



APRIL 26, 2023

STATEMENT FOR THE RECORD BEFORE THE HOUSE SELECT COMMITTEE ON COMPETITION
BETWEEN THE UNITED STATES AND THE CHINESE COMMUNIST PARTY

Closed Door Roundtable Session

Bad Blood: The TTX for the House Select Committee on Strategic Competition Between the United States and the Chinese Communist Party (CCP)

BY

Stacie L. Pettyjohn

*Senior Fellow and Director, Defense Program
Center for a New American Security*

Becca Wasser

*Senior Fellow and Lead of the Gaming Lab, Defense Program
Center for a New American Security*

And

Andrew Metrick

*Fellow, Defense Program
Center for a New American Security*

I. Introduction

Chairman Gallagher, Ranking Member Krishnamoorthi, distinguished members of the committee and staff, thank you for inviting me to come today to talk about the tabletop exercise (TTX) that we ran last week and to derive recommendations for specific actions that can strengthen deterrence against China. Though they are not here tonight, my colleagues Becca Wasser and Andrew Metrick contributed this writeup.

Three key insights emerged from last week's TTX that are supported by extant analysis and lend themselves to clear and actionable recommendations for Congress and the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2024. These three primary takeaways from the TTX are:

- The United States will run out of preferred munitions in the early days of a conflict;
- Bombers and submarines provide a unique and asymmetric advantage in a potential conflict with China;
- A distributed and resilient U.S. posture in the Indo-Pacific places the United States in the best position to defend Taiwan.

These three lessons learned translate into clear steps this Congress can take to strengthen our munitions stockpiles, maximize production of advanced air and undersea capabilities, and make investments in a distributed and hardened posture that is able to withstand Chinese missile attacks. But making these changes cannot wait. Congress must push these efforts through in the FY 2024 NDAA as they will take time to take mature.

Two additional lessons learned from the TTX require more research and analysis before they can be translated into Congressional action. They are:

- The role of economic warfare in pre-conflict and mid-conflict phases;
- The implications of the aforementioned takeaways for a protracted conflict between China and the United States.

While this statement will touch on these two issues, the emphasis is on the insights that we have the most confidence in which are detailed in the following pages.

II. The Tabletop Exercise

On April 19, 2023, the Center for a New American Security's (CNAS) Defense Program and the Gaming Lab ran a tabletop exercise that examined how the United States could use diplomatic, military, and economic tools to defeat a Chinese invasion of Taiwan with members of the House Select Committee on Strategic Competition Between the United States and the Chinese Communist Party (CCP). This game focused on American and Chinese strategic decision making and sought to provide insights into what the United States could do to win should deterrence fail. The exercise also sought to provide committee members with an understanding of the range of potential Chinese options in line with their strategic guidance and military doctrine. The ultimate goal of this TTX was to identify how to strengthen deterrence and uphold peace in support of a free and open Indo-Pacific.

There were two teams in the TTX: a Blue team making decisions on behalf of the United States and a Red team playing China. The members of Congress were all assigned to the Blue Team, representing members of the National Security Council (NSC) advising the president on a whole-of-government strategy to respond to Red's attack. They were tasked with defending the U.S. homeland and its citizens, defending Taiwan, upholding treaty commitments to allies, and weakening China's military power. The Red team was comprised of two subject matter experts from the

CNAS defense team representing the CCP and the Central Military Commission (CMC) and sought the forcible subjugation of Taiwan. The scenario, set in 2027, posited a political crisis emerging between China and Taiwan that led Beijing to call for immediate unification negotiations. When Taipei rebuffed the talks, China began to mobilize for an invasion, and the TTX began on the precipice of a Chinese invasion of Taiwan. It is vital to emphasize that CNAS set the scenario in 2027 to ensure that Blue and Red's capabilities were grounded in realistic projections. This decision does not reflect any belief that China is actively preparing for an attack on Taiwan in 2027. Combat was adjudicated by several deterministic theater-level models, while a simple stochastic model was created to assess the impact of economic coercion.

The Blue team was tasked with defining an overarching diplomatic approach and picking from three military and economic strategies, drawing on the expertise of military and economic advisors from CNAS, to achieve their goals in the first three days of the conflict. The Blue team chose a military strategy that paired distributed air, ground, and undersea forces inside the first island chain with bombers operating from distant bases to attrit the invasion fleet and prevent the seizure of Taiwan. It also struck other Red military targets to decrease the risk to U.S. forces in theater. For their economic strategy, the Blue team elected to sanction several state-owned banks with the implicit threat of further economic action, putting a moderate amount of macroeconomic pressure on China. For its part, the Red team launched massive air and missile strikes against Taiwan and U.S. bases in the region. It then started an amphibious crossing, airborne landing, and air assault against Taiwan. Red also dumped its share of U.S. treasuries to destabilize the markets and banned the export of consumer electronics to the United States in a message to industry and government. After the first three days, the Red team had successfully established a lodgment with over 30,000 forces on Taiwan but had suffered considerable losses. The Red team's attacks against U.S. bases and close-in forces also resulted in losses, but because American forces were highly distributed and possessed advanced base defenses, most forces survived and were able to continue to support the operation.

