The Marathon Initiative

No Sanctuary:
The PLA's Kinetic Threat to the Homeland

Without adequate U.S. preparations, a large-scale—or even small but effectively targeted—PLA strike against the United States could be devastating, not only in terms of direct costs but on the ability of the United States to wage a war.

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INTRODUCTION

The 2018 National Defense Strategy stated, "It is now undeniable that the homeland is no longer a sanctuary."[1] The Biden administration has emphasized this situation; a factsheet for the 2022 NDS lists "defending the homeland" as its number one priority and that effort will be "paced to the multi-domain threat posed by the [People's Republic of China]."[2]

While the threat to the U.S. homeland from the PRC has many facets, one in particular is especially concerning: kinetic strikes involving either conventional or select weapons of mass destruction attacks.

Previously, this was not a significant concern for a simple reason: the PRC's options to attack the homeland were essentially limited to cyber and strategic nuclear attacks. However, the Chinese People's Liberation Army has grown in strength and flexibility and will be increasingly able to conduct such kinetic strikes. Missiles could be deployed from container ships, nuclear-powered submarines, and long-range bombers, among other potential platforms. Furthermore, the PLA's growing global network of military bases and dual-use facilities enhances its options for striking the mainland.

The PLA Rocket Force also could use intercontinental-range missiles to carry conventional or low-yield nuclear warheads, adding to its already heavy emphasis on shorter-range non-nuclear missile strike capabilities. Indeed, the PLA currently is expanding and modernizing its nuclear arsenal. The U.S. Department of Defense estimates that it intends to possess at least 1,000 nuclear warheads by 2033 and PRC military writings are expressing interest in precise, low-yield nuclear weapons.[3] This indicates a clear departure from the PRC's previous "minimum deterrence" and even "lean and effective" nuclear policies, casting doubt about whether it will maintain its claimed no-first-use policy. At the very least, a large and diversified PRC nuclear arsenal that includes lower-yield and shorter-range systems would provide the country's leadership with options to pursue such a course.

Senior government officials and outside experts have warned about the PLA's potential kinetic threat to the United States' homeland. At a February 2023 talk at the American Enterprise Institute, Secretary of the Army Christine Wormuth said that "if we got into a major war with China, the United States homeland would be at risk as well with both kinetic attacks and non-kinetic attacks. They are going to go after the will of the United States public; they're going to try to erode support for a conflict."[4] The Center for a New American Security ran two wargames in which the game's Red team engaged in strikes on the homeland: one simulating a conflict over Taiwan in which Hawaii was struck with cruise missiles and another examining escalation in a U.S.-PRC conflict that included conventional strikes on the continental United States.[5]

There are several reasons to think kinetic strikes on the homeland would be attractive to the PRC and therefore pose a serious threat to the United States.

First, such an approach is consistent with open-source accounts of how the PLA plans to fight a war with the United States. The PLA views modern warfare as a confrontation between what it calls "operational systems," and strikes against the U.S. homeland would allow it to destroy or degrade key capabilities and nodes that comprise critical parts of the U.S. military's operational system. Certain highly important targets, such as long-range bomber bases, command and control, logistics nodes, and the defense industrial base, can only be reached in this way.

Second, kinetic strikes can inflict more significant physical damage against homeland targets than cyberattacks, but with more careful escalation management than a strategic nuclear attack. Such strikes fit into a major gap for the PLA: the ability to strike at critical targets without necessarily triggering a large-scale nuclear exchange.

Third, by attacking the U.S. homeland, the PLA can gain an advantage over the United States, including in a regionally focused conflict in the Western Pacific. Such an attack could prevent the United States from using its homeland as a base to surge forces into the region. Eighty-five percent of U.S. combat power is located within CONUS.[6] The United States does have standoff forces that can quickly reach the Western Pacific from the homeland, as well as a variety of ways to enable stand-in forces to operate in the region; however, strikes on the homeland could preempt, limit, degrade, or destroy some of these capabilities. The logic behind such strikes will only increase as the United States acquires additional standoff capabilities, such as B-21 bombers, and more hardened/dispersed stand-in forces, such as Marine Littoral Regiments. Homeland strikes could allow the PLA to directly attack standoff forces while also cutting off stand-in forces from reinforcement and resupply.

Fourth, homeland strikes would allow the PRC to respond to U.S. strikes on mainland China. The reality is that the United States will likely strike some critical military targets on mainland China in the event of a serious conflict, though such strikes likely would be highly tailored. It would be exceedingly difficult for the United States to prevail against China, even in a regionally focused war, without striking at least some mainland targets, such as over-the-horizon radars, embarkation ports, and counterspace capabilities. If the PRC believes the United States will strike the Chinese mainland, it may incentivize the PRC to attack the U.S. homeland to limit or deter such strikes or to retaliate.

Finally, the PRC could inflict both physical and psychological damage by attacking the U.S. homeland, aiming to weaken U.S. morale and public support for an ongoing conflict and potentially drawing resources and assets away from the Western Pacific for homeland defense. Since the United States has not experienced a foreign military attack on its soil since World War II, such strikes could be a significant shock to the U.S.

public. Even if little physical damage was done, the effect on the American psyche alone might be considered worth the risk by the PRC, even though this could backfire in the form of a unifying "Pearl Harbor effect."

Without adequate U.S. preparations, a large-scale—or even small but effectively targeted—PLA strike against the United States could be devastating, not only in terms of direct costs but on the ability of the United States to wage a war. Power projection assets such as capital ships, long-range bombers, and strategic airlift assets destroyed or damaged at home would require a significant amount of time to rebuild. Hitting key defense industrial targets would further increase the time and resources needed to recover. Degrading key enablers such as logistics or command and control capabilities also would seriously hamper the U.S. military's ability to operate. When combined with attacks against U.S. forces in the Western Pacific as well as regional allies and partners, the PLA's opening salvo potentially could deliver a blow from which it would be difficult to recover. The United States would then face three unattractive choices: escalate, spend years rebuilding its power projection capabilities before even attempting to roll back PRC gains, or settle.

The United States does not have unlimited resources to deal with threats to the homeland. Existing defenses are aimed at defeating a relatively small ballistic missile attack by a rogue state rather than a larger and more sophisticated set of attacks by a peer adversary like the PLA. U.S. military resources—in the form of missile and air defenses, resilience and hardening investments, and aircraft—are likewise finite. The simple reality is that America cannot become excessively focused on homeland defense missions without undermining its ability to effectively project power forward, potentially enabling the PRC to win in a regionally focused Western Pacific war.

