

ISSUE BRIEF

The Role of Nuclear Weapons in a Taiwan Crisis

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EXECUTIVE SUMMARY

The potential for a conflict over Taiwan is increasing due to China's nuclear and conventional military buildup and the threat of two simultaneous conflicts with China and Russia, which would severely stress the ability of US and allied conventional forces to win in both theaters. Nuclear weapons will cast a long shadow over a Taiwan conflict and could play multiple roles in the deterrence and warfighting strategies and operations of both the United States and the People's Republic of China (PRC). A conflict over Taiwan has a number of attributes that will shape those roles. Those attributes make the potential for limited nuclear escalation real and uncontrolled nuclear escalation possible.

The Scowcroft Center for Strategy and Security works to develop sustainable, nonpartisan strategies to address the most important security challenges facing the United States and the world. The Center honors General Brent Scowcroft's legacy of service and embodies his ethos of nonpartisan commitment to the cause of security, support for US leadership in cooperation with allies and partners, and dedication to the mentorship of the next generation of leaders.

Forward Defense (FD), housed within the Scowcroft Center, generates ideas and connects stakeholders in the defense ecosystem to promote an enduring military advantage for the United States, its allies, and partners.

Our work identifies the defense strategies, capabilities, and resources the United States needs to deter and, if necessary, prevail in future conflict.

In order to prevent war and escalation in war, US policymakers and military planners must take the role of nuclear weapons in a Taiwan conflict seriously. The United States should communicate four focused deterrent messages to China and reassure its allies and partners that it can deter Chinese nuclear use. The United States should reevaluate its theater nuclear capability requirements for a Taiwan conflict and carefully analyze options to defeat a Chinese amphibious invasion of Taiwan with limited nuclear strikes if necessary. Finally, the United States must credibly address the potential for collaborative or opportunistic aggression by China and Russia in an environment in which both are peer nuclear adversaries. This requires determining what the US strategy should be to address the two-peer threat, optimizing US and allied conventional forces to address it, and reshaping US nuclear capabilities if necessary. The United States needs to know now whether it is going to require a nuclear force that is larger, or different, or both, because changing the current modernization program requires immediate action to address the threats in time.

BACKGROUND

The political-military competition between the United States and the PRC continues to intensify. The United States Department of Defense (DOD) characterizes China as its “pacing threat,” and is prioritizing conventional force modernization designed to counter the PRC’s rapid and sustained nonnuclear military buildup.¹

While the PRC seeks to increase its influence globally and a US-China conflict could erupt over a number of issues, the most likely flashpoint for an armed conflict between the two nuclear-armed major powers is Taiwan. The PRC maintains that Taiwan is a part of China and reserves the right to use military force to seize control of Taiwan if necessary. The United States agrees there is “one China” but opposes Chinese use of force to resolve the status of Taiwan. US policy remains ambiguous about whether the United States would intervene to defend Taiwan should China attack. But a successful Chinese invasion of Taiwan would fundamentally undermine the strategic position of the United States in East Asia by damaging the rules-based international order, causing severe economic disruption (e.g., in the semiconductor industry), and raising questions about the ability and will of the United States to defend its interests, and the interests of its allies.

This political-military status quo has persisted for decades, in part because China has not possessed the military capability to seize Taiwan if the United States (and possibly some of its allies) were to intervene militarily. However, in a February 2023 television interview, CIA Director William Burns noted that PRC President Xi Jinping has directed the Chinese military to be prepared to invade Taiwan by 2027.² In addition to the ongoing conventional force modernization and expansion necessary to achieve this goal, China is engaged in the largest nuclear force buildup any country has pursued since the Cold War. The 2021 DOD report to Congress on Chinese military power estimated the PRC may field up to seven hundred nuclear warheads by 2027, and that PRC leadership intends to have at least one thousand warheads by 2030.³ The 2022 version of the report added assessments that China’s current warhead total has roughly doubled, surpassing four hundred, and that the PRC will likely field fifteen hundred warheads by 2035

if the pace of its nuclear modernization continues.⁴ Current US nuclear modernization plans envision no significant increase in US nuclear forces over this period, but a debate has begun over whether facing two nuclear peer adversaries for the first time in the nuclear age necessitates an increase in US nuclear forces and/or a change in their composition.

The ongoing shift in the military balance of the conventional and nuclear forces relevant to an armed conflict over Taiwan arguably makes a Chinese decision to resolve the Taiwan problem by force more likely. And that is a problem for both the United States and China.

THE PROBLEM

The problem the increasing Chinese threat to Taiwan poses to both the United States and China is the prospect of a high-intensity conventional war with a nuclear-armed power over what both sides perceive to be very high stakes. Such a conflict would be very costly even if it remained nonnuclear. But a US-China war over Taiwan also poses the threat of escalation to nuclear weapon use, which would dramatically increase costs if the war remained limited, and pose a potential existential threat to both countries if it does not.

A war over Taiwan poses multilevel deterrence and warfighting problems in both Washington and Beijing.

Deterrence of Chinese conventional aggression against Taiwan requires more than conventional deterrence alone. It also requires intrawar deterrence of PRC limited nuclear escalation, and it may, under some circumstances, require a credible threat to use nuclear weapons first to counter Chinese conventional superiority.