In the second move representing the next three days of the conflict, the Blue team continued its military strategy and escalated its macroeconomic pressure. The Red team stayed the course with its invasion, but also banned the export of key energetics, used in U.S. weapons, and the export of legacy chips to the United States. Given time constraints, the participants were only able to get through two quick moves, representing the first six days of the war.

TTXs are not intended to be predictive; rather, they are indicative, and their results should always be tested with additional exercises and other forms of analysis. As this TTX was only run once, its insights should be viewed as preliminary and warranting further analysis—particularly the key takeaways regarding economic warfare and protraction. As such, this written statement chooses to highlight the observations from this exercise that we can corroborate with existing analysis and insights from other TTXs and that are aligned with Congressional oversight functions.

III. No One Wins... But Only If the United States Makes Needed Investments in Near-Term Capabilities and Posture

At the end of the TTX, neither the Red team nor the Blue team was in a position to declare victory, and there was no clear end to the conflict in sight. This was a relatively good outcome for Blue compared to other TTXs.¹ While both the United States and China aspire to achieve a quick victory, that outcome is likely unobtainable given the high stakes of the conflict and the resources that each great power has at its disposal. As we saw in this TTX and others, the Red team's strategy is to launch a devastating first blow to cripple Taiwan's military and prevent American forces from effectively defending Taiwan, forcing the capitulation of both Washington and Taipei. In this game and others, Blue's strategy is to defeat the invasion force and deny Red a quick victory.² In reality, neither plan is likely to be sufficient to win.

In the exercise, the Blue team prevented a swift Chinese victory by selecting a smart military strategy but also because the game designers assumed that in this fictional 2027 scenario, the Pentagon had made investments in critical capabilities, such as munitions, base defenses, and posture. In reality, while some of these improvements are underway, much more needs to be done—and soon. Many of these investments depend on Congress authorizing and appropriating the resources for key efforts like multi-year procurement (MYP) of missiles and investments in military construction funds for overseas bases. It is also far from certain that the U.S. military will have the number of bombers, submarines, and missiles needed for such a conflict by 2027 without further investments in expanding the defense industrial base and MYP contracts. Moreover, the Department of Defense is taking steps to improve the resiliency of its Indo-Pacific posture, but it requires additional resources to build up a network of distributed bases, prepositioned equipment, effective base defenses, and rapid reconstitution capabilities.³ It also needs support from Congress to modernize the legacy U.S. military footprint by, for example, not basing as many forces at the most vulnerable locations, like Kadena Air Base on the island of Okinawa.⁴

If China decides to invade Taiwan, the human, economic, and military costs would be enormous for all parties involved. The markets would likely plummet with two of the largest economies in the world at war with each other and commercial maritime and air traffic in the area grinding to a halt due to rising insurance premiums and fear of being caught in the crossfire. The conflict itself would be unlike anything the United States or China has experienced in recent history. The losses would be extremely high. According to our model, the Blue team had over 10 bases attacked, over 90 aircraft lost, two attack submarines destroyed, three attack submarines damaged, two amphibious ships sunk, and one carrier damaged after just a week of fighting. For its part, the Red team lost over 150 aircraft, 15 submarines, over 100 surface ships, and one aircraft carrier. It managed to land around 50,000 forces on Taiwan but lost over 40,000 troops from the landings and ground combat components of the operation. This, coupled with the civilian death toll, would be a devastating loss of human life.

These horrific losses are even more daunting when you consider that a conflict between the United States and China is likely to become protracted and extend well beyond a few days or weeks.⁵ This is why it is imperative that we take immediate steps to strengthen deterrence to reduce the chance that China ever decides to attack Taiwan and to keep this conflict from occurring. Should the United States fail to make improvements to its capabilities and posture, the CCP might conclude that it could win and decide to risk forcing unification with Taiwan.

IV. War By Timeframe: The Four Phases of a U.S.-China Conflict

The TTX only examined the first six days of a hypothetical war between the United States and China. Yet the outcome in this TTX is similar to other exercises, which have concluded that neither side can quickly defeat the other and that a Chinese invasion of Taiwan would likely become a protracted conflict.⁶ While more work needs to be done to identify which strategies could enable the United States to prevail over the long-haul, there are several timeframes that matter to establishing American advantage in the conflict. Each temporal phase emphasizes different tools which, in turn, translate into a variety of investments that Congress can encourage the U.S. government to make today. We have identified four different timeframes that matter: *pre-war*, *long-range shoot out*, *war of attrition*, and *long-term economic warfare*.