The threat is both very real and acute, particularly in the face of resource constraints. Yet it is also severely underrecognized, as most PLA capacity-related analysis has centered on the Western Pacific. Consideration of PLA attacks on the homeland has tended to focus on the cyber domain or a strategic nuclear exchange rather than more controlled and discriminate kinetic strike effects. This study seeks to fill this critical gap by examining the threat of non-nuclear and non-strategic nuclear kinetic strikes by the PLA against the homeland and identifying strategies for mitigating the threat in a manner consistent with national defense strategy and realistic resource constraints.

FINDINGS SUMMARY

This study has found open-source evidence of numerous PLA capabilities that could strike the homeland. Many of these are either currently fielded or are in development and will likely enter service within the next decade. These capabilities include intercontinental-range missiles, containerized missiles, naval vessels, overseas bases, and long-range aircraft. Moreover, a number of potential targets within the U.S. homeland may prove attractive to the PLA.

METHODOLOGY

The study seeks to answer four main questions via open-source research:

1. What capabilities does the PLA already possess or could field within the next decade that could be used to kinetically strike the U.S. homeland?
2. How do such strikes fit within PLA/PRC doctrine, operational concepts, and strategic thought?
3. What key U.S. capabilities exist in the homeland that the PLA will seek to destroy or degrade via kinetic strikes?
4. How should the DOD respond to this potentiality, both for deterrence and defense?

To answer these questions, The Marathon Initiative conducted a thorough literature review of open-source material. TMI later convened a roundtable of PLA and military-technical experts to discuss and review its initial findings.

Per the Defense Threat Reduction Agency's instructions, this study focused on the threat of conventional and selective low-yield nuclear strikes on the homeland by the PLA within the next 10 years, including both current and possible future capabilities within that time frame. Cyber capabilities and strategic nuclear strikes, though serious threats to the homeland, are outside the scope of this study as they have been thoroughly examined elsewhere.

The PRC threat specifically is examined and strikes by other adversaries such as Russia or Iran are not considered, as the DOD has identified the PRC as its pacing threat. Moreover, homeland strikes will be examined in the context of a broader systemic regional war between the United States and the PRC rather than in a vacuum.

"The homeland" is defined as U.S. territory east of the International Date Line, including Alaska, Hawaii, and CONUS, but excludes Guam. The IDL is often used as an actual line of delineation by military planners, so it is not an arbitrary cutoff.

Furthermore, while Guam and other U.S. territories west of the IDL also face a real threat from the PLA, this threat has already received significant scrutiny elsewhere from analysts and policymakers. Finally, the threats to U.S. territory west of the IDL are very different from the threat facing U.S. territory east of the IDL due to the former's relative proximity to the PRC.

Finally, this study examines the potential actual execution of strikes on the homeland rather than the threat of such strikes being used for coercion. It is conceivable that the PRC would merely threaten to attack the homeland in an attempt to force the United States to back down in a conflict, but that sort of brinksmanship and its associated geopolitics are beyond the scope of this study. Understanding the possible real-world effects of the strikes themselves is a prerequisite to examining coercion scenarios, which can then be the subject of future analysis.

Analysis

Until recently, PLA options to strike the U.S. homeland were limited, largely restricted to strategic nuclear-armed missiles or cyberattacks. However, two developments have expanded PLA capabilities for homeland strikes that could fall between these two levels. First, the modernization and expansion of the PLA has enhanced its ability to project power on a global level, including against the U.S. homeland; and second, advances in technology are making it easier for militaries to conduct precise strikes at ever-growing ranges. These trends are likely to persist in the foreseeable future.

The PLA's homeland strike capabilities can be seen in two broad categories: early strike and repeat strike. The former involves covert deployment and/or leveraging international freedom of navigation rights to position strike systems within range of the U.S. homeland. However, such systems would only be useful for a "one and done" massed strike at the outset of the conflict as the United States could take measures to prevent them from being used against the homeland again. For example, a PRC state-owned enterprise's merchant ship could launch containerized missiles from off the United States' West Coast, but would be subject to destruction shortly after doing so. On the other hand, repeat strike capabilities could be used without having to be deployed near the U.S. homeland, and thus could be employed with varying efficacy throughout a conflict. For example, conventional intercontinental ballistic missiles could be launched from hardened silos or mobile launchers deep within China.

However, these options require more expensive munitions and/or platforms than early strike capabilities and would not provide the same volume. Repeat strike capabilities could and likely would be employed in an early strike, but they could still be used on an ongoing basis, depending on how the PLA decided to employ limited stocks of long-range systems.

For optimal results, the PLA would probably use both types of strike capabilities in a complementary manner. A massed early strike at the onset of a conflict could be followed up with more sophisticated capabilities for subsequent strikes, hitting targets that the first wave failed to knock out or that require multiple strikes after battle damage assessment.

Early Strike Capabilities

Containerized Missiles

Standard shipping containers can house long-range missiles, along with all other requisite systems such as fire control and communications. The advantage is that they offer a strike platform virtually indistinguishable from the countless shipping containers worldwide. Containerized missiles have already been developed by a number of nations; for example, Russia's Club-K system is capable of launching anti-ship and land-attack cruise missiles.[7]

There is evidence that the PLA is interested in containerized missile systems, and PRC defense companies have displayed them on multiple occasions. A shipping container module fitted with WS-43 miniature attack cruise missiles and a multiple-launch rocket system was spotted at the 2016 Zhuhai Airshow.[8] In 2019, the *Washington Free Beacon* reported that the PLA was developing a shipping container system capable of housing the YJ-18C, a land-attack variant of the supersonic anti-ship missile.[9] The China Aerospace Science and Industry Corp. unveiled a containerized system capable of launching both YJ-12 and YJ-18 supersonic anti-ship cruise missiles at the 2022 Zhuhai Airshow.[10]

Containerized missile systems could be deployed on merchant ships or in Chinese-owned or operated commercial ports. The PRC's merchant fleet is among the largest in the world with around 8,000 vessels, many of which are operated by state-owned enterprises. It is also the world's largest container fleet in terms of capacity.[11] The PRC is a major player in the global port business; the state-owned China Merchant Group is the world's largest port and logistics company,[12] and the Belt and Road Initiative has given the PRC access to a number of port facilities in the Western Hemisphere, which will be discussed below in detail.

Surface Combatants

In 2015, five PLA Navy vessels were spotted in the vicinity of Alaska, the first time Chinese warships had been seen operating in the area.[13] More recently, in 2022, a U.S. Coast Guard vessel encountered a surface action group comprised of three PLAN warships and four Russian Navy ships about 86 miles north of Alaska's Kiska Island. The formation included a PLAN Type 055 cruiser, which is its most powerful surface

combatant, fitted with 112 vertical launch system cells capable of launching cruise missiles or even the YJ-21 hypersonic anti-ship missile. The PLAN also fields the Type 052D destroyer with 64 VLS cells and the Type 054A frigate, which has 32 VLS cells.

