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## **The Changing Balance of Military Power in the Indo-Pacific Region**

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**ABSTRACT:** The United States, Taiwan, and countries in the Indo-Pacific are dealing with a more aggressive People’s Republic of China (PRC) and a much more capable People’s Liberation Army (PLA). PRC military modernization has shifted the regional balance of power in a more favorable direction, although the United States maintains significant advantages in power projection and in a long conflict. PLA modernization has had an even bigger impact on the cross-Strait military balance, where the PRC has overcome the Taiwan military’s historical qualitative advantage and built capable forces that provide PRC leaders with new military options, including credible threats of blockade, air and missile strikes, and amphibious invasion. PLA investments in anti-access/area-denial (A2/AD) capabilities also challenge the U.S. military’s ability to operate near the Chinese mainland.

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The question is whether Beijing can translate a more favorable military balance into its desired political outcomes. Attempting to achieve unification by force would be costly and risky, including the prospect of nuclear escalation. These concerns have driven the PRC to adopt “grey zone” tactics that apply military and psychological pressure on Taiwan while staying below the threshold of lethal force. Grey-zone tactics impose costs on target countries, but do not necessarily translate into decisive outcomes. The United States is investing in new forces, technologies, and concepts of operation that can help regain a clear military edge. Taiwan has a workable defense concept but needs to increase the resources devoted to its military to deter an invasion and respond to PLA grey zone challenges.

The United States has been the dominant maritime and air power in Asia since the end of World War II. It has relied on a network of alliances and arrangements with allies and friendly partners in the Indo-Pacific to support ground, air, and naval forces operating from bases in the region. The regional military balance in terms of relative U.S. and Chinese capabilities is important, but the real U.S. strategic center of gravity is the political-military relationships that underpin U.S. alliances and the forward-deployed military presence that they support. Some American military advantages have eroded over the past two decades as PLA capabilities have grown, but the U.S. military is welcome in the region in a way that the Chinese military is not.

The United States, Taiwan, and countries in the region face the challenge of dealing with a much more aggressive China and a much more capable Chinese military, known as the People’s Liberation Army (PLA). This paper assesses changes in the U.S.-China military balance at the regional level, considers changes in the cross-Strait military balance and Chinese military options with respect to Taiwan, examines the prospects of a U.S.-China conflict over Taiwan, and explores recent PLA efforts to pressure Taiwan through “grey zone” military actions below the threshold of lethal force. It then considers China’s ability to translate its improved military capabilities into desired political outcomes at an acceptable cost, concluding that this is not a straightforward task and that increased U.S. and Taiwan defense spending and military innovation can help maintain deterrence.

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## The U.S.-China Regional Military Balance<sup>1</sup>

In 2020, the U.S. military still enjoys significant quantitative and qualitative advantages over the PLA, especially in a long conflict that would allow it to bring all its assets to bear. The U.S. Indo-Pacific Command (INDOPACOM) oversees a Pacific Fleet with a complement of about 50 capital ships, two or three aircraft carriers, and approximately 30 advanced U.S. submarines. INDOPACOM manages three numbered U.S. Air Forces with some 2,000 fighters, bombers and transports. It oversees 80,000 U.S. Army and Marine Forces stationed throughout the region and has access to another 100,000 deployable troops from the continental United States if required. The U.S. military also has advantages in its proven ability to employ space-based intelligence, surveillance, and reconnaissance (ISR) and cyber capabilities to support its ground, air, and naval forces.<sup>2</sup>

Conversely, the PLA Navy (PLAN) has three fleets with more than 130 major surface combatants, but lacks long-range, blue-water warfare capabilities. Its two aircraft carriers use a ski-ramp design that limits the payload of their aircraft; the PLAN will not field a modern carrier until 2023. Its air forces are large and composed primarily of multi-role fighters, with a limited number of stealth fighters entering the force. Its current bombers are based on a late 1950s Soviet design, although they are equipped with modern engines and capable land-attack and anti-ship cruise missiles. PLA Army and marine forces have been reorganized in a corps-brigade-battalion structure to improve their ability to conduct combined arms and joint operations. The PLA has a limited number of army and marine amphibious brigades but lacks the sea lift to deploy and sustain them too far from the Chinese mainland. The PLA is optimized for fighting conventional land conflicts along its borders, but for the last fifteen years it has emphasized efforts to improve its air, naval, and missile forces and to develop the ability to conduct joint operations employing the full range of PLA capabilities.<sup>3</sup> These efforts have significantly improved the PLA's ability to project power within and beyond the First Island Chain.<sup>4</sup> Moreover, the PLA has implemented major organizational reforms that have significantly improved its ability to conduct integrated joint operations that bring all its capabilities to bear.<sup>5</sup>