In the *pre-war* phase, U.S. actions should focus on strengthening conventional deterrence. Diplomacy would take center stage as the United States would need to build international support for strong economic and military responses to potential aggression. Similar to the Biden administration's approach during the lead-up to Russia's invasion of Ukraine in 2022, American officials would need to share intelligence with allies and partners to convince them that an attack is likely.⁷ This intelligence sharing would be essential to the United States' ability to coordinate a powerful multilateral economic and military response intended to deter China from aggression. Such punitive action would be clearly communicated to Beijing to dissuade them from an attack on Taiwan. However, if the United States did not engage in serious economic and military planning with allies and partners before an attack occurred, it would

be difficult to quickly forge a strong coalition and coordinate effective multilateral action, thus weakening its chances of effective collective deterrence.⁸ The pre-war phase also requires taking steps to strengthen U.S. conventional deterrence. This requires positioning U.S. forces to survive a Chinese first strike and effectively defend Taiwan should deterrence fail. The United States would need to build up forces and supplies in the region, secure access to key bases, and distribute its forces in resilient manner as the Blue team did during the TTX.⁹

The opening days and weeks of the war would be a *long-range shoot out*. Both China and the United States would be likely to rely heavily on standoff missile attacks against both fielded forces and bases. China's growing stockpile of intermediate-range ballistic missiles enables the PLA to attack U.S. overseas territory, launching strikes on U.S. forces on Guam and the Commonwealth of the Marianas multiple times.¹⁰ However, both sides would run low of long-range missiles.¹¹ In the TTX, the Blue team ran out of its standoff maritime strike weapons in three days and its standoff land attack weapons would have been exhausted within ten to fourteen days. Even China's large inventory of ground-based ballistic and cruise missiles would be depleted.

Once U.S. and China's long-range missile stockpiles are depleted, the conflict becomes a grinding *war of attrition*. China could likely secure a beachhead on Taiwan with tens of thousands of forces, but would then be challenged to sustain its troops while facing fierce Taiwanese resistance and continued attacks by American forces. The United States would be able to push in its surface fleet and more effectively use short-range fighter aircraft after the long-range missile threat waned, but it would struggle to find ways to effectively attrite PLA forces and support Taiwanese defensive efforts with shorter range weapons. The United States would also need to sustain its forces in a contested environment and develop options for keeping Taiwan supplied as the war dragged on.

As months or even years go by, *long-term economic warfare* would begin to have an effect. Across all timeframes, Beijing would likely use its economic clout to harm the United States and other nations that support Taiwan.¹² Meanwhile, Washington and a coalition of the willing would use sanctions and advanced export controls to erode China's economic power.¹³ Yet several coercive economic tools—especially those likely to be leveraged by the United States—do not have an immediate impact and take time to have a cumulative effect. If the United States or China were to take steps to try to collapse the other's economy, global market panic would be likely, leading to a systemic crash. Economic warfare is a double-edged sword. U.S. efforts to weaken China's economy and reduce its ability to finance and fight a war would create blowback given the interdependencies between our two economies. This suggests that both China and the United States are likely to adapt and find ways of adjusting their economies so that they can function without each other should the conflict drag on.

V. Bombers, Submarines, and Long-Range Missiles Dominate in the Early Days

In the TTX, bombers and submarines were vital capabilities delivering the preponderance of U.S. firepower in the first six days of the conflict.¹⁴ Bombers are an area of asymmetric advantage for the United States and critical in this scenario because of their ability to fly long ranges and carry large payloads.¹⁵ Because bombers are less reliant on vulnerable airbases located within or close to Chinese missile range, they are likely to provide the bulk of American airstrikes in the early days of the war. The legacy B-1 and B-52 bomber fleets can deliver standoff cruise missile strikes, while the stealthy B-2 and B-21 bombers are able to fly inside Chinese air defenses which enables them to attack a wider array of targets. The U.S. Department of Defense (DoD) needs to take steps to maximize and potentially surge the production rate for new stealth bombers while continuing to modernize the B-52.

Submarines are another area of American advantage and the United States' most important maritime strike platform in this scenario. Because U.S. attack submarines are hard to detect and have tremendous endurance, they can be prepositioned inside the waters of the first island chain before the conflict begins. Once the hostilities start, these submarines can provide persistent survivable firepower concentrated on sinking the Chinese invasion fleet. Attack submarines are more capable of sinking Chinese ships with their heavy torpedoes than any other platform.¹⁶ They also

can fire cruise missiles at Chinese targets on the mainland or at People's Liberation Army (PLA) forces that land on Taiwan. To build a robust undersea fleet, the DoD needs to maximize investments across the submarine industrial base. This includes investing in private shipyards that build new submarines, providing robust funding for the public shipyards that maintain the submarines in the fleet, and ensuring the health of the workforce and suppliers that make all of this possible.¹⁷

These areas of unique American advantage come with a considerable constraint: either insufficient numbers of or incorrect types of munitions. In the TTX, the Blue team ran out of long-range anti-ship missiles in three days and was running low on long-range land attack missiles. Given the indications that a potential conflict between the United States and China would go on for some time, this is a daunting prospect for long-term missile expenditure. The DoD must augment munitions stockpiles in the near-term, particularly of long-range air launched weapons to ensure that bombers, a key U.S. advantage, can continue to contribute to this fight.¹⁸ Tactical air forces also need medium-range anti-ship missiles, which the Air Force has just begun to purchase this year.¹⁹ In addition to stockpiling more air-launched maritime strike weapons, the DoD should procure additional ground, surface, and sub-surface launched maritime strike weapons. The Department should also experiment with new concepts such as using long-range anti-radiation missiles to target the air defense radars of Chinese ships, which could suppress these air defense vessels and increase the efficacy follow-on anti-ship missile strikes.²⁰