Nuclear Submarines

The DOD reports that the PLAN will likely field the Type 093B guided-missile nuclear-powered attack submarine by the mid-2020s, and it will probably be armed with land-attack cruise missiles.[14] The PLAN is also developing a next-generation nuclear attack submarine, the Type 095, which will feature improved noise reduction measures and may incorporate VLS cells for cruise missiles.[15] The range of nuclear submarines is typically limited only by the needs of the crew and, if armed with long-range missiles, they could strike targets deep within the U.S. homeland.

It should be noted that current PLAN nuclear submarines have noise issues,[16] meaning that it may be challenging for them to transit safely back and forth through the First Island Chain after the outset of hostilities. For that reason, this study categorizes nuclear submarines as an early strike capability against homeland targets in the near future, though future PLAN submarines with more advanced noise reduction might be used as a repeat strike capability.

Overseas Bases

The PLA seeks to develop a network of foreign military bases and dual-use facilities to enhance its global power projection capabilities.[17] BRI ports and airfields could be used toward this end, with a "First Civilian, Later Military" approach laying the groundwork for future PLA use without raising major red flags. Furthermore, PRC law mandates that overseas infrastructure be designed to meet military standards and authorizes the PLA to commandeer facilities and other assets of Chinese-owned companies.[18] These port facilities could threaten the U.S. homeland either by providing logistics for PLAN vessels or hosting containerized missile systems, the latter of which might be done without the knowledge or consent of host nations. In late 2021, the *Wall Street Journal* reported the PLA was seeking to establish a base in Equatorial Guinea.[19] If realized, this base would be the first permanent PLA presence in the Atlantic Ocean, possibly allowing the PLA to threaten the United States' East Coast. The PRC also has considered Angola as a location for PLA logistics facilities and has made overtures to Namibia.[20]

Even more concerning is the string of PRC port facilities throughout the Western Hemisphere. PRC companies own a number of ports and docks in Latin American and Caribbean countries, including Cuba, Mexico, Panama, and the Bahamas. In 2018, Asia Pacific Xinhuao sought to lease 13 percent of Puerto de la Unión territory in El Salvador, prompting the U.S. embassy to warn the Salvadoran government that the PRC intended to inaugurate a military base.[21]

Repeat Strike Capabilities

Standoff Bombers

The PLA Air Force currently fields the H-6N bomber, which, unlike previous H-6 variants, is capable of aerial refueling.[22] Its fuselage has been modified to carry large payloads such as ballistic and hypersonic missiles. Images show the H-6N carrying what appears to be a boost-glide weapon.[23] In 2018 then-Defense Intelligence Agency Director Lt. Gen. Robert Ashley testified that the PLA was developing two air-launched ballistic missiles, one of which may carry a nuclear payload.[24] While the H-6N is not a penetrating aircraft, its large payload allows it to conduct strikes from significant standoff ranges. The PLAAF's CH-AS-X-13 ALBM reportedly has a range of 3,000 km,[25] allowing the H-6N to stay beyond the reach of U.S. regional air defenses. The H-6N and its supporting tankers might also use Russian airspace to bypass the First Island Chain and strike the homeland.

Long-Range Stealth Aircraft

The PLA has become the second military to field an operational stealth aircraft. The J-20 fighter reached initial operational capability in 2017. The PLAAF's stealth ambitions extend beyond fighters with the development of the H-20 stealth strategic bomber, which will likely be a flying wing design similar to the U.S. B-2 and B-21 bombers. Though the H-20 was not publicly acknowledged by the PLAAF until 2016, it has likely been under development since the late 1990s or early 2000s and could enter service in the mid-to-late 2020s[26]. It will reportedly have a range of more than 10,000 kilometers and its reach could be extended to cover the globe with aerial refueling. It is also expected to employ both conventional and nuclear weapons.27 In addition to the H-20, the DOD's 2022 China Military Power Report states, "the PLAAF is also developing new medium- and long-range stealth bombers to strike regional and global targets."[28]

If the H-20 has a range of 11,000 kilometers and a combat radius of roughly half of that, it would be able to reach Alaska from northern China without aerial refueling. Attacking the homeland using aerial refueling is challenging for China, as tankers are not low-observable and would be vulnerable near the territory of U.S. allies and partners, particularly the First Island Chain. However, Beijing's close relationship with Moscow may mean that PLAAF bombers and tankers could use Russian airspace. This would allow the PLAAF to bypass the First Island Chain and strike Hawaii or even CONUS.

Intercontinental-Range Missiles

The DF-27 is the PLA's latest hypersonic missile. According to leaked U.S. intelligence documents, the DF-27 was successfully tested in February 2023 and has been fielded in "limited numbers."29 Official PRC military writings indicate the DF-27 range-class

spans 5,000–8,000 kilometers;30 the former would allow it to range Alaska, while the latter would place Hawaii under threat as well.

PLA writings have openly discussed the possibility of ICBMs armed with conventional warheads. *The Science of Second Artillery Campaigns*, a 2004 PLA publication, suggested using conventionally armed ICBMs to "resist against intervention from the Powerful Enemy" (a euphemism for the United States).[31] The PLA has a number of ICBMs capable of ranging CONUS, including the silo-based DF-5 and the road-mobile DF-41, both of which can launch multiple independent reentry vehicles. The United States has explored the possibility of conventional ICBMs as part of the Prompt Global Strike program, referenced by PLA writers in the 2013 edition of *The Science of Military Strategy*.[32] Under this program, ICBM could be equipped with warheads accurate enough for conventional strikes. In 2002, a Trident D5 missile equipped with an experimental maneuverable reentry vehicle landed within several meters of its navigation system's aim point.[33] The conventional Trident modification program was ultimately canceled by the U.S. Congress over concerns that it would be impossible to distinguish between nuclear and conventionally armed Trident missiles.[34] However, such concerns do not seem to weigh heavily on the PLA, given its proclivity for dual-capable missiles.[35]

In 2021, the PLA tested a fractional orbital bombardment system, which boosts a payload consisting of a hypersonic glide vehicle launched by an ICBM into low-earth orbit before reentering the atmosphere. The HGV reportedly released a payload while traveling a total distance of 40,000 km around the world before landing back inside China. The nature of the payload was unclear — possibly a submunition or penetration aid.[36] Senior U.S. military officials have stated that the HGV missed its target but "came close."[37] This indicates that the PLA's FOBS may not be accurate enough for conventional unitary strikes, though it may be effective with a low-yield nuclear warhead or conventional submunitions. However, its accuracy may improve as the PLA further refines FOBS and HGV technology. A FOBS offers the advantage of unlimited range, allowing the PLA to attack the homeland from any direction, including a southern axis that avoids U.S. early-warning radars.

