in the Philippines during the Duterte Administration

Long outgunned and outspent by China, the Philippines cannot match Chinese capabilities despite its strong commitment to upgrade its maritime force. Thus, it strategically depends on its security alliance with the United States. However, the Philippines-U.S. alliance has been undermined by Duterte’s independent foreign policy that aims to break the country’s extensive reliance on the United States. Such policy is partly motivated by Duterte’s personal hostility toward the United States due to criticisms of human rights violations during his “war on drugs” and his pragmatic focus on economic engagement with China. As a result, the alliance faced possible termination of critical military deals during the Duterte administration, such as the 1999 Visiting Forces Agreement (VFA), which would render the 2014 Enhanced Defense Cooperation Agreement (EDCA) inoperable and create uncertainty for the 1951 Mutual Defense Treaty.

Despite these developments, the institutionalization of the alliance has shielded it from Duterte’s hostility against the United States through long-term investments in bilateral cooperation. Critical in the overall partnership is the pro-alliance mentality nurtured among military and defense officials in the Philippines (despite Duterte’s anti-U.S. sentiments), which is promoted through regular collaborative activities (such as joint military exercises and counterterrorism efforts).²⁷ Though Duterte threatened to suspend alliance activities, security cooperation between the Philippines and the United States carried on with normal operations, albeit at a modest pace. This results in strategic benefits for both countries as U.S. military presence in the Philippines helps deter Chinese threats.

²⁵ “PH Navy Chief Says Maritime Militias to Serve as ‘Force Multipliers’ in West Philippine Sea,” *Inquirer.net*, October 22, 2020, <https://globalnation.inquirer.net/top-story/ph-navy-chief-says-maritime-militias-to-serve-as-force-multipliers-in-west-philippine-sea>.

²⁶ Alan Robles, “Philippines’ Plan for Maritime Militia to Match China Raises Fears of ‘Shooting War,’” *South China Morning Post*, October 16, 2020, <https://www.scmp.com/week-asia/politics/article/3105687/philippines-plan-maritime-militia-match-china-raises-fears>.

²⁷ Andrea Chloe Wong and Alexander C. Tan, “The Philippines’ Institutionalised Alliance with the U.S.: Surviving Duterte’s China Appeasement Policy,” *National Security Journal* 3, no. 2 (2021).

Proof of this institutionalized alliance is the restoration of the VFA due to efforts of Philippine and U.S. officials. On July 30, 2021, Philippine defense secretary Delfin Lorenzana announced Duterte's decision not to terminate the agreement following his meeting with U.S. defense secretary Lloyd Austin, which finally put an end to the prolonged uncertainty regarding the fate of the VFA. Even with the restoration of the agreement, U.S. and Philippine officials continue to engage in bilateral negotiations to finalize an addendum or additional agreement regarding custody over U.S. soldiers who will be tried for heinous crimes committed in the Philippines.²⁸ The previous high-profile rape and murder cases against U.S. Marines Daniel Smith in 2005 and Joseph Pemberton in 2014 will serve as critical references during negotiations. They are expected to address this concern as a separate deal, given that no changes had been made to the original text of the VFA after Duterte announced its full restoration.

With the restoration of the VFA, the United States can maintain collaborative activities with the Philippines during Duterte's final year in office. It can push for its last Balikatan (shoulder-to-shoulder) military exercises before the Philippine presidential elections in May 2022. Moreover, the United States can demonstrate to the Duterte administration the strategic benefits of the alliance for the Philippines by continuing joint naval patrols to prevent China from employing its gray-zone tactics in the West Philippine Sea. It can also manifest support and promote military engagement with the PN and PCG by deploying U.S. naval assets whenever threats from China arise—similar to the coordinated response of both countries over the incident in the Whitsun Reef in March 2021.