Chinese deterrence of US intervention in a Taiwan conflict also requires more than conventional deterrence. It involves convincing Washington that the conflict might escalate to levels of violence that exceed the importance of the US stake in Taiwan, therefore deterring Washington from intervening in the first place. And it requires intrawar deterrence of US nuclear escalation to defeat the invasion.

1 Jim Garamone, “Official Talks DOD Policy Role in Chinese Pacing Threat, Integrated Deterrence,” US Department of Defense, June 2, 2021, <https://www.defense.gov/News/News-Stories/Article/Article/2641068/official-talks-dod-policy-role-in-chinese-pacing-threat-integrated-deterrence/>.

2 “We do know, as has been made public, that President Xi has instructed the PLA [People’s Liberation Army], the Chinese military leadership, to be ready by 2027 to invade Taiwan, but that does not mean that he has decided to invade in 2027 or any other year as well,” *Face the Nation*, aired February 26, 2023, on CBS.

3 “Military and Security Developments Regarding the People’s Republic of China 2021,” U.S. Department of Defense Annual Report to Congress, November 2, 2021, 90. This issue brief went to press before the 2023 China Military Power Report was released.

4 “Military and Security Developments,” 94.



A DF-31 missile displayed in 2017. China's rapid nuclear buildup has included all three legs of its nascent nuclear triad, including land-mobile missiles like the DF-31. Source: Wikimedia/Tyg728

Both sides must also address the warfighting implications of a failure of nuclear deterrence.

Given these multiple ways in which the nuclear forces of both sides could affect the outcome of a Taiwan conflict, US policymakers, strategists, and military planners must take into account the effects the interaction of those nuclear forces would have on US efforts to prevent war and escalation in war, and to secure an outcome favorable to the United States and its allies and partners.

Before analyzing the role of nuclear weapons in Chinese and US strategy and operations in a crisis or conflict over Taiwan, it is important to provide context by outlining the key features of the Taiwan invasion scenario.

KEY FEATURES OF THE TAIWAN INVASION SCENARIO

This analysis focuses on a relatively near-term Taiwan invasion scenario circa 2027.⁵ That scenario was selected as the baseline because, while China could choose less violent means of seeking to coerce Taiwan to capitulate (a blockade, an air/missile strike campaign, etc.), it is the invasion scenario that would result in the largest-scale conventional conflict and would create the highest stakes for both sides, thus triggering the greatest potential for nuclear escalation. The scenario also matches President Xi's directive to his military to be ready to invade Taiwan by 2027.

There are eight key features of this scenario that affect the roles both sides' nuclear forces might play during a crisis and conflict:

⁵ Should the conflict not take place until the 2030s, China would have larger and more capable nuclear forces, making the nuclear element of this problem worse, unless the United States takes steps to counter Chinese nuclear expansion.

- 1 A Taiwan invasion would be unprecedented: a high-intensity armed conflict between two nuclear-armed major powers. The leaders of both sides would face challenges to nuclear deterrence that no one has faced before.
 - 2 Each side's stake in the outcome of such a conflict would be very high. A Chinese defeat could pose an existential internal political threat to the Chinese Communist Party (CCP) and result in Taiwanese independence. A US and allied defeat could undermine US-led alliances in Asia and Europe, and fundamentally undermine the US and allied strategic position in Asia. Chinese occupation of Taiwan would transform that island from a geographic constraint on China's military operations to a platform from which to project power further. And the incorporation of Taiwan's economic capacity would further strengthen the PRC.
 - 3 Both sides would try to deter the other prewar and intrawar. The United States would seek first to deter the invasion and then Chinese nuclear escalation if China were losing in the conflict. China would seek first to deter US and allied intervention in the conflict, and then US nuclear escalation if China was winning.
 - 4 The conflict would be fought on a scale and with an intensity that would severely test both Chinese and US, allied, and partner conventional forces, potentially to the breaking point. That scale and intensity would mean either side might consider the limited use of nuclear weapons to secure victory or prevent defeat.
 - 5 Both sides have escalation options short of nuclear weapons use that create potentially decisive strategic level dilemmas for the other. China has space and cyber options that could degrade US power projection. Chinese leadership also might be able to prompt Russian (or North Korean) opportunistic or collaborative aggression, stressing the US military's ability to fight two major conflicts against nuclear-armed adversaries simultaneously. The Chinese invasion of Taiwan could be the first or second of those conflicts to initiate (i.e., the Taiwan invasion itself could take the form of opportunistic aggression). Those scenarios pose very different challenges to US strategy and forces. The United States and its allies have space and cyber options to degrade Chinese conventional operations, plus the option to blockade shipping to and from China outside the reach of China's navy and air force. These nonnuclear escalation options raise the prospect of nuclear escalation in response.
 - 6 The conflict could become protracted if China fails in its initial effort to seize Taiwan but refuses to terminate the conflict. The prospect of a protracted conflict could prompt either side to consider nuclear escalation to bring the conflict to a favorable or acceptable conclusion should either party determine that a protracted war is not in its interest.
 - 7 By 2027, China's nuclear force will likely have grown to approximately seven hundred deployed warheads, most of them capable of ranging the United States, giving it a more secure second strike against the US homeland and significant new theater nuclear strike options. While not yet a quantitative "peer" in 2027, a nuclear force of this size is a far greater threat than what the United States faced just a year or two ago.
 - 8 Finally, perhaps the most defining operational feature of the Taiwan invasion scenario is that it requires the Chinese military to conduct an opposed amphibious and airborne assault across 80-125 nautical miles of ocean onto an island with a population of 23.5 million people, approximately 170,000 active-duty military, and nearly 1.6 million reservists. This is a daunting prospect for China, especially in the face of US and allied military intervention. Current US joint doctrine for amphibious operations states: "The assault is the most difficult type of amphibious operation and one of the most difficult of all military operations due to its complexity".⁶ Similarly, the 2022 DOD China military power report notes: "Large scale amphibious invasion is one of the most complicated and difficult military operations, requiring air and maritime superiority, the rapid buildup and sustainment of supplies onshore, and uninterrupted support."⁷
- These key features of the Taiwan invasion scenario circa 2027 impact both the roles nuclear forces play in Chinese and US strategy and operations and the nature of the nuclear forces needed to fulfill those roles with high confidence.