PLA Thinking on Homeland Strikes

Analysis of possible PLA strikes on the homeland are here informed by PLA doctrine, operational concepts, and strategic thinking. Open-source PLA writings do not explicitly call for attacks on the United States homeland, but a close reading of available literature can glean insight into how the PLA likely thinks about the issue.

System Destruction Warfare

The PLA views modern warfare as a confrontation between opposing operational systems, and its theory of victory centers on degrading, disrupting, and destroying vital nodes to undermine the enemy's will and ability to resist, paralyzing an adversary's operational system through "acupuncture-style"[38] strikes rather than annihilation.

PLA literature suggests there are four main target types the PLA will execute in order to paralyze the enemy's operational system. First, PLA writings call for strikes that degrade or disrupt the flow of information within an operational system, specifically targeting key data links and information sites. Second, the literature recommends degrading or disrupting essential elements of the adversary's operational system. PLA writers are vague on exactly what these elements are, possibly due to operational systems being unique and/or the sensitive nature of the subject. However, based on existing literature on the PLA's own operational system, it likely includes "command and control, reconnaissance intelligence firepower, information confrontation, maneuver, protection, and support." [39] Third, the literature proposes strikes on the "operational architecture" of the enemy's system, including physical nodes of the various essential elements previously mentioned. Finally, PLA writings advocate disrupting the enemy's time sequence and/or tempo of operations.[40]

The PLA may find homeland strikes to be an attractive course of action under system destruction warfare as many key nodes in the U.S. military's operational system are located in the U.S. homeland. Striking homeland targets such as key command and control centers or logistical facilities could be viewed by the PLA as an optimal or even necessary means to achieve its goal of U.S. paralysis.

Strategic Assault

Strategic assault is defined in the 2020 edition of *The Science of Military Strategy* as "the use of heavy forces or strategic weapons against the enemy's military, political, economic, etc. targets with strategic value." Its purpose is to "destroy the enemy's important targets, destroy its combat system, severely damage its viable power, weaken its military strength and war potential, and create favorable conditions for a strategic offensive." [41] Targets for strategic assaults include:

- Strategic command and control systems
- Airports, ports, and military bases
- Heavy forces groups and strategic weapon systems
- Transportation, communications, power, energy, and other key infrastructure[42]

While strategic assault does not explicitly call for striking an adversary's homeland, many of the targets, such as strategic command and control and key infrastructure, are

located mostly or entirely within the U.S. homeland. Thus, conducting strategic assault as prescribed against the United States would require the PLA to strike homeland targets.

Strategic assaults can be conducted either at the onset of hostilities or over the course of the war. *The Science of Military Strategy* states that "strategic assaults should focus on the first assault, while emphasizing multiple waves of continuous assaults."[43] This aligns with the mix of early strike and repeat strike capabilities that the PLA is fielding or developing and suggests that it would employ both.

Overview of PLA Thinking and Homeland Strikes

While this is not definitive proof that the PLA would strike the homeland in the event of a conflict with the United States, it does indicate that such a course of action would align well with PLA thinking. This, combined with the long-range strike and power projection capabilities the PLA currently possesses or is developing, strongly suggests that homeland strikes would at least be considered.

Furthermore, the PLA's belief in paralyzing an adversary's systems by destroying or degrading key nodes suggests that such strikes would be conducted in a targeted and surgical manner, giving potential insight into which targets the PLA would likely focus on. In short, the PLA would consider strikes on the homeland as a way to weaken the U.S. military in order to enable a strategic offensive in the Indo-Pacific.

POTENTIAL HOMELAND TARGETS

Based on PLA capability development and strategic thinking, we can expect that the PRC is likely to be selective in choosing U.S. homeland targets to attack if a conflict broke out. Given the vastness of the homeland, U.S. defense planners must be similarly selective about which potential targets must be defended, as the United States lacks the defensive capabilities to fully protect the whole country.

That said, taking a purely deductive approach by simply examining targets U.S. analysts consider important without consideration of PLA literature risks mirror imaging. On the other hand, merely taking PLA writings at their word risks squandering resources should the PLA target low-value strategic locations. A combination of approaches is necessary: first, examine which targets the PLA is likely to strike based on its known thinking, and second, determine which targets must be defended based on their importance to the United States.

Logistics

The PLA emphasizes logistics as a key part of modern warfare in general and views counter-logistics as fundamental to its theory of victory in a conflict with the United States.[44] The American way of war typically requires large volumes of material transported across vast distances; in a war with the PRC in the Western Pacific, the distances required would be particularly significant. This is a challenge for the U.S. military that the PLA will undoubtedly seek to exacerbate.

Munitions infrastructure could be a vulnerable target set. Given the inherent safety risks involved, the U.S. military has a limited number of ports that handle munitions.[45] Great power conflict involves a rate of munition consumption that is almost always greater than planned for, something observed in numerous wargames and starkly demonstrated by the war in Ukraine. Disrupting munitions supply could prove decisive in a U.S.-PRC conflict.

The limited U.S. sealift fleet is another vulnerability the PLA may seek to exploit. The number of U.S.-flagged vessels engaged in international trade has declined precipitously from 183 in 1992 to just 82 in 2017. Though tonnage capacity only declined slightly during that time period, fewer ships mean fewer targets that would have to be sunk or damaged by the PLA. Sinking sealift vessels would not only diminish an already limited U.S. sealift capacity, but might also stoke fear in the crews of foreign vessels that the United States would likely need to employ under contract to meet the logistical requirements of a great power conflict. During the Gulf War, when the United States had to rely on foreign shipping to meet its sealift needs, 13 of the 177 foreign vessels carrying essential supplies hesitated or refused to enter the area of operations.[46] A conflict against the PRC poses far greater risks. While the PLA could and likely would target logistics vessels in transit, striking ships while they are in port or mining harbor entrances — perhaps via submarines or long-range stealth bombers — would be much simpler in terms of targeting. Such actions would be an attractive way to disrupt maritime logistics that did not pass near the Chinese mainland, e.g., between Hawaii and CONUS.

Command and Control

In an attempt to achieve its desired system paralysis, PLA homeland strikes would likely include strategic command and control targets. Strategic command and control are central to operational systems.