One aspect of the U.S.-China military competition in the Indo-Pacific involves Chinese efforts to use increasing military and paramilitary presence and coercion to enhance its effective control of the maritime territories it claims in the South China and East China seas, and U.S. military efforts to operate in these disputed waters to maintain the principles of freedom of navigation and international law. The United States does not take a position on the merits of the competing claims to sovereignty over land features, but insists on the principles of peaceful resolution of disputes and compliance with international law.<sup>6</sup> Aggressive Chinese tactics to enforce its claims—which the United States regards as incompatible with the UN Convention on the Law of the Sea—have involved the creative use of civilian fishing vessels and coast guard ships in the front line, backed by naval capabilities.<sup>7</sup> China has practiced “grey zone” tactics that seek to avoid the use of lethal force while employing a range of military, paramilitary, economic, diplomatic, legal, and informational tactics to reinforce its maritime claims.

These actions have increased the willingness of countries in the region to spend more on their militaries and their interest in enhanced security cooperation with the United States and

other major powers. Absent U.S. intervention, China now has the military capability to seize and hold the disputed land features in the South China Sea, but this would be a bloody affair that would severely damage China's relations with claimant and non-claimant states alike and stimulate military balancing against China. To date, Beijing has judged the costs of a military solution to be too high. This low-level war of nerves on the high seas is likely to continue without a definitive resolution for some time to come.

U.S.-China strategic competition in the Indo-Pacific also has a conventional military aspect, where U.S. qualitative advantages in military hardware, ability to project power globally, and proven ability to conduct effective joint combat operations are partially offset by China's geographic advantages when operating from its own home territory, including the PLA's ability to use ground-based missiles and aircraft to project power over nearby air and maritime space. Since the mid-1990s, the paradigmatic PLA planning and modernization scenario has been an invasion of Taiwan in response to a formal declaration of independence, with the United States intervening on Taipei's behalf. This scenario would require air and sea lift capabilities to get a PLA invasion force onto the island, but the ranges required would be relatively limited since the island is less than 100 miles away.

The need to preserve a peaceful regional environment for economic development—necessary for internal stability—is in tension with the desire to use China's newfound power to achieve nationalist territorial goals at the expense of China's neighbors. What China sees as defensive actions to “safeguard sovereignty and territorial integrity” are viewed by neighboring states as efforts to use intimidation and threats to advance Chinese territorial claims. Even those Asia-Pacific countries that do not have territorial disputes with Beijing are wary of how a powerful, unrestrained China might behave if not balanced by other countries, including outside powers such as the United States.

### **The Military Balance and Cross-Strait Relations**

Taiwan is the most difficult of these territorial issues because it relates directly to the nationalist credentials of the Chinese Communist Party (CCP), and because the CCP has defined unification with Taiwan as an element of the “great rejuvenation of the Chinese people” to be achieved by 2049, the centennial of the founding of the PRC. Beijing would strongly prefer to resolve the Taiwan issue peacefully but has refused to rule out the use of force, and is developing military capabilities to coerce Taiwan. The PLA views its ability to inflict large-scale damage on Taiwan as playing a critical role in deterring Taiwan independence, and also views military power as an important means of coercing a reluctant Taiwan into accepting unification. PLA coercive capabilities give Chinese leaders leverage in dealing with their Taiwan counterparts and underpin China's policy approaches toward Taiwan. In practice, the precise mix of persuasion, coercion, and united front tactics in China's policy varies depending on circumstances.

When Ma Ying-jeou was president of Taiwan from 2008 to 2016, his Kuomintang (KMT) party accepted the so-called “1992 Consensus,” which it defined as “one China, separate interpretations.” Under this political framework, the two sides signed a range of economic and administrative agreements strengthening cross-Strait ties, even as Ma resisted PRC pressure to

engage in political talks. Democratic Progressive Party (DPP) candidate Tsai Ing-wen, who became president in May 2016, has refused to accept the “1992 Consensus” and its core connotation that Taiwan is part of China, a condition unacceptable to most of her nominally pro-independence party. Beijing has responded with increased diplomatic and military pressure, including wooing away several countries that had formally recognized Taiwan, military exercises explicitly focused on Taiwan, and a series of air and naval deployments around the island. The opposition KMT had unexpected success in November 2018 local elections, but President Tsai was reelected in January 2020, and her party maintained a majority in the legislature. Tsai has refrained from provocative pro-independence actions, but China has refused to deal with her directly. China’s increasing use of the PLA to pressure and intimidate Taiwan will undercut efforts to persuade Taiwan voters that unification under Beijing’s unpopular “one country, two systems” formula is a desirable choice, especially given China’s unilateral imposition of a draconian national security law on Hong Kong in response to pro-democracy protests.