6 *Joint Publication 3-02, Amphibious Operations*, Joint Chiefs of Staff, January 4, 2019, validated without change on January 21, 2021, II-9.

7 "Military and Security Developments," 127.



A Chinese destroyer crosses the path of a US and Canadian warship transiting the Taiwan Strait in summer 2023. Source: US Navy

THE ROLES OF NUCLEAR WEAPONS IN CHINA'S STRATEGY AND OPERATIONS

China's nuclear forces potentially play both deterrence and warfighting roles in a Taiwan invasion scenario. Only some of those roles are consistent with China's declared policy of "No First Use" of nuclear weapons.

Deterrence Roles of PRC Nuclear Forces

The potential deterrence roles of PRC nuclear forces in a Taiwan conflict include:

- 1 Deterring the United States and/or its allies and partners from intervening in the conflict.
- 2 Preventing US nuclear coercion by credibly deterring US nuclear use against the Chinese mainland.

- 3 Deterring US limited nuclear use to defeat a Chinese invasion of Taiwan.

Deterring US and Allied Intervention

China's nuclear force has long presented the United States with the possibility of uncontrolled nuclear escalation if the United States were to decide to intervene in a Taiwan conflict. In 1996, a Chinese general is reported to have issued a thinly veiled nuclear threat to a visiting US official when he contended that the United States would not intervene because the American people care more about Los Angeles than Taipei.⁸ However, China has not explicitly threatened nuclear escalation if the United States were to intervene militarily.

Now, however, having seen explicit Russian nuclear threats arguably succeed in deterring direct NATO military interven-

⁸ Barton Gellman, "U.S. and China Nearly Came to Blows in '96," *Washington Post*, June 21, 1998, <https://www.washingtonpost.com/archive/politics/1998/06/21/us-and-china-nearly-came-to-blows-in-96/926d105f-1fd8-404c-9995-90984f86a613/>.

tion in Ukraine and limit the level of military aid provided, the Chinese leadership might conclude that its nuclear arsenal could do the same for China vis-à-vis Taiwan. In a Taiwan crisis, China might issue new veiled nuclear escalation threats, announce a change to its “No First Use” policy, or issue more explicit threats, and overtly increase its nuclear force readiness to reinforce the message.

US leaders would of course consider the potential for nuclear escalation in deciding whether to intervene in a Taiwan conflict in any event. Any conflict between nuclear-armed major powers could escalate to a catastrophic, large-scale homeland exchange that could pose an existential threat to both, though uncontrolled escalation would by no means be automatic or even likely. But, because successful Chinese deterrence of US and allied intervention could be decisive in determining the outcome of a Taiwan invasion, China may act to make such uncontrolled escalation appear to be, or actually be, a more likely outcome. China might also choose to highlight nuclear escalation risks more to US allies than to the United States itself. US forces in East Asia are heavily dependent on access to basing and military support from Japan and South Korea, making decisions in Tokyo and Seoul not to intervene also potentially decisive. And neither Japan nor South Korea has nuclear weapons of its own. This latter course of action makes it essential that US extended deterrence commitments to its Asian allies are seen as credible, perhaps even more so in Tokyo, Seoul, and Canberra than they are in Beijing.



Changbai Shan (989) is a Type 071 amphibious transport dock of the People’s Liberation Army Navy. Amphibious ships like the Type 071 would be essential to a possible Chinese invasion of Taiwan. Source: Wikimedia/kees torn

Preventing US Nuclear Coercion

One of China’s original motivations for acquiring nuclear weapons was to prevent the United States from coercing China into capitulating in the face of nuclear threats in a crisis or conflict.⁹ That objective remains central to Chinese nuclear strategy today.