Both the U.S. Joint Staff and U.S. Northern Command have alternate command centers — Raven Rock and Cheyenne Mountain, respectively — that likely cannot be destroyed by conventional means or even low-yield nuclear weapons. However, they may be vulnerable to a surprise attack at the start of a conflict. U.S. Indo-Pacific Command and

its component commands — U.S. Pacific Air Forces, the United States Pacific Fleet, etc. — would be likely targets given their centrality in a U.S.-China conflict. Indeed, Lt. Gen. Clint Hinote once noted that USINDOPACOM headquarters is almost always knocked out in U.S. Air Force wargames.[47] There are a number of other homeland command and control centers that the PLA may target for their importance to a regional war, such as the U.S. Third Fleet and Military Sealift Command Pacific headquarters in San Diego, California.

Power Projection

The U.S. military would have to rely on a relatively small number of expensive power projection platforms in order to fight the PLA from across the Pacific. Homeland strikes could allow the PLA to destroy these platforms at their most vulnerable and preempt a surge of key U.S. forces into the Western Pacific.

Targeting bomber bases could be a priority for the PLA. The range and payload of the U.S. bomber fleet makes it a critical capability in a U.S.-PRC conflict. If the PLA were to refrain from striking homeland bases, U.S. bombers would have a sanctuary from which to conduct long-range strikes in the Pacific. But strategic bombers are based at only a handful of airfields in CONUS, and there are a limited number of bases in Alaska and Hawaii with runways long enough to accommodate such aircraft. The United States no longer keeps bombers on day-to-day nuclear alert, which may give the PLA confidence that striking these bases would not be interpreted as a nuclear counterforce action, maintaining reasonably low nuclear escalatory risks.

Sinking a moving vessel at long range is a difficult feat that requires a complex kill chain to find, fix, and track the enemy. However, striking ships in port, especially aircraft carriers, surface combatants, and nuclear attack submarines, would greatly simplify this problem, and PLA writings explicitly advocate doing so.[48] Satellite images of PLA missile test ranges indicate that the PLA does plan to strike U.S. Navy vessels while in port.[49] As one Chinese researcher put it when discussing ballistic missiles being employed against carriers, “even a tiger takes a nap.”[50] SSNs in port may be a particularly attractive target, given the U.S. advantage in undersea warfare and the inherent difficulty of hunting submarines. As SSNs are mostly based separately from ballistic missile submarines, there is relatively little risk of nuclear escalation if SSNs are targeted in port.

Information and Communication Sites

System destruction warfare calls for disrupting and degrading the flow of information in an adversary’s operational system, a high priority given the centrality of information in modern warfare. Some of this can be done with non-kinetic attacks, but it will likely not

be enough on its own. Physically destroying key nodes in the U.S. information architecture would go further in paralyzing the U.S. military's operational system than cyber or electronic warfare alone. PLA writings recommend combining "soft strikes" with "hard destruction" in order to achieve information superiority.[51]

Undersea cables are critical to providing reliable, high-bandwidth communications and account for 95 percent of U.S. international internet and phone traffic. Almost all U.S. government communications, including sensitive diplomatic and military orders, use these cables to reach the field. In 2008, three undersea cables in the Mediterranean were severed, resulting in an air base in Iraq having to decrease unmanned aerial vehicle sorties from hundreds to tens per day due to bandwidth loss.[52] Cable landing stations, where undersea and terrestrial networks meet, concentrate equipment in a small area and have limited physical hardening, so they are particularly vulnerable to kinetic attack.[53] Should the PLA strike landing stations in the homeland, it might seriously hamper the U.S. military's ability to communicate with forces in the field. While some of this traffic could be rerouted through satellites, there could be significant bandwidth limitations, especially when the PLA is likely to degrade and disrupt the U.S. military's space architecture as well.

Data centers also could be susceptible to kinetic strikes. Deputy Assistant Secretary of Defense for Cyber Policy Mieke Eoyan has stated that data centers are physical targets, noting that Russia resorted to kinetically attacking Ukraine's physical infrastructure when cyberwarfare did not achieve the desired results.[54] Official estimates place the number of DOD data centers at around 3,000, with unofficial estimates more than twice that.[55] While it may be impractical to physically attack them all, the PLA may be able to achieve significant effects by attacking certain data centers that are critical to U.S. military operations. Main hubs that handle a high volume of data or are in close proximity to the area of operations, such as DOD data centers in Hawaii, may warrant such strikes.

Space

Space is a critical domain in modern warfare and striking homeland targets such as ground control stations or space launch sites could seriously hamper the United States' ability to operate in space. The latter could prove an attractive target given the limited number of spaceports, particularly vertical rocket launch sites.[56] The United States is currently developing a more resilient space architecture that includes larger, more distributed satellite constellations.[57] Degrading or destroying the U.S. military's ability to replenish these constellations by attacking space launch assets would be a logical way for the PLA to counter this new space architecture.

Defending Against Homeland Strikes

A Combined Deterrence Approach

Ideally, the United States would deter strikes on its homeland rather than simply defend against them. However, given the sheer size of the homeland, the capabilities of the PLA, and the inherent difficulty of defending against weapons like hypersonic missiles, full-scale deterrence by denial is impractical, especially in light of existing resource constraints. Deterrence by punishment is also unlikely to be effective on its own, as this could create an unfavorable escalatory dynamic.

A promising method of deterrence is one that would combine denial and punishment as well as resilience because there are many costs and risks associated with physically attacking the U.S. homeland. While the PLA's reasons to do so have been outlined above, it also has reasons not to do so.

First, many ways of striking the homeland are resource-intensive, requiring the expenditure of expensive munitions such as conventional ICBMs or putting exquisite platforms like stealth bombers or nuclear submarines in harm's way. This is especially true if the PLA seeks to strike the homeland repeatedly in a protracted war. Second, homeland strikes would carry significant escalatory risks. Third, such strikes would carry negative international consequences for the PRC. For example, NATO Article V could be triggered by attacks on CONUS, although it would not be triggered by strikes on U.S. forces in the Western Pacific per the geographic restrictions laid out in Article VI[58] of the Atlantic Treaty. Finally, homeland strikes would risk a "Pearl Harbor moment," galvanizing the American public.

While these drawbacks do not necessarily outweigh the advantages, a prudent American strategy would seek to shift the PRC's decision-making calculus by raising costs, reducing potential gains, and imposing uncertainty. The United States would deter attacks on the homeland by denying the PLA the ability to strike certain key nodes and making targets resilient where outright denial is impractical so that the resulting punishment (the risks, costs, and consequences laid out above) would outweigh the benefits. Various forms of deterrence have differing strengths and drawbacks, so a combined approach that synthesizes multiple methods can yield a stronger deterrent.[59] Should deterrence fail, resilience still helps the U.S. military to continue to operate effectively.