The military balance between Taiwan and China has shifted over the decades. Taiwan has historically benefitted from the inherent defensive advantages provided by its island geography and a technological edge based on access to advanced U.S. weapons and training. However, PLA modernization has eroded Taiwan’s technological advantage, and the PLA now maintains qualitative advantages across the spectrum of conflict. Taiwan’s conventional force capabilities are outmatched by the PLA’s size and advantages in personnel, weapon systems, and defense budgets. Table 1 compares Taiwan military forces with the PLA’s Eastern and Southern Theater Commands (TCs) that would be most involved in a Taiwan scenario to establish a baseline of the conventional military challenge Taiwan faces.<sup>8</sup>

**Table 1: Comparison of PLA and Taiwan Military Forces**

<b>Capability</b>	<b>PLA Eastern and Southern TCs</b>	<b>Taiwan</b>
Ground Force Personnel	412,000	88,000 (active duty)
Tanks	*6,300 across PLAA	800
Artillery Pieces	*6,300 across PLAA	1,100
Aircraft Carriers	1	0
Surface Warfare	99	26
Landing Ships	51	14
Submarines	38	2 (diesel attack)
Coastal Patrol Boats (Missile)	68	44
Fighter Aircraft	600 (*1500 across PLA)	400
Bomber Aircraft	250 (*450 across PLA)	0
Transport Aircraft	20 (*400 across PLA)	30
Special Mission Aircraft	100	30

Source: *Military and Security Developments Involving the People’s Republic of China 2020*

The PLA has developed several military options for Taiwan, including a blockade, coordinated missile and airstrikes, and plans for a full-fledged invasion of the island. However, even with the significant military advantages China has gained over Taiwan, decisive outcomes are not guaranteed.

An air and maritime blockade would involve the use of lethal military force, but the blockade could be tailored in scope and intensity.<sup>9</sup> A combined-effects blockade would likely employ the entire suite of PLA capabilities, including electronic warfare, cyber warfare, and information operations. Chinese submarine warfare capabilities and the PLA's ability to launch anti-ship cruise missiles and ballistic missiles from a variety of platforms would greatly complicate Taiwan's defenses.<sup>10</sup> Despite PLA military advantages, a blockade would disrupt commercial shipping in the region and generate significant international reactions. The extended duration of the blockade necessary to compel Taiwan into accepting Chinese terms would have substantive military, economic, and political costs and provide time for the international community to impose sanctions and for the U.S. military to deploy forces to intervene militarily. This option carries substantial costs and risks with uncertain prospects of actually compelling Taiwan to capitulate.

A second option entails an air and missile campaign that would employ PLA missile and air strikes to compel Taiwan to accept Chinese terms. The first phase would employ precision strikes to degrade Taiwan's air and missile defenses to achieve air superiority. A second phase of attacks would strike military and infrastructure targets to inflict punishment on Taiwan's leaders and population.<sup>11</sup> Such a campaign has high costs and risks for the same reasons listed above with the blockade. Taiwan also has its own offensive missile capabilities that it could use to mount limited strikes against the mainland. China has the military capabilities to inflict heavy punishment on Taiwan, but these attacks would generate significant international reaction. Moreover, the historical record indicates that strategic bombing campaigns tend to produce rallying effects rather than cause leaders and the public to surrender. Taiwan's 2021 Quadrennial Defense Review and 2019 National Defense Report spend considerable time addressing these realities and highlight the training, defense spending increases, and foreign military sales (FMS) acquisitions that would add significant risk and cost to this option for the PLA.<sup>12</sup>

The third option would involve an amphibious invasion, which might build upon prior blockade and strike campaigns. This option has the highest costs and risks, but offers the prospect of a decisive military victory. The PLA routinely exercises the military skills that would be employed in an amphibious invasion.<sup>13</sup> An invasion would require a massive mobilization of PLA forces, equipment, and logistics capabilities. The first phase would involve efforts to degrade Taiwan's air and naval defenses in preparation for an amphibious assault. The PLA would utilize precision ballistic and cruise missile strikes against Taiwan's air and missile defenses, precision long-range artillery, airstrikes with medium-range bombers and fighters, and anti-ship cruise missile and submarine attacks against Taiwan's naval assets. Taiwan would employ its air and missile defense and air force and naval assets to defend targets and contest PLA efforts to gain maritime and air superiority.<sup>14</sup> The PLA would then need to execute an amphibious assault to establish a beachhead on Taiwan and an airborne/air assault attack to try to seize an airfield and a port facility that could allow the PLA to use civilian transportation assets to provide air and sea lift. The PLA would then have to land sufficient ground combat forces to defeat Taiwan's ground forces and provide sufficient ammunition and other supplies to support them during combat operations.

