THE BOILING MOAT
URGENT STEPS TO DEFEND TAIWAN
EDITED BY MATT POTTINGER
US and allied policymakers and military planners should assume that a prospective war against China will be long, even open ended, and at waxing and waning levels of intensity. These policymakers and planners should prepare now for that outcome. Doing so will give them the best chance of dominating the conflict should it occur. Even more important, preparing for a long, open-ended conflict and showing China’s leaders that they are doing so will be critical elements of a stronger deterrence posture that, if successful, will prevent the war from occurring.

That said, mobilization, or even preparing for mobilization before a conflict, is a hazardous act. Done unwisely, mobilization can reduce a country’s readiness for conflict, the opposite of the intended outcome, if it wastes resources on inappropriate military capabilities or expands centers of gravity vulnerable to enemy targeting. A poorly designed mobilization could weaken rather than strengthen a society if mobilization leads to economic inflation or social upheaval and resistance.

The United States and its allies need to do more to prepare for a long war against China. Doing so now strengthens deterrence and sets
up the conditions for victory should deterrence fail. But policymakers and planners need to think carefully about how they prepare lest they make their strategic situation worse rather than better.

**Why US Policymakers Should Assume a PLA Conflict Will Be Long**

US and allied policymakers and planners should assume a war against China will be long if for no other reason than wars are difficult to end. A fundamental purpose of war is to provide new information to the combatants that they did not have prior to the war’s inception, namely which side will be stronger as the war continues and which will be weaker. The war presumably began because the combatants did not agree on this assessment; if they did agree on which side was weaker, that player would have had a strong incentive to avoid the war by offering concessions instead. The war likely occurred because both sides believed they had a good chance to win or concluded that fighting was the least-worse option. Subsequent combat, and losses, should clarify which side’s judgment on this matter was best.¹

Even so, war is often an imperfect and slow-moving creator of the new information that should resolve this uncertainty and disagreement.² In addition, even when one leader knows he will lose, he may still be unwilling to stop the war because it could literally be fatal for him and his ruling circle to do so.

The leaders of the Chinese Communist Party (CCP) would launch a war for Taiwan because they would have the confidence, mistaken or not, that they could prevail at an acceptable price. And for them, the price they may be willing to risk could be much higher than anyone outside their circle in Beijing might expect. The capture of Taiwan is a millenarian goal for the CCP and a goal to which the CCP has committed its prestige.

Beyond that, these leaders will see the capture of Taiwan as dramatically weakening the strategic position of regional rivals such as Japan and the United States since it would lead to the PLA’s domination of
the western Pacific Ocean’s sea and air lines of communication. This outcome would go far to establish China as the dominant power of eastern Eurasia, worth a high risk for the CCP’s leaders. It would be difficult for these leaders to turn back after they openly committed to achieving this goal with war.

The type of war CCP and PLA leaders choose could also bear on the duration of the conflict. Chapter 8 discussed why the blockade option is difficult for the United States and its allies to counter and why China’s leaders may prefer it to an amphibious assault. The very nature of the blockade option, with its gradual and escalating strangulation of Taiwan, would purposely be a long-run endeavor for the PLA. US and allied policymakers and planners will need a matching time horizon if they wish to counter the blockade.

China’s leaders would choose an amphibious assault if they thought it would be more decisive than a blockade or because they sought to avoid a long war and calculated they could achieve a quick fait accompli with a forceful seizure.

But if the option fails, China’s leaders would face difficult decisions. A likely cause of such a failure would be the widespread destruction of China’s maritime power during the PLA’s assault attempt (discussed in chapter 7). Having successfully defended Taiwan from a direct assault, US, allied, and Taiwanese leaders would likely prefer a quick ceasefire and de-escalation, to limit the risk of further destruction. China’s leaders would then face the choice of accepting, or not, this “off-ramp.”

The argument from China’s perspective for accepting a quick armistice is that it would give China a largely undisturbed interval, lasting perhaps several decades, to reconstitute the PLA and put China in a position to revisit the Taiwan issue later. Reconstitution would be a straightforward technical and production task and PLA leaders could apply lessons learned from the recent combat. If Taiwan and the coalition conducted few strikes on China’s homeland (as was the case during the 2022 CSIS war-game series discussed in chapter 7), China’s leaders would also have an incentive to limit the risk of further destruction, to get on with reconstitution.
There is, however, a darker scenario. Internal political pressure may compel CCP and PLA leaders to continue the war, even after a failed amphibious assault. These leaders would still possess the land-based anti-maritime forces they would need for a blockade of Taiwan, as discussed in chapter 8. All the factors that make the blockade option appealing would still be present.

The risk for China’s leaders would be escalation that would lead to widespread bombing of mainland China, as the US coalition either attempted to suppress the PLA’s land-based blockade forces or pursued a coercive punishment campaign against the CCP leadership. China’s leaders would opt for continuing the war in this manner if they concluded that US and allied leaders lacked the will to escalate to attacks on the Chinese mainland or to continue a war long enough to rescue Taiwan from the blockade’s strangulation.

In any of these cases, the United States, its allies, and Taiwan will face a long-term and open-ended strategic competition against the PLA’s potential military power. In one outcome, the contest would be a long struggle to counter a blockade of Taiwan, an effort that would likely wax and wane in intensity. The other outcome would see a truce followed by China rebuilding a more capable PLA, applying lessons learned from recent combat. Both paths will require the United States and its allies to fashion a wise mobilization strategy and organize industry and financial resources to execute the strategy.