For the Chinese leadership to order an invasion of Taiwan, it would have to be confident it could withstand potential US coercive nuclear threats. That confidence stems from credible deterrence of two things. The first is US large-scale use of nuclear weapons against targets on the Chinese mainland. The second is deterrence of US nuclear escalation sufficient for China to avoid losing what Thomas Schelling called a “competition in risk-taking” that could include one or more limited nuclear exchanges.¹⁰

US analysts do not know what China’s force requirements are for these deterrence objectives. Nor do analysts know whether Xi’s directive to the PLA to be prepared to invade Taiwan by 2027 included acquiring sufficient nuclear forces to meet these deterrence objectives with confidence. Therefore, analysts cannot determine how much more confident China will be in 2027 when it fields an arsenal of approximately seven hundred warheads. But given China’s assessed intent to field at least fifteen hundred warheads by 2035, Chinese leadership may not yet be fully confident in 2027, but will likely be more confident than it is today.

US analysts also do not know whether China’s nuclear force buildup is due to a change in China’s perception of what its legacy nuclear strategy requires, or whether it is being driven by a change in Chinese nuclear strategy. The latter could have dire consequences in the context of a Taiwan conflict.

What is certain is that the far larger nuclear arsenal which China is building will include a growing array of theater-range systems, including systems with sufficient accuracy to make effective military use of low-yield nuclear weapons. Qualitatively and quantitatively improved theater nuclear capabilities will enable a change in strategy, a change that includes options for China to credibly engage in a competition in risk-taking against an adversary (the United States) that today lacks a wide range of theater nuclear options, and whose stake in the outcome Chinese leaders may assess to be lower than their own.

9 Mao Tse-tung said China must acquire nuclear weapons because “[in] today’s world, if we don’t want to be bullied, we have to have this thing.” Talk by Mao Zedong at an Enlarged Meeting of the Chinese Communist Party Central Committee Politburo, April 25, 1956, found at Wilson Center Digital Archive, <https://digitalarchive.wilsoncenter.org/document/talk-mao-zedong-enlarged-meeting-chinese-communist-party-central-committee-politburo>.

10 Thomas Schelling, *Arms and Influence* (New Haven: Yale University Press, 1966), 94.



An F-15C Eagle takes off from Kadena Air Base, Japan, April 3, 2019. Source: US Air Force/Airman 1st Class Matthew Seefeld

Deterring US Limited Nuclear Use to Defeat a Chinese Invasion of Taiwan

For the Chinese leadership to order an invasion of Taiwan, it would have to be confident that it could deter the United States from using nuclear weapons to destroy the Chinese conventional forces invading Taiwan, particularly the PRC's amphibious landing fleet. DOD's 2022 report to Congress on Chinese military power noted: "By late 2018, PRC concerns began to emerge that the United States would use low-yield weapons against its Taiwan invasion fleet, with related commentary in official media calling for proportionate response capabilities."¹¹ The Chinese are right to be concerned about this potential threat. Amphibious landing operations are almost uniquely vulnerable to nuclear attack.

As in the case of preventing US nuclear coercion, the Chinese answer to this threat seems to be to field a new

range of militarily effective theater nuclear response capabilities backed by a highly survivable strategic nuclear deterrent that together enable China to persevere through a limited theater nuclear war. However, the unique nature of a Taiwan conflict, as described later in this paper, means that Chinese deterrence of this threat is not easy to achieve with confidence.

Warfighting Roles of PRC Nuclear Forces

The potential warfighting roles of the PRC's nuclear forces in a Taiwan conflict include:

- 1 Limited nuclear first use to coerce war termination on China's terms.
- 2 Limited nuclear use to restore deterrence following US nuclear first use.

¹¹ "Military and Security Developments," 93.

- 3 Limited nuclear use to destroy critical US and/or allied military capabilities to decisively shift the military balance (through either first or second use).

Limited Nuclear First Use to Coerce War Termination on China's Terms

This role for Chinese nuclear forces essentially mirrors an element of Russian strategy and doctrine: initiate limited nuclear use to avoid defeat by coercing the adversary to terminate the conflict on one's own terms, or at least on terms that one can accept. China's growing arsenal of militarily effective theater nuclear capabilities backed by a highly survivable strategic nuclear deterrent enables this role. There is one potential circumstance in which this would most likely be considered by China's leadership: if it faces the impending defeat of the PRC's conventional invasion, and Chinese leadership assess that a protracted conflict is decidedly not in its interest. This course of action would be made more credible, and thus more likely, if China's leadership believes there is a marked asymmetry of stakes favoring China.

However, the Taiwan invasion scenario differs significantly from the Russia-NATO scenario that Russian strategy and doctrine were designed to address. The Russian approach was formulated as a means of compensating for conventional inferiority vis-à-vis NATO and as insurance against failed Russian conventional aggression. It was designed to prevent defeat by an overwhelming NATO counteroffensive that threatens "the very existence of the [Russia] state."¹²

In the Russia-NATO case, the United States and its allies might be able to avoid further Russian nuclear escalation by limiting their war aims to the liberation of NATO territory. In the Taiwan case, if China must "win" (i.e., forcibly incorporate Taiwan into China) in order to avoid catastrophic domestic consequences for CCP rule, this coercion strategy has profoundly different implications. The United States and its allies and partners would have to accept Chinese occupation of Taiwan to meet China's coercive demand. As opposed to simply accepting the status quo ante bellum in the Russia-NATO case, the United States and its allies and partners in a Taiwan case would have to capitulate despite being on the verge of winning, or having won, the conventional war. That is a much higher bar.