It is likely that some PLA forces will get ashore on Taiwan during an invasion, given that Beijing can mass ships and fires. The United States needs to prepare to attrite the PLA forces on Taiwan, but its current stockpiles of land attack weapons are not optimized for attacking large numbers of dispersed and mobile ground forces. In the TTX, Blue efforts to provide air support to Taiwan were hindered by the fact that U.S. forces did not have area effects weapons to dislodge PLA forces from the island. The DoD should explore options for Oslo-compliant area effects weapons and a next-generation Joint Direct Attack Munition (JDAM) to effectively launch interdiction strikes and provide close air support to Taiwanese forces.

The DoD may be underestimating the number of missiles required for a conflict with China for two primary reasons. The first reason is mass. China has a large number of fighters and ships that it is likely to push forward, requiring a high volume of U.S. strikes. The second reason is a shift in U.S. posture toward distributed operations. This necessitates larger stockpiles for allocation to dispersal locations both to defend a greater number of bases but also to provide logistical flexibility across these installations. The Department needs to reimagine how it thinks of munitions and abandon the "one missile per target" paradigm that has come to define the American way of war following the Gulf War.²¹ This means the DoD needs ample stockpiles of weapons so it can launch large enough salvos to saturate China's air defenses and increase the chance of some weapons getting through to their targets.

VI. A Resilient and Responsive Posture Across Domains

In the hypothetical world of the TTX, the DoD had made the investments to strengthen U.S. military posture in the Indo-Pacific so that Blue could withstand a large first strike and rapidly begin to contest the invasion. This is not currently true in the real world.²² The United States should improve the resiliency of its posture by implementing a multi-faceted system of building passive defenses, fielding mobile active defenses, prepositioning equipment and supplies, and improving its ability to rapidly repair damaged base infrastructure.²³

The military strategy selected by the Blue team in the TTX made smart choices about where it based different forces. Blue fighter aircraft in Japan, for example, could take advantage of the hardened aircraft shelters at many Japanese bases while the high sortie rates of both U.S. and Japanese fighters engaged in counter-air operations enabled allies to

maximize the use of scarce hardened shelters. Larger aircraft, such as tankers, bombers, and maritime patrol aircraft, were kept farther away to enhance their survivability.

Contrary to many operational concepts, Blue's strategy avoided basing bombers on Guam because of the island's vulnerability to China's growing stockpile of intermediate-range ballistic missiles, especially at the outset of the conflict. The Blue team did distribute fighters and tankers across a cluster of airbases on Guam and the Commonwealth of the Northern Mariana Islands. These bases were bolstered by active defenses and air defenses provided by nearby surface naval vessels which significantly degraded Red's attacks and enabled Blue to continue to generate combat power from the Guam base cluster.

To make the Blue team's posture in the TTX a reality, the DoD must do more to create the conditions for a distributed posture. While the Biden administration has made notable progress in gaining access to new bases in the Indo-Pacific, it still must improve the infrastructure at these locations to support U.S. military operations.²⁴ Infrastructure improvements must enable the dispersed, redundant, and resilient stockpiling of key logistics inputs such as munitions, fuel, and spare parts. These overarching material investments must be matched with the manpower and supporting equipment.

In addition to upgrading base infrastructure, the Department of Defense should take actions that make it difficult for China to easily target U.S. forces on existing U.S. bases. This would include on-base dispersal of forces and the proliferation of low-cost decoys. Additionally, the DoD should selectively harden key facilities, such as headquarters and field expeditionary hardened shelters for fighter aircraft. These passive efforts should be complimented by investments in mobile, expeditionary active defense systems, especially for the counter-cruise missile and counter-theater ballistic missile missions. These active systems would include both kinetic and non-kinetic capabilities.²⁵ Finally, the DoD needs to continue to invest in rapid repair capabilities that enable airbases and ports to quickly resume operations after an attack. The DoD should ensure that material and non-material solutions for rapid reconstitution are adequately funded and prioritize the development of tactics, techniques, and procedures that limit base closure times.