Table 1 illustrates the significant air, ground, and naval disadvantages that Taiwan's military would face in an invasion. Quantitative advantages do not dictate battlefield outcomes, but the PLA numerical advantages suggest that Taiwan would be hard pressed to hold off a PLA invasion in the long run. Taiwan's Overall Defense Concept seeks to use asymmetric capabilities to pose significant obstacles to invading PLA amphibious forces. This includes investments in rapid mine deployments and mobile missile platforms that would target invading forces and complement Taiwan's geographic advantages.<sup>15</sup> The concept also includes investments to make Taiwan's forces more survivable and effective in preventing a post-landing breakout. Taiwan's military is technologically advanced, well-trained and equipped, and equally focused on this scenario. The PLA is likely to face significant losses in mounting an invasion. Moreover, even if China is able to defeat the Taiwan military, the wars in Afghanistan and Iraq illustrate the potential for insurgents backed by a supportive population to impose continuing losses against an occupying army. The costs and risks of an invasion are thus extremely high for Chinese political leaders. Even if the PLA is successful militarily, "unification" might turn out to mean indefinite occupation of a hostile population, which would create new political problems for leaders in Beijing. China would also have to contend with political and economic sanctions from the international community and the likelihood of U.S. military intervention to support Taiwan.

### **The U.S. Factor in Cross-Strait Security**

The United States does not have a formal security commitment to Taiwan, but the 1979 Taiwan Relations Act (TRA) requires making defensive arms available to Taiwan and states that U.S. policy is to retain the capability to resist the use of force or coercion to undermine Taiwan's security.<sup>16</sup> U.S. military concerns about a potential conflict with China over Taiwan are partly based on the fact that China would enjoy "home-field advantage" in operating from its own territory while the United States would have to deploy forces from distant locations and operate from a limited number of regional bases and ports or from aircraft carriers that are vulnerable to Chinese attack.<sup>17</sup> This raises the possibility that China might initiate a conflict and hope to win a quick victory before the United States can fully deploy its forces to the theater, thereby presenting the United States with a hard-to-reverse *fait accompli*.

The PLA has invested in an array of "anti-access/area denial" (A2/AD) capabilities intended to raise the costs and risks for U.S. forces operating near China, with the goal of deterring or delaying U.S. intervention. These include advanced diesel submarines (which could attack U.S. naval forces deploying into the Western Pacific), surface-to-air missiles such as the Russian S-300 which could target U.S. fighters and bombers, anti-ship cruise missiles and anti-ship ballistic missiles optimized to attack U.S. aircraft carrier battle groups. China has invested in a range of accurate conventional missiles that can target the bases and ports the U.S. military would use in a conflict. China has also sought to exploit U.S. military dependence on space systems by developing a range of anti-satellite (ASAT) capabilities that could degrade, interfere with, or directly attack U.S. satellites and their associated ground stations. It has invested in cyber capabilities to collect intelligence and to degrade the U.S. military's ability to employ computer networks in a crisis or conflict. In a conflict, the PLA would attempt to use multi-

domain attacks to paralyze U.S. intelligence, communications, and command and control systems and force individual units to fight in isolation, at a huge disadvantage.<sup>18</sup>

The implications for the U.S. ability to defend Taiwan are significant. While China is not close to catching up to the U.S. military in terms of aggregate military capabilities (quality and quantity), it does not need parity to frustrate U.S. intervention in a short conflict on its immediate periphery. The RAND Corporation's 2015 evaluation of U.S.-China military force capability trends found that the United States had "major advantages" in 7 of 10 critical capability areas in a Taiwan scenario in 1996, but that by 2017 the U.S. would have clear "advantages" in only three categories, and the PLA would enjoy advantages in two: its ability to attack U.S. airbases and carriers. China's advances in ballistic missiles, cruise missiles and modern diesel attack submarines now give it advantages it did not have during the Taiwan standoff in 1996.<sup>19</sup> The U.S. Air Force ended its sixteen year forward bomber presence on Guam in late April 2020 in recognition of China's enhanced missile capabilities, especially its DF-26 "Guam killer".<sup>20</sup>

The Department of Defense is increasingly focused on how to adapt U.S. weapons and operating concepts to fight the PLA within an anti-access/area denial environment, including forward deployment of forces and supplies to overcome the "tyranny of distance." Parts of this thinking are evident in the 2018 National Defense Strategy and the joint concept of "globally integrated operations" that seeks to leverage information and U.S. global capabilities to achieve decisive strategic effects.