Defeating the Early Strike

In order to make the best use of limited resources, the DOD should prioritize efforts to defeat PLA early strike capabilities over repeat strike capabilities.

First, defeating repeat strike capabilities, namely hypersonic and ballistic missiles, is far more difficult and will likely prove cost prohibitive when it comes to air and missile defense. Efforts to defeat cruise missiles, which make up the bulk of the PLA's early strike capabilities, are likely to prove more cost effective provided they center on defending key sites rather than attempt to make the entire homeland invulnerable. Medium-range Ukrainian surface-to-air missiles have reportedly achieved an 80 percent success rate against Russian cruise missiles.

Second, strategic stability concerns arise from ballistic and hypersonic AMD for the homeland. In the past, China and Russia have voiced opposition to even relatively limited U.S. ballistic missile defense efforts on these grounds.

Finally, PLA repeat strike capabilities lack the mass provided by early strike options. Ballistic and hypersonic missiles capable of reaching the homeland are expensive, and while long-range stealth aircraft could employ fewer munitions in repeated strikes, the high cost of the platform and low sortie rate would greatly limit the volume of fires. Thus, repeat strike capabilities could be effective at destroying targets that were either missed by the early strike or required multiple hits to neutralize but are likely to prove too expensive to significantly degrade U.S. combat power on their own, especially if the resiliency of homeland targets is improved. Sufficiently defending against early strike capabilities should greatly mitigate the threat from repeat strike capabilities as well.

This approach does not ignore repeat strike capabilities but would largely rely on passive rather than active defenses to deal with the threat (see Appendix A). Many passive defenses needed against cruise missiles, such as hardening and dispersal, would also mitigate ballistic and hypersonic threats. While they would not stop repeat strike capabilities altogether, they could make targets resilient enough so the required expenditure of exquisite, long-range systems would be too large to have the desired effect. Moreover, many of these passive defenses can be acquired at relatively low cost, at least when compared to active ballistic/hypersonic missile defense.

KEY FINDINGS AND RECOMMENDATIONS

Finding: Kinetic strikes on the homeland are consistent with PLA doctrine and strategic thought. There are a number of vulnerabilities in the U.S. military system that the PLA would likely seek to exploit as part of its System Destruction Warfare and Strategic Assault concepts.

Recommendation: The DOD should deter homeland strikes by combining denial, punishment, and resilience to raise the costs and risks associated with attacking the homeland while also reducing the benefits of such strikes. By denying the PLA the ability to strike certain key nodes and making targets resilient where denial is impractical, the resulting punishment may outweigh the benefits, thus deterring the PRC from striking the homeland in the first place.

Finding: The PLA fields or likely will field a number of early strike and repeat strike capabilities. The former could provide substantial strike volume but only at the outset of a conflict, while the latter can be used throughout the course of a conflict but requires more exquisite munitions and/or platforms. For optimal results, the PLA would probably use both categories in a complementary manner. A massed early strike at the onset of a conflict could be followed up with more sophisticated capabilities for subsequent strikes, hitting targets the first wave failed to knock out or targets that require repeated strikes after battle damage assessment.

Recommendation: The DOD should prioritize active homeland defense efforts against cruise missiles to defeat the early strike. Therefore, the DOD should accelerate and strengthen cruise missile AMD for the homeland, which has previously been underfunded as the threat was seen as a distant one. DOD should also employ passive defenses in the homeland, including hardening and dispersal, both to complement cruise missile defense and mitigate hypersonic and ballistic threats. Additional sensing layers should be deployed over the homeland to provide early warning against non-ballistic threats. Specifically, the DOD is currently investing in a space-based architecture to detect hypersonic threats. While this program should be continued, the DOD should also consider an additional airborne layer for homeland hypersonic early warning to hedge against the possible loss of space assets in a conflict. This could be achieved through steerable high-altitude balloons60 or airships,61 which offer long loiter times and, in contrast to tethered aerostats, can be transferred to other theaters relatively quickly while being less vulnerable to poor weather conditions.

Appendix A: Additional PLA Concepts That Could Inform On Homeland Strikes

Active Defense

The concept of "active defense," also known as "offensive defense" and "decisive defense," has been the cornerstone of the PRC's military strategy since its founding. While active defense has evolved over time with shifts in the PRC's strategic environment, its general principles have remained consistent. Active defense entails a combination of strategic defense with offensive action at the tactical and operational level. The strategy is often summarized with the phrase "we will not attack unless we are attacked, but if we are attacked, we will certainly counterattack." Active defense is not limited to a purely defensive stance or territorial defense, nor does it prohibit preemptive action.[62] An example of active defense in practice was the Korean War, when PLA troops attacked UN troops in North Korea. Although the PLA struck first and outside of Chinese soil, Beijing considered its actions to be defensive in nature. Homeland strikes would be consistent with active defense, even if the PLA struck first at the outset of a conflict. The PRC may simply view this action as necessary to defend its interest and sovereignty and would likely argue that it was not the aggressor.

War Control

The *2020 Science of Military Strategy* defines war control as "the strategic director's control of the objectives, means, timing, process, scale, intensity, and consequences of the war according to the development of the situation, striving to win the strategic initiative, obtain the greatest war benefits, and appropriately achieve political goals." It lists four objectives: seize the initiative; achieve the best coordination between military and political/economic/diplomatic means; reduce risk; and improve the effectiveness of warfare.[63]

While war control has some similarities with the Western concept of escalation management, it differs significantly in the document's ideas that war can be precisely steered and engineered. PLA strategists take a scientific, almost deterministic view of modern warfare. While the literature asserts that war has always been subject to a high degree of control, the PLA believes that advances in technology, such as precision-guided munitions, give commanders greater control over war than ever.[64]

War control may instill the PLA with a belief that it can strike the homeland without incurring significant escalatory risk, especially if such strikes are precise and limited. Indeed, war control's emphasis on seizing and maintaining the initiative may actually *encourage* the PLA to attack the homeland.

Appendix B: Hypothetical PLA Capabilities

The PLA could conceivably use the following hypothetical capabilities that appear in open-source literature to strike the homeland. Though this study found no evidence that the PLA is currently developing these capabilities, it is possible the PLA could field them within the next decade.