Creating a resilient and responsive posture requires more than just bases; it also requires strengthening space, cyber, and electromagnetic spectrum capabilities. In the TTX, Blue bolstered its cyber and space defenses. It also used offensive cyber-attacks to disrupt Chinese targeting and force flow and sought to disable or destroy Red's offensive space weapons once the war began.²⁶ These actions in space and cyber limited Red's ability to effectively target Blue forces and helped Blue to close its kill chains in the face of Red's attempt to break critical links. Given China's focus on attacking American military networks and communications, the DoD should consider how our current, highly integrated approaches to command and control may fail and how more nodal, ad-hoc approaches may improve resiliency and better align with distributed concepts of operations.²⁷

The TTX highlighted how the Blue team's ability to effectively defend Taiwan depended on being able to absorb a Chinese first strike by dispersing forces on bases throughout the region and strengthening its defenses in space and the cyber domains. It also rested on Blue's ability to rapidly target Red's invasion forces and neutralize its counter-space capabilities. The performance of the Blue team in the TTX was buoyed by the assumption of robust, expeditionary base defense capabilities at both distributed operating locations and main operating bases. The DoD must rapidly and ruthlessly prioritize military construction overseas, and passive and active defensive systems to be able to weather the PLA's expanding and evolving long-range first strike capabilities.

VII. Conclusion and Recommendations

Our current understanding of a potential future conflict between China and the United States over Taiwan, as illustrated by the TTX, paints a bleak and depressing picture. The good news is that this future does not need to come to pass—but only if we take immediate steps to strengthen deterrence.

The U.S. Congress can strengthen our defense industrial base to support and maximize production of the most critical defense capabilities, to include U.S. Air Force bombers, U.S. Navy submarines, and a diverse stockpile of preferred munitions. Congress can also bolster U.S. posture in the Indo-Pacific and enable the Joint Force to shift to a distributed posture that enhances resiliency in both peacetime and conflict. Specific recommendations for what Congress can do to improve these areas in the next NDAA can be found in the table below.

All these efforts would improve the U.S. military's ability to defend Taiwan in case of an attack by China. By better preparing U.S. forces to withstand a preemptive strike and then respond to a potential Chinese invasion of Taiwan, the United States is, in fact, deterring China. These enhancements are intended to give Beijing pause and inspire it to reconsider whether aggression would be worthwhile. Ultimately, we must collectively ensure that what transpired in this TTX does not come to pass. This requires making concerted changes to improve U.S. military strength to bolster deterrence in the Indo-Pacific.





Recommendations for the FY 2024 NDAA

<i>Requirement</i>	<i>Application to a Taiwan Contingency</i>	<i>Issue</i>	<i>NDAA Recommendations</i>
<i>Capabilities</i>			
Sustaining U.S. bombers	In a potential conflict, bombers could provide the majority of sustainable, access insensitive strike volume against a range of potential PLA targets.	The U.S. bomber fleet currently lacks the capability, capacity, and health to play this war-winning role.	<ul style="list-style-type: none"> • Mandate an assessment of options to maximize and potentially surge the production rate of the B-21. • Request a joint DoD-industry briefing on B-52 modernization plans and progress. • Mandate a U.S. Air Force study on ways to maximize the capability and capacity of the B-2 and B-1 fleets.
Building submarines	In a future conflict, submarines could provide sustainable, access insensitive counter-maritime strikes.	Current deficiencies and delays in U.S. shipbuilding and maintenance mean that there will not be enough undersea capabilities to generate the necessary strike volume.	<ul style="list-style-type: none"> • Maximize use of multi-year procurement for <i>Virginia</i>-class submarines and align with AUKUS activities to provide consistent funding, enable manufacturing capacity, and accelerate delivery schedules. • Modify biennial report on shipbuilding training and the defense industrial base into a yearly assessment of the defense shipbuilding workforce, current and projected labor needs, and planned workforce improvements required to meet the demands of a 2+ <i>Virginia</i>-class per year requirement. • Request an independent study on the solutions to ongoing maintenance challenges for SSNs and SSBNs, to include outsourcing labor, using privately owned shipyards, and leveraging allied labor or shipyards. • To keep critical SSNs in the fight and limit their time transiting to and from distant bases, the Navy should develop expeditionary methods of maintenance and sustainment for the undersea fleet, including how the Navy could rearm SSNs at sea. • Require advance procurement of spare parts for <i>Virginia</i>-class submarines by the Department of the Navy to keep the sustainment pipeline open to overcome maintenance issues and delays and reduce the cannibalization of parts from other submarines.