Limited Nuclear Response to Restore Deterrence Following US Nuclear First Use

Given the potential for US limited use of nuclear weapons, either first or in response to Chinese limited first use, it would be logical for China to see a role for its nuclear forces in restoring deterrence to prevent uncontrolled escalation. This role would seem consistent with the Chinese concept of restraining war by "using war to stop war."¹³

Attempting to restore deterrence in this way would require a nuclear response that convinces the adversary that it has seriously miscalculated and that further nuclear use risks a more catastrophic miscalculation. Thus, the costs imposed by the response must significantly exceed what the adversary anticipated it would incur. Of course, such a response, which might not be a tit-for-tat, proportionate one, would also risk further counter-escalation by the adversary.

Should the United States initiate nuclear use, demonstrating that China is willing to counter-escalate could be an important way for China to deter further US nuclear use. However, restoring deterrence of US nuclear use following a first strike that destroys China's amphibious force off Taiwan would do nothing to address the failure of the PRC leadership's attempt to reincorporate Taiwan into China. In that circumstance, PRC nuclear use to restore deterrence might not be its option of choice.

Limited Nuclear Use to Shift the Military Balance

China could see a role for its nuclear forces in either achieving a decisive military advantage in a Taiwan conflict through first use or in restoring a decisive military advantage following US first use. US and allied conventional forces are likely to be postured in a way that makes them vulnerable to limited nuclear strikes, as they are dependent on relatively few key bases from which to operate effectively (e.g., Okinawa, Guam, Yokosuka, and US aircraft carriers). The United States is actively seeking to reduce this vulnerability through active and passive missile defense of existing basing and operational and logistical dispersal, but it is unclear how much those efforts will have achieved by 2027.

Chinese first use for this purpose seems unlikely, given the anticipated nuclear balance in 2027 and the vulnerability of

12 "Foundations of State Policy of the Russian Federation in the Area of Nuclear Deterrence," CNA, June 2020, trans. CNA Russia Studies Program, <https://www.cna.org/reports/2020/06/state-policy-of-russia-toward-nuclear-deterrence>.

13 "Military and Security Developments," 37.



A Trident II D-5 ballistic missile is launched from the *Ohio*-class ballistic missile submarine *USS Kentucky* (SSBN 737) during a missile test. In February 2020, the US Department of Defense confirmed that a small number of low-yield warheads had been deployed to submarine-launched ballistic missiles. Source: US Navy

the Chinese amphibious force to nuclear strikes in response. As noted above, the destruction of the PLA amphibious force would make pursuit of “military advantage” a somewhat moot point, as China’s remaining forces would be unable to seize Taiwan as long as they had not yet seized several major ports and airfields.

Second use to achieve decisive military advantage is also problematic. Again, if the United States effectively uses nuclear weapons against the Chinese amphibious force during its landing operations, Chinese nuclear responses against key US and allied targets will not restore a Chinese advantage that allows China to successfully occupy Taiwan, because the PLA invasion force cannot be readily reconstituted for years.

However, were China’s leadership to choose a protracted conflict in response to US first use, Chinese nuclear strikes on key bases could significantly damage US and allied military capabilities, altering the military balance in that protracted war.

Summary of Chinese Roles

To successfully invade Taiwan, China must accomplish one of the following with its nuclear forces:¹⁴

- 1 Deter US and allied intervention in the conflict in the first place, or;
- 2 Prevent US nuclear coercion and deter US nuclear strikes on China’s amphibious force during the conflict, or;

14 Note that this is a list of what Chinese nuclear forces must achieve to successfully invade Taiwan. The list of what Chinese conventional forces must achieve is far longer.

- 3 Prevent US nuclear coercion and coerce US and allied capitulation through nuclear use.

Put this way, it should be no surprise that China decided its nuclear forces were too small and too limited in capability to ensure they could succeed at one of these requirements.

THE ROLES OF NUCLEAR WEAPONS IN US STRATEGY AND OPERATIONS

The 2022 DOD Nuclear Posture Review states that the US nuclear force “undergirds all our national defense priorities, including defending the U.S. homeland, deterring strategic attacks against the United States, our Allies and partners, and deterring regional aggression with emphasis on the PRC and Russia.”¹⁵ This statement highlights two important differences between the roles of Chinese and US nuclear forces in a Taiwan invasion scenario:

- 1 US forces have the additional role of extending nuclear deterrence to US allies and partners.
- 2 US forces must simultaneously deter regional aggression by China and Russia (so-called opportunistic or collaborative aggression).

Deterrence Roles of US Nuclear Forces

The deterrence roles of US nuclear forces in a Taiwan crisis or conflict could include:

- 1 Deterring a Chinese invasion of Taiwan, even if the United States is already engaged in a Russia-NATO conflict in Europe.
- 2 Deterring Chinese nuclear use.
 - a Limited nuclear use
 - b Large-scale attack on the United States
- 3 Deterring a Chinese nonnuclear strategic attack.
- 4 Deterring Russian aggression versus NATO while the United States is engaged in a Taiwan conflict with China.