High-Altitude Balloons

In early 2023, a PRC surveillance balloon traveled over Alaska and CONUS. It was later revealed that multiple PRC balloons have flown in U.S. airspace in recent years and these incursions initially went undetected.[65] PLA writings have often discussed "near-space," the area between 20 and 100 kilometers in altitude, as a domain.

High-altitude balloons could be used to carry weapons in addition to sensors. Concepts exist for glide bombs[66] and loitering munitions[67] deployed by high-altitude balloons, and Chinese researchers have demonstrated balloon-launched unmanned aerial systems.[68] Balloons offer two advantages as strike platforms: cost and survivability.[69] Munitions could be delivered by high-altitude balloons at a considerably lower cost than missiles or aircraft capable of reaching the U.S. homeland and may cost less than the United States' current methods to shoot them down. Balloons and their payloads can also be designed with low signatures, as indicated by the United States' failure to detect earlier balloon incursions.

Recent advances in artificial intelligence allow balloons to navigate by adjusting their altitude to catch winds in the desired direction.[70] These algorithms can even allow balloons to loiter over an area for extended periods of time.[71] It is unclear if the PRC has mastered this technology yet, as the 2023 PRC surveillance balloon used propellers and a rudder to maneuver.[72] However, a U.S. company that manufactures balloons with advanced wind-navigating technology has received investment from Tencent, a large Chinese conglomerate with close ties to the state.[73] It is possible that the PRC could acquire and reverse-engineer the requisite algorithms and, under China's civil-military fusion strategy, such technology would likely end up in the PLA's hands. The ability to precisely steer balloons without signature-enhancing propellers or rudders could make them much more effective as strike platforms.

High-altitude balloons are unique among repeat strike capabilities in their ability to provide mass due to their aforementioned low cost; one can easily imagine the PLA sending swarms of relatively cheap munitions to the homeland in this manner.

However, disadvantages include very slow speed, lack of reliable delivery, and vulnerability to interception if detected. It would take days to reach the homeland and

even longer to return to China and conduct subsequent strikes should the PLA treat them as recoverable systems. Balloon-delivered munitions would likely instead be used in large but infrequent pulses against fixed targets or perhaps loiter overhead for extended periods to strike targets of opportunity, assuming they have the technology to do so.

Seabed Missiles

Missile modules that lie on or are moored to the seafloor have been examined as a cost-effective, covert way to deploy undersea fires for well over a decade. In the 1990s, the United States explored a concept for large payload modules towed by attack submarines.

One concept called for a very large strike module carrying over 250 Tomahawk cruise missiles.[74] DARPA's Upward Falling Payload concept proposed deploying unmanned, distributed systems that lie on the deep-ocean floor in special containers for years at a time before being activated remotely and rising to the surface.[75] While DARPA's proposal was for deploying nonlethal payloads, one can imagine such a system carrying lethal ordnance. Retired Capt. Ernest Snowden, USNR, has proposed "effector payload modules" based on a 2009 CNO Strategic Studies Group proposal, which would consist of four Mk-41 VLS canisters moored to the seafloor and deployed by surface vessels.[76]

While there is no open-source evidence that the PLA is exploring undersea missile modules, it may find such proposals attractive given the limited size and capabilities of the PLAN's nuclear submarine fleet. Such modules would be a relatively low-cost way to significantly enhance the capacity of undersea fires and could be deployed prior to a conflict even by submarines lacking advanced noise reduction features, though their deployment of those modules might be monitored by U.S. anti-submarine platforms. The PRC could also use its many SOE-owned commercial ships to covertly deploy undersea missile modules near the U.S. homeland.

The Seabed Arms Control Treaty, to which the PRC is a party, prohibits the placement of nuclear weapons on the seabed. However, the treaty does not limit the deployment of conventional capabilities.

Appendix C: Ways to Defend the Homeland

Early Warning

NORAD's early warning architecture is primarily designed to detect ballistic missiles approaching from the north, east, or west. However, the PLA presents a more diverse, multi-vector threat to the homeland. Cruise and hypersonic missiles present a particular challenge for sensors since they fly at lower altitudes. The United States will need a

sensor architecture capable of detecting a broader array of threats approaching from many axes. This could be achieved through a combination of satellites, ground-based sensors (e.g., over-the-horizon radars), lighter-than-air vehicles (high-altitude balloons/tethered aerostats/airships), and airborne early warning aircraft (whether crewed or uncrewed).

Cruise missiles are a greater challenge, as they can fly unpredictable trajectories at very low altitudes. Nonetheless, a layered sensor architecture that prioritizes key areas of the homeland could provide sufficient early warning against cruise missile attacks at a reasonable cost. The Center for Strategic and International Studies has proposed a five-layer homeland cruise missile defense architecture that includes over-the-horizon radars, towered sensors, tethered aerostats, and E-7 Wedgetail AEW aircraft. CSIS estimated that its proposal would cost $32.7 billion over 20 years, including interceptors in addition to the sensor architecture.[77] While parts of this architecture would not be fungible to other theaters, the price is relatively affordable in light of the seriousness of the cruise missile threat. Once again, LTA solutions such as balloons or airships are particularly promising due to their combination of persistence and low cost, as well as their ability to be transferred across theaters.

Dispersal

Dispersal can take place within one site or across many sites to complicate PLA targeting and increase the number of munitions required to neutralize homeland targets. The DOD is already developing concepts for dispersed operations in the Indo-Pacific such as Agile Combat Employment and Distributed Maritime Operations. Similar operational concepts should also be developed for U.S. forces in the homeland, such as dispersing strategic bombers across numerous bases and civilian airports in a contingency or on a permanent basis to some degree given the risk of a PLA surprise attack. Key assets should also be disaggregated where possible; as an example, in an Air Force wargame, the Blue team responded to attacks on USINDOPACOM headquarters by creating small, distributed command and control cells that used portable technology.

Air/Missile Defense

The United States' homeland air and missile defense is limited to Ground-Based Midcourse Defense, fighter aircraft, and a single National Advanced Surface-to-Air Missile System battery in the National Capital region. The DOD should consider fielding additional AMD capabilities in the homeland that are capable of dealing with a more diverse array of threats, including Indirect fire protection capability and Patriot batteries. While deploying surface-to-air missile batteries at every potential target are cost-prohibitive, point defenses could be established at key military sites such as headquarters and sole-source defense industrial facilities. The Heritage Foundation has proposed mooring Ticonderoga-class cruisers in Guam, essentially turning the aging

hulls into stationary AMD platforms, although they could be periodically towed around to complicate PLA targeting.[78] Cruisers could be moored at other key homeland sites such as Pearl Harbor, Hawaii.