Advancing the U.S. Alliance with the Philippines under New Leadership

In anticipation of a change in Philippine leadership in 2022, the U.S. government can elevate the alliance from modest security cooperation under the Duterte administration to an enhanced military collaboration under his successor. The Philippines looks forward to an anti-incumbent election in 2022 against the “anointed heir” of Duterte based on the poor electoral track record of the chosen successors of outgoing presidents. Public dissatisfaction against the Duterte administration is high for its mishandling of the pandemic and a pro-China policy that failed to prevent China from encroaching in Philippine waters, among other issues. The country's upcoming leadership transition, therefore, presents an opportune time for the United States to revive its security partnership with the Philippines. Though there is no guarantee that the next Philippine president will be dedicated to strengthening the alliance, the United States can at least expect a more sensible and less impulsive leader than Duterte.

As a manifestation of its commitment to the alliance, the U.S. government under the Biden administration could initiate high-level political engagement with the incoming government. Such engagement could include ministerial-level meetings and dialogue with military service commanders, leading to an exchange of state visits. The United States might use these occasions to confirm its military support to defend the Philippines against Chinese maritime threats under the Mutual Defense Treaty, affirm an equitable partnership with the Philippines in the implementation of the VFA and EDCA, propose increased support for the Armed Forces of the Philippines modernization program, and offer more trade and investment prospects, aside from U.S. security and military guarantees. These economic opportunities from the United States can

²⁸ Andrea Chloe Wong, “Duterte's Back-Down on U.S. Forces in Philippines,” Lowy Institute, Interpreter, August 24, 2021, <https://www.lowyinstitute.org/the-interpreter/duterte-s-back-down-us-forces-philippines>.

be presented to the new president as an alternative to China's economic largesse that will benefit the Philippines in the long term.

Such political manifestations of the U.S. commitment to the alliance would help reset bilateral relations by demonstrating goodwill to a public that still harbors anti-colonial and even anti-U.S. sentiments and sending a strong message of the alliance's resilience to counter China's security threats in the region. Specifically, the Biden administration could renew the alliance through the following measures.

Implementation of the EDCA in the Philippines. With the restoration of the VFA that provides the operational context for the EDCA, the United States can implement more military activities with the Philippines, which have been scaled down or put on hold during Duterte's term. As an executive agreement, the EDCA authorizes the United States "to have access and use of agreed locations on a rotational basis."²⁹ It also gives U.S. troops, planes, and ships "increased rotational presence in Philippine military bases, and allows Washington to build facilities to store fuel and equipment there."³⁰ Both countries agreed on "five initial Philippine military bases on which the United States would construct facilities, position equipment, and rotate forces."³¹

With the full implementation of the EDCA, the United States' presence in Southeast Asia could be more strategic and visible by dispersing U.S. forces in the Philippines. The U.S. Indo-Pacific Command could regularly access these approved EDCA sites, particularly the Basa Air Base in Pampanga and the Antonio Bautista Air Base in Palawan, considered as the most critical locations for U.S. operations in the South China Sea.³² Both locations could be used to conduct joint military exercises and host air and naval operations that can fend off incursions of Chinese vessels and offset China's naval and missile advantages. With the full implementation of the EDCA, the normalized presence of U.S. forces in the Philippines could essentially restrict China's naval expansion and maritime threats.

Joint military training to enhance maritime security and territorial defense. The annual U.S.-Philippines Balikatan exercises could concentrate on promoting maritime security and upgrading territorial defense capabilities. In particular, the training could focus on combat drills directed at a hypothetical threat emanating from the South China Sea. These could include high-profile live-fire training as well as the development of amphibious capabilities and aviation operations. These activities would be in addition to other military training exercises focusing on humanitarian assistance and disaster relief and counterterrorism that are equally beneficial to the Philippines.