Deterring a Chinese Invasion of Taiwan

US nuclear forces contribute to deterrence of a Chinese invasion of Taiwan in two key ways.

The first way is aptly described in the 2022 Nuclear Posture Review:

If we are not confident we can deter escalation, it will be more difficult for our leaders to make the decision to project conventional military power to protect vital national security interests—and far more dangerous to do so should that decision be made.¹⁶

Thus, by credibly deterring Chinese nuclear escalation, US nuclear forces also contribute to deterring Chinese conventional aggression against Taiwan by making it more likely that the United States and its allies and partners will enter the conflict. China’s prospects for a successful invasion drop dramatically if the United States and its allies intervene promptly. If the deterrent effect of US nuclear forces convinces the Chinese leadership that nuclear escalation to coerce US and allied capitulation is not a viable option (assuming the conventional war does not go in China’s favor), China’s leaders will be less likely to decide to initiate a Taiwan conflict.

The second way that US nuclear forces contribute to deterring a Chinese invasion of Taiwan is by providing the United States with a credible military option to defeat a Chinese invasion even if China achieves regional conventional superiority, or if the United States is already fully engaged in a major European conflict with Russia. While this option could take several forms, the one that combines the highest effectiveness with the least escalation potential would be a nuclear strike on China’s amphibious force as it prepares to offload near the Taiwanese shore. While there would be significant escalation risk for the United States in executing this option, Chinese counter-escalation against US and allied forces in the theater would not enable China to seize Taiwan (again, as long as they had not succeeded in seizing and maintaining control over major ports and airfields). Such a Chinese nuclear response would also risk US counter-escalation, possibly against targets on the Chinese mainland.

15 2022 National Defense Strategy of the United States of America (including the 2022 Nuclear Posture Review), US Department of Defense, 9.

16 2022 Nuclear Posture Review, 7.



A pilot walks away from a B-52 Stratofortress at Andersen Air Force Base, Guam, one of a handful of US bases in the Indo-Pacific that would be critical to prosecuting a war to defend Taiwan. Source: US Air Force/Staff Sgt. Jacob N. Bailey

Clearly, the preferred US means of deterring or defeating a Chinese invasion of Taiwan is through decisive conventional military operations, and the United States should ensure it can do so if it intends to intervene if Taiwan is attacked. However, the ability of US conventional forces to effectively defeat a Chinese invasion if the United States is already fully engaged in a large-scale conventional conflict in Europe is an open question. If the United States and its allies and partners are unwilling or unable to field conventional forces capable of defeating Russia and China simultaneously, then a logical option would be to increase reliance on nuclear weapons in the theater in which the United States finds itself at a potentially decisive conventional disadvantage. The 2022 Nuclear Posture Review hinted at this option when it stated:

In a potential conflict with a competitor, the United States would need to be able to deter opportunistic aggression by another competitor. We will rely in part on nuclear weapons to help mitigate this risk, recognizing that a near-simultaneous conflict with two nuclear-armed states would constitute an extreme circumstance.¹⁷

However, increased reliance on nuclear weapons to compensate for conventional inferiority is credible only if US nuclear forces provide viable military options for doing so. Because of the unique vulnerability of an amphibious landing operation to nuclear strikes, and the lack of significant collateral damage to either Taiwan or China from such strikes, this is likely easier to achieve in Asia than in Europe.

Deterring Chinese Nuclear Use

Deterring a large-scale Chinese nuclear attack on the United States and its allies is clearly the highest priority mission of US nuclear forces in a Taiwan conflict. Fortunately, deterrence of such an attack should remain extremely robust circa 2027. Chinese strategic forces will be able to cause catastrophic damage to the United States in an all-out attack but will not be able to reduce significantly the ability of the United States to devastate China in response. A Chinese decision to “go big first” would be suicidal, rendering a decision to do so irrational in the extreme. And the Chinese leadership is not suicidally irrational.

17 2022 Nuclear Posture Review, 12.

Deterring Chinese limited nuclear use designed to shift the military balance is essential to US and allied conventional success, as those forces are vulnerable to such limited strikes. However, the threat of a US retaliatory response against the Chinese amphibious landing operation would be an asymmetrically powerful deterrent to such strikes, as destroying that force with nuclear weapons obviates the need for large-scale US and allied conventional forces to do so.

Note, however, that there is a temporal aspect to this deterrent effect. The vulnerability of the amphibious force is greatest when it is offloading forces and logistical support offshore. During its transit of the Taiwan Strait, the amphibious force would be a moving target and could be widely dispersed, making effective nuclear targeting more difficult. Once ashore and off the beaches, the landing force's vulnerability diminishes, and the potential collateral damage to Taiwan increases.

Deterring Chinese limited nuclear use to coerce capitulation if the PRC's conventional forces are failing requires clearly communicating to the Chinese leadership that the US stake in the outcome of the conflict is high, and that Chinese use of nuclear weapons would dramatically increase that stake. Were the United States to capitulate in response to Chinese limited nuclear use, the entire US global security architecture (based as it is on extended nuclear deterrence) could collapse overnight.