At the request of Congress, Indo-Pacific Command commander Adm. Philip Davidson has developed a six-year, \$20 billion investment program for the U.S. military to "regain the advantage" over China in the Indo-Pacific, and Congress appears likely to fund his request.<sup>21</sup> The U.S. services all have active efforts underway to adapt their systems and doctrine to meet A2/AD threats, with a clear focus on China. For the U.S. Navy, this involves efforts to disrupt the "kill chain" necessary for Chinese missiles to locate and target U.S. carriers and to develop the ability to operate and reload ship armaments from a diverse set of non-traditional port facilities. For the U.S. Air Force, this involves efforts to develop both stand-off and penetrating platforms<sup>22</sup> and to improve the service's ability to conduct expeditionary, distributed operations from austere airfields with reduced logistics and maintenance requirements, which the service calls Agile Combat Employment.<sup>23</sup> The U.S. Army has created new "multi-domain task forces" which combine artillery and precision strike capabilities with a range of cyber, electronic warfare, space, and intelligence capabilities to operate within and degrade an adversary's A2/AD capabilities. The initial pilot program was conducted under U.S. Army Pacific and the first operational task force has been established at Joint Base Lewis-McChord, which is aligned to the Indo-Pacific theater.<sup>24</sup> The U.S. Marine Corps has made a major shift in its force modernization over the next decade to improve its ability to conduct expeditionary operations in contested environments, with a clear focus on China.<sup>25</sup>

U.S. military operators, strategists, and force developers are now heavily focused on how to defeat the PLA in a conflict over Taiwan or elsewhere in the Indo-Pacific, just as Chinese operators, theorists, and force developers have been focused on the U.S. military for the past 25 years. There are no real-world examples of two advanced militaries fighting each other with

advanced conventional capabilities and the full array of modern cyber, space, counter-space, and hypersonic weapons.<sup>26</sup> No one can predict the outcome with certainty, but both sides would likely suffer significant losses in a major conflict. Moreover, fighting might not be contained to the local theater, a war could turn out to be a protracted struggle for regional dominance, and there is always the risk that the losing side might escalate to the nuclear level.<sup>27</sup> For these reasons, Chinese leaders would think carefully before using force against Taiwan that might turn into a full-scale U.S.-China war.

### **Into the Grey Zone?**

The preceding analysis illustrates that it is not straightforward for the PLA to convert its growing military power advantage into the political outcome it seeks with Taiwan. All the military options for employing force have significant costs and risks, whether measured in expected operational losses or in international reactions. Grey zone operations and pressure potentially allow the CCP to exploit Taiwan's vulnerabilities while staying below the threshold of lethal force. Unlike direct military actions, grey zone operations facilitate incremental pressure on Taiwan's behavior and do not incur the high costs and risks of overt warfare. While Taiwan's efforts and investments to increase deterrence of a PRC invasion have increased the costs and risks for traditional military options, China is finding exploitable operating space elsewhere.

China is applying increasing military pressure on Taiwan in this grey zone space. Recent examples of PLA pressure include incursions into Taiwan's air defense identification zone (ADIZ) in response to politically objectionable events, circumnavigation flights by strategic bombers and intelligence, surveillance, and reconnaissance (ISR) platforms, and ballistic missile and amphibious exercises designed to impart psychological effects.<sup>28</sup> Each of these measures are calculated to provoke a specific reaction from Taiwan or designed to create effects beyond their immediate military utility in collecting intelligence, building proficiency, and familiarizing the PLA with the operating area. These actions are assertive in nature (and aggressive in their intent toward Taiwan) but individual actions don't usually cross the threshold into overt military aggression. If they do, they quickly recede below the threshold, as when multiple PLAAF fighters and bombers crossed the median line of the Taiwan Strait several times in late September but left before entering Taiwan airspace.<sup>29</sup> These activities are sometimes accompanied by publicity that ties PLA military actions to U.S. or Taiwan actions.<sup>30</sup>