Aside from diversifying their scope, the Balikatan exercises could be expanded to include other stakeholders in the region. In 2019, Australia participated in the special operations forces training as well as humanitarian and civic assistance projects during the exercises. Other countries such as Japan, Canada, New Zealand, South Korea, Thailand, Vietnam, and the United Kingdom sent delegations as international observers. Besides building broader networks among security partners, the multilateralization of the military exercises presents a strategic opportunity to enhance

²⁹ "Agreement between the Government of the Republic of the Philippines and the Government of the United States of America on Enhanced Defense Cooperation (EDCA)," in *Forging Partnerships: Philippine Defense Cooperation under Constitutional and International Law*, ed. J. Eduardo Malaya and Maria Antonina Mendoza-Oblena (Manila: Foreign Service Institute and U.P. Law Center, 2016), 86.

³⁰ "Full Text: Supreme Court's Decision on EDCA," Rappler, January 15, 2016, <https://www.rappler.com/nation/full-text-supreme-court-decision-edca>.

³¹ Gregory Poling and Conor Cronin, "The Dangers of Allowing U.S.-Philippine Defense Cooperation to Languish," War on the Rocks, May 17, 2018, <https://warontherocks.com/2018/05/the-dangers-of-allowing-u-s-philippine-defense-cooperation-to-languish>.

³² Michael J. Green and Gregory B. Poling, "The U.S. Alliance with the Philippines," Center for Strategic and International Studies, December 3, 2020, <https://www.csis.org/analysis/us-alliance-philippines>.

multinational interoperability in order to neutralize China's growing maritime capabilities. But while their multilateralization is a welcome development, the Balikatan exercises should maintain a bilateral focus on meeting alliance obligations under the Mutual Defense Treaty and developing interoperability between Philippine and U.S. armed forces.

Routine conduct of freedom of navigation operations (FONOPs). The United States should routinely organize FONOPs as part of the Biden administration's commitment to secure the unrestricted flow of global commerce and to protect open access in the South China Sea. With a regular schedule of FONOPs (ideally once or twice per quarter), the United States could engage claimant countries in the region, its partners in the Quad (Japan, Australia, and India), and other major powers (such as the United Kingdom and France) to participate in these exercises. It could also encourage its strategic allies and partners, including the Philippines, to conduct FONOPs independently or jointly with other countries (e.g., a Philippines-Australia operation). Doing so would help deflect Chinese criticism of U.S. interference in the South China Sea disputes, as other countries similarly have a strategic interest to preserve freedom of navigation.

For the Philippines, partnering with other stakeholders could likewise pacify public perception and apprehension against the country's overreliance on the United States. Through the FONOPs, the United States could empower claimant countries such as the Philippines to challenge China's excessive maritime claims and enforce international law in the South China Sea. These operations are critical for upholding the rules-based order of unimpeded access to the world's global commons, especially in support of a free and open Indo-Pacific.

Acquisition of military equipment and increased capacity building. Through its Foreign Military Sales program, the United States could offer any of the following items listed in the "Philippine Fleet Desired Force Mix":³³

- For naval patrol, it could provide frigates, corvettes, and offshore patrol vessels.
- For amphibious, sealift, and auxiliary services, it could provide strategic sealift vessels, landing craft utility, logistics support/replenishment ships, ocean tugs, and yard/fire tugs to support warships in docking and undocking.
- For interdiction and special boat operations, it could provide Cyclone-class coastal patrol interdiction craft, patrol gunboats, multipurpose assault craft, and rigid hull inflatable boats.
- For naval air operations, it could provide amphibious maritime patrol aircraft, naval helicopters, and multipurpose helicopters.

The United States could also contribute to Philippine defense by enhancing capacity building in maritime vessel maintenance, law enforcement, and intelligence gathering in order to expand the Philippines' ability to maintain a greater maritime presence and conduct more patrols.