Deterring a Chinese Nonnuclear Strategic Attack

Chinese strategic attacks on US and allied homeland critical infrastructure and space-enabling capabilities (including nuclear command, control, and communications and missile warning capabilities) have the potential to shift the military balance in an invasion scenario, perhaps decisively. Once again, a credible threat to use nuclear weapons to defeat the Chinese invasion if made necessary by such strategic attacks could deter China from undertaking such attacks in the first place.

Deterring Russian Aggression versus NATO while the United States Is Engaged in a Taiwan Conflict with China

If the United States and its allies do not have sufficient conventional forces to fight and win simultaneous conflicts against two nuclear-armed major powers by 2027, the United States will have to address how it will deter Russian aggression in Europe if it is already fully engaged in a Taiwan conflict.

Increased reliance on US nuclear forces in the "second theater" is a logical solution to this dilemma, but only if the United States fields nuclear forces with the range of capabilities

necessary to make such a strategy credible. This theoretically could work in either direction (i.e., versus Russia or China as the second aggressor). But a credible threat of US nuclear first use designed to counter Chinese conventional advantage in a Taiwan scenario is much easier to achieve than it is against Russia for two reasons:

A Chinese amphibious landing operation against Taiwan is uniquely vulnerable to a nuclear strike that would cause little or no damage to either mainland China or Taiwan.

Russia's large theater nuclear advantage in Europe makes US first use there high risk without very significant expansion of US theater nuclear forces.

Warfighting Roles of US Nuclear Forces

The roles of US nuclear forces in a Taiwan conflict could include:

- 1 Restoring deterrence of Chinese nuclear use following Chinese first use.
- 2 Destroying the Chinese amphibious invasion force offshore.
- 3 Shifting the military balance in favor of the United States through limited nuclear use.

Restore Deterrence of Chinese Nuclear Use

Were China to initiate nuclear use either to coerce US and allied capitulation or to shift the military balance, restoring deterrence of further nuclear use would be a high priority in Washington.

Conventional responses to such Chinese first use are unlikely to successfully restore deterrence, given that it is US and allied conventional superiority that would be triggering Chinese escalation in this situation. A US nuclear response that imposed costs greater than what China anticipated could convince the PRC leadership that it cannot be confident in its ability to manage escalation, and that uncontrolled escalation is a significant risk if China continues to use nuclear weapons. However, such responses would also risk still further Chinese escalation.

China is unlikely to initiate nuclear use while its invasion forces remain highly vulnerable to a US retaliatory strike. However, if a nuclear option against the landing force is unavailable, the United States would face a dilemma regarding what to target to restore deterrence. A strike or strikes on the Chinese



The USS *Florida* launches a Tomahawk cruise missile in 2003. One option under consideration for additional theater nuclear capabilities is a nuclear-armed submarine-launched cruise missile. Source: US Navy

homeland would likely be necessary, increasing the risk of further escalation.

Destroy Chinese Amphibious Invasion Force Offshore

China has a unique vulnerability to US nuclear attack in a Taiwan invasion scenario: the landing operations themselves. The landing force has an inescapable problem: it must concentrate to land sufficient force to overcome the Taiwanese defenders. If it does not, it will be defeated on the beach. But against a nuclear-armed adversary, concentrating a large-scale amphibious landing force offshore for many hours presents perhaps the best possible conventional force target for nuclear attack.

A nuclear strike on such a force while concentrated and conducting large-scale landing operations would be highly effective and could be executed without appreciable collateral damage ashore. Were the United States to destroy the Chinese amphibious landing force with such a strike before China could seize major ports and airfields, the invasion would

fail. It would take years for China to reconstitute sufficient amphibious landing capability to try again.

To reiterate, the overwhelmingly preferred option is for the United States, its allies, and Taiwan to field sufficient conventional forces to defeat a Chinese invasion with high confidence. Given the difficulty of large-scale amphibious operations (especially by a force with no relevant joint combat experience), this is likely possible by 2027 if the US military is not fully engaged in a high-intensity theater conflict in Europe. If, however, the United States is engaged in such a war, the temptation for China to act opportunistically would be strong, unless Chinese leaders believed either that the United States and its allies and partners could defeat Russia and China simultaneously with conventional forces, or that the United States might well rely on nuclear weapons to defeat a Chinese invasion of Taiwan if fully engaged in Europe first.

Some may argue that the likelihood of aggression by two major powers, either opportunistic or collaborative, is so unlikely

that the United States and its allies and partners need not prepare to deter or defeat it. But the irony of such an argument is that following it makes such aggression more likely.

Limited Nuclear Use to Shift Military Balance in Favor of United States

This role assumes that a strike on the landing forces is either not yet or no longer viable.

The problem with seeking to shift the military balance with nuclear strikes on targets other than the amphibious landing force off Taiwan is that the highest value targets are all in the Chinese homeland. The wide dispersion of Chinese conventional capabilities on the mainland in range of Taiwan is an asymmetric advantage for China in a limited nuclear exchange focused on critical theater military targets. China has options to strike US and allied forces without striking the US homeland. The United States does not.

RECOMMENDATIONS

Given the unique nature of the Taiwan invasion scenario, this analysis has identified five actionable recommendations for the United States and its allies and partners regarding the roles of nuclear weapons in a Taiwan conflict.