Producing counter-maritime, air-to-air, and counter-ground munitions	A potential future conflict between the United States and China would require a high volume of strikes due to China’s ability to mass forces, the requirements to provide air support to Taiwanese forces, a shift to a more distributed posture, and the likelihood of protracted conflict.	Current and planned stockpiles of munitions are insufficient for the rate of expenditure in a potential future conflict against China. This is particularly true for counter-maritime munitions, which are quickly depleted in unclassified wargames and analysis. Other types of munitions, namely ground support weapons, are not optimized for the requirements of a potential conflict in the Indo-Pacific.	<ul style="list-style-type: none"> • Require a rapid DoD assessment of options to expand production capabilities for air, ground, surface, and sub-surface counter-maritime munitions to meet the topline quantity requirements against the full spectrum of possible targets. Options should focus on opportunities to expand U.S. production capabilities and potential co-production opportunities with allies. • Extend the large lot procurement pilot program to the following munitions: Joint Strike Missile, AARGM-ER, and SiAW. • Mandate an independent study on how the Joint Force can provide close air support and interdiction to Taiwan in the event of a conflict with China and implications for air to surface munitions to inform future munitions development, including a next generation JDAM replacement and Oslo-compliant area effects weapons. • Require the DoD to identify options and opportunities for pre-positioned munitions stockpiles in the Indo-Pacific, along with concrete plans for how to transport these munitions to both main operating bases and dispersed operating sites.
Air and missile defenses	The United States must weather high volume missile strikes against a large number of installations across the theater in order to continue to generate forces to defend Taiwan.	As U.S. air superiority would be contested by China’s long-range strike capabilities, the United States can no longer afford to underinvest in air and missile defense to protect forces and bases in the Indo-Pacific.	<ul style="list-style-type: none"> • Direct the Department of Defense to study options for expeditionary base defense capabilities that combine mobile and deployable air defenses and non-kinetic jamming to disrupt high-volume saturation attacks. • Commission a DoD study on alternative Defense of Guam strategies and concepts, including those that embrace mobile defensive systems and naval surface fleet air defenses.
<i>Posture</i>			
Strengthen posture	The United States will need to possess a sufficiently robust and survivable forward posture within range of Taiwan to support the	Current posture in the Indo-Pacific is insufficient to meet the warfighting demands of a potential Taiwan	<ul style="list-style-type: none"> • Mandate an assessment of the progress made by the Department of Defense toward achieving the objectives of the Pacific Deterrence Initiative and whether funding has aligned with its objectives. The assessment should include updates on the current state of defense posture in the Indo-Pacific, to include base infrastructure and hardening efforts, pre-positioned equipment and munitions



	<p>defense of Taiwan but located outside of the worst threat rings posed by China’s missile capabilities. This forward posture must be supported by a relatively distributed, distant posture that supports bomber and high-value aircraft operations.</p>	<p>contingency as forces lack resiliency.</p>	<p>stocks, investments required to address contested logistics, the status of current and planned military construction, and the planned exercise INDOPACOM exercise schedule.</p> <ul style="list-style-type: none"> • Request the DoD provide a detailed assessment of current and planned base resiliency measures to include base hardening and active and passive defenses. • Require an independent study to consider the overflight requirements associated with widely distributed postures to the United States to inform Department of Defense and Department of State negotiation activities.
<p>Enable a distributed posture</p>	<p>U.S. operational concepts are currently predicated on dispersal to enhance resiliency and shift forces to a warfighting posture to help operations to support Taiwan.</p>	<p>U.S. forces currently lack the equipment, infrastructure, and concepts required to enable dispersion and quickly shift from a peacetime to warfighting posture.</p>	<ul style="list-style-type: none"> • Direct the DoD to prioritize Pacific Deterrence Initiative spending on capabilities, military construction, and other investments that support the distribution and rapid reconstitution of forces. As part of this directive, require additional funding tables that accompany defense authorization and appropriation legislation to help clarify how these investments enable dispersed operations. • Require the DoD to identify options and opportunities for pre-positioned munitions stockpiles in the Indo-Pacific, along with concrete plans for how to transport these munitions within or to the First and Second Island chains. • Mandate a DoD study assessing requirements for additional munitions, fuel supplies and storage, logistics inputs, and rapid reconstitution capabilities that are required to undergird a distributed posture.





¹ Sydney J. Freedberg Jr., “US ‘Gets Its Ass handed to It’ In Wargames: Here’s a \$24 Billion Fix,” *Breaking Defense*, March 7, 2019, <https://breakingdefense.com/2019/03/us-gets-its-ass-handed-to-it-in-wargames-heres-a-24-billion-fix/>.

² For examples see: Stacie Pettyjohn, Becca Wasser, and Chris Dougherty, “Dangerous Straits: Wargaming a Future Conflict over Taiwan,” (Washington, DC: Center for a New American Security, 2022),

<https://www.cnas.org/publications/reports/dangerous-straits-wargaming-a-future-conflict-over-taiwans>; Mark F. Cancian, Matthew Cancian, and Eric Heginbotham, *The First Battle of the Next War: Wargaming a Chinese Invasion of Taiwan*, (Washington, DC: Center for Strategic and International Studies, 2023), <https://www.csis.org/analysis/first-battle-next-war-wargaming-chinese-invasion-taiwan>; Chris Dougherty, “More than Half the Battle: Information and Command in a New American Way of War,” (Washington, DC: Center for a New American Security, 2021),

<https://s3.amazonaws.com/files.cnas.org/CNAS+Report+Command+and+Info-2021.pdf>; Eric Heginbotham, et. al., “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/content/dam/rand/pubs/research_reports/RR300/RR392/RAND_RR392.pdf; Valerie Insinna, “A US Air Force war game shows what the service needs to hold off — or win against — China in 2030,” *Defense News*, April 12, 2021, <https://www.defensenews.com/training-sim/2021/04/12/a-us-air-force-war-game-shows-what-the-service-needs-to-hold-off-or-win-against-china-in-2030/>; Tara Copp, “‘It Failed Miserably’: After Wargaming Loss, Joint Chiefs Are Overhauling How the US Military Will Fight,” *Defense One*, July 26, 2021, <https://www.defenseone.com/policy/2021/07/it-failed-miserably-after-wargaming-loss-joint-chiefs-are-overhauling-how-us-military-will-fight/184050/>.