China can incrementally increase the frequency of these actions to normalize them without eliciting significant military or political pushback. It also has the option of employing limited lethal force to impose higher costs on Taiwan, for example by seizing Pratas or some of the Penghu islands. As with militarization of the South China Sea in the past decade and the establishment of the East China Sea Air Defense Identification Zone (ADIZ) in 2013, China's actions can change the status quo in its favor. For Taiwan, the increased frequency of these activities has the potential to wear out military forces and consume resources and attention. Taiwan does not publicly release complete information on Chinese military incursions, but if Japan serves as any example these increased activities are becoming the new status quo. In Fiscal Year 2019, Japan scrambled fighters to challenge and intercept PLA aircraft 675 times. This figure is more than double the total number of intercepts across the entire previous decade and

reflects a sustained trend.<sup>31</sup> Each intercept involves logistics, fuel consumption, wear and tear on the aircraft, and risks to aircrew, all of which compound over time. Responses to grey zone challenges require attention and resources that exert a tax on Japanese conventional force capabilities; Taiwan's military likely feels similar pressure. Taiwan must adapt to confront PLA pressure in the grey zone operations, but cannot neglect the military investments in asymmetric capabilities needed to deter a Chinese invasion. Limited defense budgets put these missions in competition with each other, which poses a significant challenge to Taiwan's civilian and military leaders.

While the cost and risk calculus of conventional military options has driven PLA actions towards the grey zone, it is not clear if these activities will achieve China's desired outcome. Chinese grey zones activities impose costs on Taiwan, but they also demonstrate a hostile attitude that may stimulate resistance rather than compliance.

### **Conclusion**

China's decades of effort in building its military have paid off in the form of a much more capable PLA.<sup>32</sup> China has shifted the military balance of power in the Indo-Pacific in a more favorable direction, and its investments in A2/AD capabilities have raised the costs and risks for U.S. military forces operating near the Chinese mainland.<sup>33</sup> PLA modernization has had an even bigger impact on the cross-Strait military balance, where China has overcome the Taiwan military's historical qualitative advantage and built capable forces that provide Chinese leaders with new military options, including credible threats of blockade, air and missile strikes, and amphibious invasion.

The question is whether Beijing can translate this more favorable balance into its desired political outcomes. The costs and risks of efforts to achieve unification by force are high; a Chinese leader would be rolling the dice and putting his or her personal political survival at risk. U.S. military intervention would produce a major military conflict that would likely involve heavy loss of life on all sides and a significant risk of escalation into an all-out war, potentially at the nuclear level. While grey-zone tactics are effective in producing pressure and imposing costs on target countries, they do not necessarily translate into decisive outcomes while staying below the threshold of lethal force. Countries and people will not give up their freedom or their territory without a fight.

The United States is increasing investment in new forces, technologies, and concepts of operation that can help it regain a clear military edge against China. Taiwan has a workable defense concept, but needs to increase the resources devoted to its military to deter an invasion and respond to PLA grey zone challenges.<sup>34</sup> These efforts will not restore the qualitative edge the Taiwan military once enjoyed or bring back the days of unquestioned U.S. military dominance in Asia. However, they can raise the costs and risks of aggressive Chinese military actions and thereby help maintain peace in the Taiwan Strait and the Indo-Pacific.

## ENDNOTES

<sup>1</sup> This section draws upon Thomas F. Lynch III, James J. Przystup, and Phillip C. Saunders, “The Indo-Pacific Competitive Space: China’s Vision, The Post-World War II American Order and Implications,” in Thomas F. Lynch III, ed., *Strategic Assessment 2020: Into a New Era of Great Power Competition* (Washington, DC: NDU Press, 2020), <https://ndupress.ndu.edu/Publications/Books/Strategic-Assessments-2020/>.

<sup>2</sup> These numbers are extracted from, “Asian-Pacific Military Strength (2020),” Global Firepower, accessed on April 23, 2020, <https://www.globalfirepower.com/countries-listing-asia-pacific.asp>; and, “Asia: Assessing the Global Operating Environment, Military Strength,” *Heritage Foundation*, October 30, 2019,

<https://www.heritage.org/military-strength/assessing-the-global-operating-environment/asia>. USINDOPACOM claims more robust numbers on its public-facing information sites, contending that it has five carrier groups, two hundred ships, and more than 300,000 military personnel. These numbers over-count actual in-theater assets by claiming all the U.S. military assets that could be deployed. See, “About USINDOPACOM,” United States Indo-Pacific Command, accessed on April 24, 2020, <https://www.pacom.mil/About-USINDOPACOM/>.

<sup>3</sup> See Joel Wuthnow and Phillip C. Saunders, *Chinese Military Reforms in the Age of Xi Jinping: Drivers, Challenges, and Implications*, China Strategic Perspectives 10 (Washington, DC: National Defense University Press, March 2017) and Defense Intelligence Agency, *China Military Power: Modernizing a Force to Fight and Win* (Washington, DC: Defense Intelligence Agency, 2019).