First, deterring an invasion of Taiwan requires the United States and its allies and partners to take steps to convince the Chinese of four things associated with nuclear weapons:

- 1 The US and allied stake in the outcome of a Taiwan conflict is high enough for them to risk nuclear escalation and high enough to persevere through limited nuclear exchanges. The United States in particular needs to clearly communicate that it views Chinese seizure of Taiwan by force as fundamentally transforming the strategic situation in East Asia, and that Chinese use of nuclear weapons would further raise the US stake in the outcome. Taiwan is not Ukraine. The US national interest in its defense is far greater.
- 2 The United States and its allies and partners will not be deterred from intervening in a Taiwan conflict by Chinese nuclear threats. The allies are confident in US extended deterrence commitments, and the United States has the nuclear capabilities necessary to enable its strategy.
- 3 Chinese limited use of nuclear weapons in theater will not result in China achieving its objectives (e.g., the United States and its allies will not capitulate, and US nuclear responses will deny China any significant military

advantages), and China will incur costs that far exceed any benefit it can achieve. This likely requires convincing the PRC leadership that the Chinese mainland will not be a sanctuary from nuclear response if China initiates nuclear use.

- 4 If faced with defeat, the United States can and might use nuclear weapons first to destroy the PLA invasion force offshore, China has no available response that can counter this option's impact on China's core objective, and Chinese counter-escalation risks further US nuclear use.

Second, deterring an invasion of Taiwan requires that the United States convince Japan, South Korea, Australia, and the Philippines that it can deter Chinese nuclear escalation against them if they join the United States in defense of Taiwan. For example, stating that a Chinese nuclear strike on US allies will be treated as a strike on the United States could reassure the allies and enhance deterrence. Bolstering US theater nuclear capabilities in the Indo-Pacific theater could have those same effects. This is essential because allies' involvement is critical to the United States' ability to defend Taiwan without US nuclear use.

Third, the United States should reevaluate the need for a wider array of more militarily effective theater nuclear capabilities in order to:

- 1 Send China the message that the United States takes China's nuclear buildup seriously, is taking steps to bolster the credibility of US extended deterrence commitments, and is willing to engage in an intense competition of risk-taking if necessary to defend US vital interests.
- 2 Provide the US president with a range of viable limited nuclear options to deter Chinese limited use and counter such use if deterrence fails. US theater nuclear capabilities should ensure that the United States can strike at the times and places of its choosing with a range of explosive yields and on operationally relevant timelines even after adversary preemptive strikes.

Fourth, given the potentially decisive military and political leverage that the threat of US nuclear strikes on China's amphibious landing operations provides, the United States should analyze such options in more detail and determine what capabilities would be optimally effective. This option, if successful, would decisively terminate China's ability to invade and occupy Taiwan for years. Once executed, the Chinese leadership would have to ask itself what its war aims

could be, because seizing Taiwan in the near term would be off the table.

Fifth and finally, US strategy needs to seriously address the potential for collaborative or opportunistic Russia-China aggression in Europe and Asia.¹⁸ It may be possible to improve US, allied, and partner conventional capabilities in both theaters to successfully deter or defeat simultaneous aggression. The United States should closely examine whether it is possible to enhance NATO conventional defenses through improved optimization of force allocation across the alliance and increased European contributions to NATO defense to counter Russian opportunistic aggression. The United States should do the same with its Indo-Pacific allies. The differences in the US conventional forces required in Asia and Europe are significant, with logistical constraints and a shortfall in a number of key high-demand/low-density US capabilities being the primary limiting factors on the United States' ability to fight and win in both theaters simultaneously.

But it is more likely that the United States will have to increase its reliance on nuclear weapons to compensate for conventional inferiority in one of the two theaters and ensure that US nuclear forces are fit for the purpose of doing so. As China's nuclear buildup continues and the United States draws closer and closer to facing two nuclear peer adversaries in the 2030s, the United States must formulate its strategy for that two-peer threat environment and determine the nuclear forces necessary to enable that strategy. The 2022 Nuclear Posture Review did not do this. But doing so is now urgent. The United States needs to know now whether it is going to require a nuclear force that is larger, different, or both, because changing the modernization program being pursued requires immediate action to address the threats in time.

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Gregory Weaver is the principal of Strategy to Plans LLC. Previously, he was deputy director for strategic stability on the Joint Chiefs of Staff Directorate for Strategic Plans and Policy (J5), where he was the principal policy and strategy adviser to the chairman of the Joint Chiefs of Staff on nuclear, space, cyber, missile defense, and arms control issues. Prior to joining the Joint Staff, he served as principal director for nuclear and missile defense policy in the Office of the Under Secretary of Defense for Policy, where he was responsible for all policy matters involving US nuclear and missile defense forces, strategy, plans, and requirements.

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¹⁸ The threat of collaborative or opportunistic China-North Korea aggression must also be addressed, though the military threat posed by North Korea does not rise to the level of that posed by Russia. A US nuclear force sufficient to address simultaneous conflicts with China and Russia should be more than sufficient to address a China-North Korea conflict.

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