³ Stacie L. Pettyjohn, “Spiking the Problem: Developing a Resilient Posture in the Indo-Pacific with Passive Defenses,” *War on the Rocks*, January 10, 2022, <https://warontherocks.com/2022/01/spiking-the-problem-developing-a-resilient-posture-in-the-indo-pacific-with-passive-defenses/>.

⁴ Stacie L. Pettyjohn, Andrew Metrick, and Becca Wasser, “The Kadena Conundrum: Developing a Resilient Indo-Pacific Posture,” *War on the Rocks*, December 1, 2022, <https://warontherocks.com/2022/12/the-kadena-conundrum-developing-a-resilient-indo-pacific-posture/>.

⁵ Andrew Metrick, *Rolling the Iron Dice: The Inescapable Reality of Protraction*, (Washington, DC: Center for a New American Security, forthcoming).

⁶ Stacie Pettyjohn and Hannah Dennis, “Escalation Management in a War to Defend Taiwan,” HDTRA1-22-P-0024, (Washington, DC: Center for a New American Security, 2022); Tim Heath, Kristen Gunness, and Tristan Finazzo, “The Return of Great Power War Scenarios of Systemic Conflict Between the United States and China,” (Santa Monica: RAND Corporation, 2022), https://www.rand.org/pubs/research_reports/RRA830-1.html

⁷ Erin Banco, Garrett M. Graff, Lara Seligman, Nahal Toosi and Alexander Ward, “‘Something Was Badly Wrong’: When Washington Realized Russia Was Actually Invading Ukraine,” *Politico*, February 24, 2023, <https://www.politico.com/news/magazine/2023/02/24/russia-ukraine-war-oral-history-00083757>.

⁸ Stacie L. Pettyjohn and Becca Wasser, “No I in Team: Integrated Deterrence with Allies and Partners,” (Center for a New American Security, December 2022), <https://www.cnas.org/publications/reports/no-i-in-team>.

⁹ Becca Wasser, *Campaign of Denial: Strengthening Simultaneous Deterrence in the Indo-Pacific and Europe*, Center for a New American Security, forthcoming).

¹⁰ Xiao Tianliang, et. al., *The Science of Military Strategy (Revised in 2020)*, ed. Xiao Tianliang, trans. China Aerospace Studies Institute, (Beijing: National Defense University Press, 2020), <https://www.airuniversity.af.edu/CASI/Display/Article/2913216/in-their-own-words-2020-science-of-military-strategy/>; U.S. Department of Defense, *Military and Security Developments Involving the People’s Republic of China: 2022*, (Washington, DC: U.S. Department of Defense, 2022), <https://media.defense.gov/2022/Nov/29/2003122279/-1/-1/1/2022-MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA.PDF>; U.S. Department of Defense, *Military and Security Developments Involving the People’s Republic of China: 2019*, (Washington, DC: U.S. Department of Defense, 2019), U.S. Department of Defense, *Military and Security Developments Involving the People’s Republic of China: 2022*, (Washington, DC: U.S. Department of Defense, 2022), <https://media.defense.gov/2022/Nov/29/2003122279/-1/-1/1/2022-MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA.PDF>;;

¹¹ For more on U.S. conventional PGM buys see Stacie L. Pettyjohn and Hannah Dennis, “Precision and Posture: Defense Spending Trends and the FY23 Budget Request,” (Center for a New American Security, November 2022), <https://www.cnas.org/publications/reports/precision-and-posture-defense-spending-tre>.

¹² Emily Kilcrease, Emily Jin, Rachel Ziemba, “Containing Crisis: Strategic Concepts for Coercive Economic Statecraft,” (Washington, DC: Center for a New American Security, December 2021).