<sup>4</sup> While the notion of “island chains” is a construct that the Chinese military borrowed from American World War II military and diplomatic talk, and there is no authoritative Chinese military definition of each of the chains, most Chinese sources include Taiwan, Japan/the Ryukyu Islands and the Philippine Islands as being in the First Island Chain, and all include the Northern Mariana Islands in the Second Island Chain. See Andrew S. Erikson and Joel Wuthnow, “Barriers, Springboards and Benchmarks: China Conceptualizes the Pacific ‘Island Chains,’” *China Quarterly* (January 2016): 6-9.

<sup>5</sup> See Wuthnow and Saunders, *Chinese Military Reform in the Age of Xi Jinping*.

<sup>6</sup> The United States recognizes Japanese administrative control over the Diaoyu/Senkaku islands, and therefore regards them as covered under the U.S.-Japan security treaty but does not take a position on the underlying sovereignty dispute.

<sup>7</sup> See Lyle J. Goldstein, *Five Dragons Stirring Up the Sea: Challenge and Opportunity in China’s Improving Maritime Enforcement Capabilities* (Newport: U.S. Naval War College China Maritime Studies Institute No. 5, April 2010).

<sup>8</sup> Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2020* (Washington, D.C: Department of Defense, 2020), 164-166, <https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF> (accessed Sep 15, 2020).

<sup>9</sup> *Ibid.*, 113.

<sup>10</sup> South China Morning Post. “China Fires ‘Aircraft-Carrier Killer’ Missile in ‘Warning to US,’” August 26, 2020. <https://www.scmp.com/news/china/military/article/3098972/chinese-military-launches-two-missiles-south-china-sea-warning>.

<sup>11</sup> U.S. Department of Defense, *Military and Security Developments 2020*, 113.

<sup>12</sup> Taiwan Ministry of National Defense, *2021 Quadrennial Defense Review*, <https://www.ustaiwandefense.com/tdnswp/wp-content/uploads/2021/03/2021-Taiwan-Quadrennial-Defense-Review-QDR.pdf> and Taiwan Ministry of National Defense, *2019 Taiwan National Defense Report*, <https://www.ustaiwandefense.com/tdnswp/wp-content/uploads/2020/02/Taiwan-National-Defense-Report-2019.pdf>.

<sup>13</sup> U.S. Department of Defense, *Military and Security Developments 2020*, 114.

<sup>14</sup> *Ibid.* 120.

<sup>15</sup> Andrew 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/>.

<sup>16</sup> For a concise overview of U.S. policy, see Richard C. Bush, “A One-China policy primer,” *Brookings Institution*, March, 2017, <https://www.brookings.edu/research/a-one-china-policy-primer/>.

<sup>17</sup> For an influential assessment of how much ground the Chinese military has made up relative to the United States, see Eric Heginbotham, Michael Nixon, Forrest E. Morgan, Jacob L. Heim, Jeff Hagen, Sheng Tao Li, Jeffrey Engstrom, Martin C. Libicki, Paul DeLuca, David A. Shlapak, David R. Frelinger, Burgess Laird, Kyle Brady, Lyle J. Morris, *The U.S.-China Military Scorecard Forces, Geography, and the Evolving Balance of Power, 1996–2017* (Santa Monica, CA: RAND Corporation, 2015), [https://www.rand.org/pubs/research\\_reports/RR392.html](https://www.rand.org/pubs/research_reports/RR392.html).

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<sup>18</sup> The PLA calls this “systems attack” or “systems confrontation.” See Jeff Engstrom, *Systems Confrontation and System Destruction Warfare: How the Chinese People's Liberation Army Seeks to Wage Modern Warfare* (Arlington: RAND, 2018).

<sup>19</sup> “An Interactive Look at the U.S.-China Military Scorecard,” RAND-Project Air Force, accessed on April 2, 2020, <https://www.rand.org/paf/projects/us-china-scorecard.html>. RAND defined “advantage” to mean that one side is able to achieve its primary objectives in an operationally relevant time period while the other side would have trouble doing so.

<sup>20</sup> Stephen Bryen, “Why the US Withdrew its Bombers from Guam,” *Asia Times*, April 28, 2020, <https://asiatimes.com/2020/04/why-the-us-withdrew-its-bombers-from-guam/>; and, Lee Jeong-ho, “China releases footage of ‘Guam killer’ DF-26 ballistic missile in ‘clear message to the U.S.’,” *South China Morning Post*, January 28, 2019, <https://www.scmp.com/news/china/military/article/2183972/china-releases-footage-guam-killer-df-26-ballistic-missile-clear>.