Implementation of the U.S. Maritime Security Initiative. Launched under the Obama administration in 2016, the Maritime Security Initiative seeks to collaborate with Southeast Asian states to improve their ability to detect, understand, react to, and share information about air and maritime activity in the South China Sea.³⁴ The goal is to create a regularly updated common

³³ See Jaime Laude, "Philippine Navy Needs P500B to Upgrade War Capability," *Philippine Star*, May 24, 2012, <https://www.philstar.com//2012/05/24/809955/philippine-navy-needs-p500b-upgrade-war-capability>; and Frances Mangosing, "Congress Asked to Give More Funds to PH Navy for New Warships amid China Incursions," *Inquirer.net*, March 25, 2021, <https://globalnation.inquirer.net/194597/congress-asked-to-give-more-funds-to-ph-navy-for-new-warships-amid-china-incursions>.

³⁴ Prashanth Parameswaran, "America's New Maritime Security Initiative for Southeast Asia," *Diplomat*, April 2, 2016, <https://thediplomat.com/2016/04/americas-new-maritime-security-initiative-for-southeast-asia>.

operating picture. Under the Biden administration, the United States could actively push for and implement the initiative's various projects in the Philippines:

- Establishment of a maritime and joint operations center that will increase the command-and-control capabilities of the Armed Force of the Philippines, PCG, and Philippines National Coast Watch Center.
- Implementation of a plan to improve maritime intelligence, surveillance, and reconnaissance so that the Philippines can detect maritime and air traffic within its coastal waters and provide information to the military and law enforcement's common operating picture.
- Identification of command, control, communications, and computing capabilities needed for the operation of the Hamilton-class high-endurance cutters that the Philippines bought from the U.S. Coast Guard under the Excess Defense Articles program.³⁵

Although these programs may seem to benefit the Philippines more than the United States, the reality is that both countries need to strengthen bilateral security cooperation to counter China's maritime expansion. Despite the Philippines being the weakest and most dependent ally in the U.S. alliance system, its geostrategic location is critical for the United States' regional military presence and could provide greater and more convenient access for the U.S. government to closely confront possible military threats from China. Thus, the United States has a strategic interest in actively cultivating its alliance with the Philippines so as to increase its regional influence amid China's rising economic and military power.

Conclusion

China's growing maritime capabilities have empowered the country to expand its claims in the South China Sea, posing serious concerns for the Philippines. The PLA Navy, CCG, and PAFMM work together to change the territorial status quo by force and to seize control of areas within the Philippines' EEZ. Despite the Philippines' arbitration victory invalidating the nine-dash line, China's contentious activities in the disputed waters continue unhindered. And despite Duterte's appeasement policy, the Chinese government continues to violate the Philippines' maritime rights, nearly crossing the red lines that his administration drew to warn China against its provocative actions.

In response, the Philippines has recently taken serious steps to push back against Chinese threats. It has actively pursued the modernization of its navy, gradually fulfilled its procurement plans for its coast guard, and even considered the creation of a maritime militia. Yet these efforts cannot match the level of China's maritime clout; instead, they are aimed at developing a credible defense posture for the Philippines.

To compensate for its weak maritime capabilities, the Philippines is relying on its security alliance with the United States. Notwithstanding Duterte's independent foreign policy, the country continues to engage with the United States to confront Chinese maritime threats. As Duterte's term draws to a close, the Philippines looks forward to a new administration that will support more security cooperation through the alliance with the United States. This forthcoming leadership transition presents a vital opportunity for the Biden administration to advance

³⁵ Megan Eckstein, "The Philippines at Forefront of New Pentagon Maritime Security Initiative," U.S. Naval Institute News, April 20, 2016, <https://news.usni.org/2016/04/18/the-philippines-at-forefront-of-new-pentagon-maritime-security-initiative>.

the alliance through more defense engagement, joint military training, acquisition of defense materials, and capacity-building initiatives. Both countries are expected to reset bilateral relations and transform the alliance into a mutually beneficial relationship that will protect the Philippines' territorial sovereignty and maritime rights while upholding U.S. leadership in the region.



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