A number of other potential options for AMD besides traditional SAMs will likely be fielded within the next decade, including directed energy weapons and hypervelocity projectiles. The latter is particularly promising as some can be fired from traditional tube artillery and intercept cruise missiles,[79] potentially turning numerous homeland Army and National Guard artillery formations into AMD assets.

Electronic warfare can contribute to missile defense. Gabe Collins and Andrew Erickson have proposed placing GPS/Beidou jammers on unmanned aerial vehicles and/or aerostats to reduce the accuracy of PLA ballistic missiles.[80] Ground jammers also could be placed near key sites to interfere with active radar guidance. Beidou recently completed two ground control stations in central CONUS that enhance its precision over North America;[81] these facilities should be shut down immediately.

Counter-ISR

Interfering with the PLA's intelligence, surveillance, and reconnaissance would hamper its ability to locate and track mobile targets and do battle damage assessments on fixed ones. Given the distances involved, the PLA would primarily rely on satellite ISR. Satellites can be neutralized through a number of kinetic and non-kinetic means, and the DOD should continue the development of such offensive space capabilities. High-altitude balloons pose another challenge in terms of detection and tracking. While the United States was able to detect and destroy a PRC surveillance balloon that flew overhead in February 2023, previous incursions were reportedly undetected by NORAD. The DOD should remain committed to the development of the Crossbow sensor network[82] and develop cost-effective counters to high-altitude balloons such as lasers or high-powered microwave weapons.

Deception will be key to complicating PLA targeting efforts. This can range from decoys to corrupting data used to train ISR machine learning algorithms. Many forms of deception can be fairly simple even in modern warfare. For example, during the initial phases of the 2022 invasion of Ukraine, the Ukrainian Air Force photographed the damage of attacks on its hangars and printed the resulting patterns on sheets. These sheets were then draped over the repaired hangers, successfully fooling Russian battle damage assessment efforts.[83]

Hardening

Key sites can be physically hardened by measures such as underground bunkers or above-ground concrete shelters. Developments in ultra-high-performance concrete could make these structures resilient against even the most powerful penetrating conventional munitions.[84] However, such hardened structures would be expensive and should be reserved for the most critical assets. Hardening can come in lower-cost forms that would not be invulnerable to precision strikes but would nonetheless force the PLA to expend more munitions, as merely hardening targets enough to require direct hits from unitary warheads eliminates the possibility of individual munitions knocking out multiple targets while forcing multiple munitions to be expended on one target in the case of a miss. As most of the PLA's methods to strike the homeland involve exquisite munitions, this kind of hardening could make the PLA either rapidly deplete its stocks—or even conclude that such expenditures were not worthwhile in the first place.

Evacuation

The DOD should practice the rapid evacuation of personnel at key sites in the homeland, such as command staff at C2 centers. Many PLA homeland strike capabilities would give little warning time; for example, a conventional ICBM would likely reach the homeland in 30 minutes or less. U.S. forces would only have minutes to detect and assess such a threat, warn personnel in homeland targets, and execute evacuation/continuity procedures. Similarly, evacuating key platforms could require ships to leave pier positions and aircraft to take off in a matter of minutes. This can be done with practice and preparation, but would leave little to no margin for error and would thus require rigorous training.[85]

APPENDIX D: ADDITIONAL POTENTIAL HOMELAND TARGETS

CRITICAL INFRASTRUCTURE

It is unlikely that kinetic strikes against U.S. critical infrastructure would yield sufficient benefits for the PLA, even though its strategic assault concept advocates such an attack. First, significantly degrading critical infrastructure such as the U.S. electric grid or water systems would require a large-scale campaign that will likely be beyond the PLA's capabilities over the next 10 years. Second, such large-scale strikes would primarily affect civilians rather than the U.S. military. While the PLA might seek to undermine the will of the U.S. public, the historical record indicates that such efforts tend to fail and often produce counterproductive results. Ukraine has suffered sustained, large-scale

attacks on its critical infrastructure for almost two years, and its will to fight has not seemed to falter.

One exception to the larger picture above is that selective kinetic attacks on critical infrastructure could produce effects at the tactical or operational level. For example, the PLA could strike Hawaii's more limited electrical grid to facilitate a wider campaign against targets in the area.

Nuclear Arsenal

The PLA's rapidly growing nuclear capabilities give it options for counterforce strikes that it previously lacked. However, conventional or low-yield nuclear strikes would be unsuitable for a disarming attack on the United States' nuclear arsenal. Hardened ICBM silos would be extremely difficult to destroy conventionally, even with precision guidance. Destroying silos with nuclear weapons would require ground bursts that would produce a substantial amount of fallout in the U.S. heartland, likely precipitating a strategic nuclear exchange. Finally, even if the PLA were to destroy all U.S. ICBMs, the United States would still retain a second-strike capability in the form of SSBNs, as well as bombers, if they managed to get airborne or disperse. The evolution of PLA counterforce capabilities and doctrine does warrant further analysis, but falls outside the scope of this study.

Defense Industrial Base

Modern weapons require complex supply chains, and the U.S. defense industrial base has undergone waves of consolidation since the end of the Cold War. As a result, many critical munitions and platforms are only manufactured at a small number of sites and in some cases, just one. For example, all new Tomahawk missiles are manufactured at a single factory.[86] Moreover, disrupting the supply of certain components used across multiple weapon systems could have a cascading effect. Many U.S. military systems rely on microelectronics that are similar to commercial versions but incorporate certain defense-relevant features such as higher radiation and heat tolerance.[87] If the PLA were to strike facilities that manufactured these military-grade microelectronics, the effects could ripple across the entire defense industrial base, especially when paired with the disruption of microelectronics imports from Taiwan that would very likely occur in a conflict.

The USN relies on four public shipyards to maintain and repair its nuclear-powered fleet, and only two of these shipyards are located in the Pacific. Due to limited yard capacity, the USN has struggled to get through its maintenance and repair backlog even in peacetime, and the unique demands of nuclear-powered warships mean this work cannot be done in most private shipyards. Attempts to outsource submarine maintenance even to private yards that build nuclear ships have encountered mixed

results.[88] If the PLA attacks these shipyards, it could pose serious problems in a war in which the USN needs to rapidly repair warships, as well as pursue fixed targets in the form of immobilized ships within the shipyards.

Striking the defense industrial base would not have an immediate effect at the operational and tactical level at the onset of a conflict. Given the long lead times associated with manufacturing modern weapons, U.S. forces will largely have to work with existing munition stocks in the initial stages of a conflict. However, strikes on industrial targets could tip the balance in a protracted war, especially given the high rates of attrition and the consumption of platforms and munitions.

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