<sup>21</sup> Mallory Shelbourne, “INDOPACOM wants \$20B over the next six years to execute National Defense Strategy,” *Inside Defense*, April 2, 2020, <https://insidedefense.com/daily-news/indopacom-wants-20b-over-next-six-years-execute-national-defense-strategy/>; Tony Bertuca, “White House report on China sets stage for new Indo-Pacific investments,” *Inside Defense*, May 21, 2020, <https://insidedefense.com/daily-news/white-house-report-china-sets-stage-new-indo-pacific-investments/>; Sen. Jim Inhofe and Sen. Jack Reed, “The Pacific Deterrence Initiative: Peace Through Strength in the Indo-Pacific,” *War on the Rocks*, May 28, 2020, <https://warontherocks.com/2020/05/the-pacific-deterrence-initiative-peace-through-strength-in-the-indo-pacific/>.

<sup>22</sup> Brig. Gen. Alex Grynkeiwich, “The Future of Air Superiority, Part III: Defeating A2/AD,” *War on the Rocks*, January 13, 2017, <https://warontherocks.com/2017/01/the-future-of-air-superiority-part-iii-defeating-a2ad/>

<sup>23</sup> Maj. Gen. Brian M. Killough, “The Complicated Combat Future of the U.S. Air Force,” *The National Interest*, February 9, 2020, <https://nationalinterest.org/feature/complicated-combat-future-us-air-force-121226>

<sup>24</sup> Sean Kimmons, “Army to build three Multi-Domain Task Forces using lessons from pilot,” Army News Service, October 15, 2019,

[https://www.army.mil/article/228393/army\\_to\\_build\\_three\\_multi\\_domain\\_task\\_forces\\_using\\_lessons\\_from\\_pilot](https://www.army.mil/article/228393/army_to_build_three_multi_domain_task_forces_using_lessons_from_pilot)

<sup>25</sup> Michael R. Gordon, “Marines Plan to Retool to Meet China Threat,” *Wall Street Journal*, March 22, 2020 and Berger, *Notes on Designing the Marine Corps of the Future*.

<sup>26</sup> For an examination of the PLA’s progress in these areas, see U.S. Department of Defense, *Military and Security Developments 2020* and Phillip C. Saunders and David C. Logan, “China’s Regional Nuclear Capability, Non-Nuclear Strategic Systems, and Integration of Concepts and Operations,” in James M. Smith and Paul J. Bolt, eds., *China's Strategic Arsenal: Worldview, Doctrine, and Systems* (Washington, DC: Georgetown University Press, 2021), 125-157.

<sup>27</sup> See John Culver, “The unfinished Chinese civil war,” *The Interpreter* (Lowy Institute), September 30, 2020. Accessed October 5, 2020. <https://www.lowyinstitute.org/the-interpreter/unfinished-chinese-civil-war>.

<sup>28</sup> Matthieu Duchâtel, “Anticipating China’s Military Coercion of Taiwan,” *Institut Montaigne*, September 15, 2020. Accessed October 1, 2020. <https://www.institutmontaigne.org/en/blog/anticipating-chinas-military-coercion-taiwan>.

<sup>29</sup> Wu Su-wei, “PLA Aircraft Cross into Taiwan’s ADIZ,” *Taipei Times*, September 19, 2020. <https://taipeitimes.com/News/front/archives/2020/09/19/2003743692>.

<sup>30</sup> “PLA Friday Drills Not Warning, but Rehearsal for Taiwan Takeover: Global Times Editorial,” *Global Times*, September 18, 2020. Accessed October 1, 2020. <https://www.globaltimes.cn/content/1201338.shtml>.

<sup>31</sup> Japanese Ministry of Defense, *2020 Defense of Japan* (Tokyo: Ministry of Defense, 2020), 74, [https://www.mod.go.jp/e/publ/w\\_paper/wp2020/pdf/R02010202.pdf](https://www.mod.go.jp/e/publ/w_paper/wp2020/pdf/R02010202.pdf) (accessed 1 October 2020).

<sup>32</sup> Phillip C. Saunders, “U.S.-China Relations and Chinese Military Modernization,” in Jacques deLisle and Avery Goldstein, eds., *After Engagement: Dilemmas in U.S.-China Security Relations* (Washington, DC: Brookings Institution Press, 2021), 267-295.

<sup>33</sup> The range and lethality of the PLA’s A2/AD systems vary, but some stretch out hundreds of miles. See U.S. Department of Defense, *Military and Security Developments 2020*, 72-76.

<sup>34</sup> For a look at some of the innovative small, smart and cheap approaches Taiwan and the United States might consider, see T.X. Hammes, “Key Technologies and the Revolution of Small, Smart & Cheap in the Future of Warfare,” in Lynch, *Strategic Assessment 2020*.