<https://www.cnas.org/publications/reports/containing-crisis>

- ¹³ For an example of the economic actions taken against Russia see: Emily Kilcrease, Jason Bartlett, and Mason Wong, “Sanctions By the Numbers: Economic Measures against Russia Following Its 2022 Invasion of Ukraine,” (Center for a New American Security, June 16, 2022), <https://www.cnas.org/publications/reports/sanctions-by-the-numbers-economic-measures-against-russia-following-its-2021-invasion-of-ukraine>.
- ¹⁴ David A. Ochmanek, “Restoring U.S. Power Projection Capabilities: Responding to the 2018 National Defense Strategy,” (RAND, July 2018), p. 9, <https://www.rand.org/pubs/perspectives/PE260.html>; Stacie Pettyjohn, Becca Wasser, and Jennie Matuschak, “Risky Business: Future Strategy and Force Options for the Defense Department,” (Center for a New American Security, July 20, 2021), <https://www.cnas.org/publications/reports/risky-business-future-strategy-and-force-options-for-the-defense-department>, pp. 13-15.
- ¹⁵ Christopher Bowie, Fred Frostic, et. al., “The New Calculus: Analyzing Airpower’s Changing Role in Joint Theater Campaigns,” (Santa Monica: RAND Corporation, 1993), https://www.rand.org/pubs/monograph_reports/MR149.html.
- ¹⁶ John C. Schulte, *An Analysis of the Historical Effectiveness of Anti-Ship Cruise Missiles In Littoral Warfare*, MS diss. (Naval Postgraduate School, 1994), <https://apps.dtic.mil/sti/pdfs/ADB192139.pdf>; David B. Larter, “This is what it looks like when a MK-84 torpedo breaks your keel,” *Defense News*, July 17, 2018, <https://www.defensenews.com/naval/2018/07/17/this-is-what-it-looks-like-when-a-mk-48-torpedo-breaks-your-keel-video/>.
- ¹⁷ R. Derek Trunkey and Eric J. Labs, *The Capacity of the Navy’s Shipyards to Maintain Its Submarines*, Presentation at the Annual Conference of the Western Economic Association International, (Washington, DC: Congressional Budget Office, June 29, 2021). <https://www.cbo.gov/system/files/2021-06/57290-Shipyards.pdf>
- ¹⁸ Stacie L. Pettyjohn and Hannah Dennis, “Precision and Posture: Defense Spending Trends and the FY23 Budget Request,” (Center for a New American Security, November 2022), <https://www.cnas.org/publications/reports/precision-and-posture-defense-spending-tre>.
- ¹⁹ “US Air Force to buy JSM cruise missiles for F-35 jets,” *Defence today*, March 22, 2023, <https://www.defencetoday.com/air/air-weapons/us-air-force-to-buy-jsm-cruise-missiles-for-f-35-jets/>.
- ²⁰ “Northrop Grumman’s Advanced Anti-Radiation Guided Missile Extended Range Completes Fourth Successful Missile Live Fire,” Northrop Grumman, December 8, 2022, <https://news.northropgrumman.com/news/releases/northrop-grummans-advanced-anti-radiation-guided-missile-extended-range-completes-fourth-successful-missile-live-fire>.
- ²¹ Barry Watts, “Six Decades of Guided Munitions and Battle Networks: Progress and Prospects,” (Washington, DC: Center for Strategic and Budgetary Assessments, 2007), <https://csbaonline.org/research/publications/six-decades-of-guided-munitions-and-battle-networks-progress-and-prospects>.
- ²² Becca Wasser, “The Unmet Promise of the Global Posture Review,” *War on the Rocks*, December 30, 2021, <https://warontherocks.com/2021/12/the-unmet-promise-of-the-global-posture-review/>; Stacie L. Pettyjohn, “Spiking the Problem: Developing a Resilient Posture in the Indo-Pacific with Passive Defenses,” *War on the Rocks*, January 10, 2022, <https://warontherocks.com/2022/01/spiking-the-problem-developing-a-resilient-posture-in-the-indo-pacific-with-passive-defenses/>
- ²³ Alan J. Vick, “Air Base Attacks and Defensive Counters: Historical Lessons and Future Challenges,” (RAND Corporation, 2015), 11–19, https://www.rand.org/pubs/research_reports/RR968.html; Alan J. Vick et al., “Air Base Defense: Rethinking Army and Air Force Roles and Functions,” (RAND Corporation, 2020), https://www.rand.org/pubs/research_reports/RR4368.html.
- ²⁴ “Joint Statement of the Security Consultative Committee (2+2),” U.S. Embassy & Consulates in Japan, January 11, 2023. <https://jp.usembassy.gov/joint-statement-security-consultative-committee-2plus2/>; “Philippines, U.S. Announce Locations of Four New EDCA Sites,” U.S. Department of Defense, April 3, 2023. <https://www.defense.gov/News/Releases/Release/Article/3349257/philippines-us-announce-locations-of-four-new-edca-sites/>
- ²⁵ Bob Elder and Howard Thompson, “Will Hypersonics Finally Force the Pentagon to Integrate Kinetic and Non-Kinetic Defenses?” *Defense One*, March 25, 2019, <https://www.defenseone.com/ideas/2019/03/will-hypersonics-finally-force-pentagon-integrate-kinetic-and-non-kinetic-defenses/155796/>.
- ²⁶ The Blue team used jamming to disrupt Red’s space operations and counter-space operations to neutralize some satellites particularly any on-orbit counter-space systems.
- ²⁷ For examples see: Chris Dougherty, “Confronting Chaos: A New Concept for Information Advantage,” *War on the Rocks*, September 9, 2021, <https://warontherocks.com/2021/09/confronting-chaos-a-new-concept-for-information-advantage/>; Andrew Metrick, “The Siren Song: Technology, JADC2, and the Future of War,” *Breaking Defense*, January 19, 2023, <https://breakingdefense.com/2023/01/the-siren-song-technology-jadc2-and-the-future-of-war/>.