**Mobilization Is a Competitive Act**

Mobilization means more than the call-up of reservists and National Guard soldiers. For this chapter, military mobilization is the substantial and exceptional displacement, through either conscription or bidding, of a country’s labor, financial, and industrial capacities that would otherwise naturally go to civilian purposes. Combatants in a war invariably mobilize their resources for the war effort. This is a competitive act that usually benefits one combatant more than the other, and in potentially unexpected ways.
Mobilizing and Equipping

The Willow Run Creek factory produced one B-24 an hour in 1944. US prewar mobilization set the stage for later US victory in the race for military production in World War II. *Bettmann via Getty Images*

Mobilization can occur in a prewar period (and is arguably what the PLA is doing now). For example, with the international situation deteriorating, the US Congress passed several important military bills in the years before the United States entered World War II in December 1941. First was the Naval Act of 1938, which authorized a 20 percent increase in the navy’s warship budget, authorized the Iowa class of 16-inch gun battleships, and greatly expanded the navy’s cruiser and destroyer fleets. Next was the Two-Ocean Naval Expansion Act in July 1940, which authorized an additional 7 new battleships, 18 aircraft carriers, 29 cruisers, 115 destroyers, 42 submarines, and 15,000 aircraft for the fleet. And in September 1940, President Franklin Roosevelt signed the Selective Training and Service Act of 1940, which authorized the
country’s first peacetime conscription for military service, permitting the call-up of up to nine hundred thousand men at a time.⁵

These actions, especially the advanced procurement of slow-to-build warships, put the United States in a better position when the war arrived. And they prepared US industry for the massive wartime mobilization that would occur later and that would overwhelm the Axis adversaries. After the United States entered the war and fully mobilized, the Allies easily won the mobilization competition, a clear misjudgment by the Axis leaders who declared war on the United States.

**Mobilization Is a Risky Act**

The goal of mobilization is to rapidly increase a country’s military strength. But mobilization can be risky, especially if policymakers do not consider the country’s economic backdrop or its social context. Done unwisely, mobilization can be self-defeating.

The mobilization the US government undertook for its entry into the Vietnam War is an example. In 1965, the Johnson administration decided to fight a large ground war in South Vietnam, to fend off the North Vietnamese army and local communist guerrillas. President Lyndon Johnson believed that military mobilization would create “escalation dominance” for the United States over its adversaries in Vietnam, just as mobilization for World War II had so successfully achieved dominance over the Axis powers just over two decades previously.

In March 1965, two battalions of US Marines landed in Da Nang, South Vietnam. By December, 184,300 US military personnel were in the country, a force that grew to 536,100 by 1968.⁶ To support this ground war, the Pentagon expanded the US Army and Marine Corps from a combined 1,163,015 personnel in June 1964 to 1,877,595 in June 1968, a 61 percent increase.⁷

Meeting this manpower mobilization requirement required the Selective Service System to triple the number of men it conscripted, an action that proved highly unpopular and resulted in widespread civil disobedience.⁸ In addition, the US labor force and overall economy
were already running at or beyond full capacity in 1965. The additional demand for manpower and war production sent the economy into rapidly accelerating inflation, a condition that typically ignites political instability.\textsuperscript{9}

In less than three years, political support for President Johnson’s war policy collapsed and he declined to run for reelection. By 1968, the only politically tenable policy was withdrawal from the war and a reversal of mobilization, which Johnson’s successor, Richard Nixon, carried out.

Johnson and his advisors failed to appreciate the country’s macroeconomic and social backdrop. For the Vietnam War, mobilization created the conditions for defeat rather than victory, a lesson future policymakers should remember.

**Mobilize What and Why?**

From the perspective of the US Department of Defense’s *Joint Publication 5-0, Joint Planning*, discussed in chapter 7, mobilizing half a million ground troops for the Vietnam War and placing them within the range of the enemy’s firepower was a reckless strategy. Through the lens of *JP 5-0*, the United States rashly exposed a vulnerable center of gravity, conscripted foot soldiers from homes across the country, to the guns of an adversary that retained the initiative of when and how to engage on the battlefield. At the same time, the US strategy failed to identify the adversary’s centers of gravity or to formulate methods to effectively attack these.

The lesson is that policymakers and planners need to first develop an effective strategy based on center-of-gravity analysis and the operational concept to execute the strategy. They should then tightly tailor the mobilization plan to support only what the strategy and operational concept require.

Chapter 7 discussed what military capabilities the United States and its allies will require to defeat a PLA amphibious assault against Taiwan while chapter 8 discussed the requirements for thwarting a PLA blockade. These two lists of requirements considered the recommendations
of *JP 5-0*, to find and strike the adversary’s centers of gravity while avoiding its doing the same in return. The military resources the United States and its allies mobilize before and during a war against the PLA should support these theories.

Dominant air and space power are the top requirements for countering both the amphibious assault and the blockade scenarios. The United States and its allies cannot safely conduct significant naval or ground operations for Taiwan contingencies until they have achieved dominance over the PLA in the air and space domains. Thus, mobilizing air and space resources and capabilities before and during a prospective conflict should be the coalition’s top planning priority.

Fortunately, the United States and its allies possess clear dominance in global aerospace research, engineering, and industrial capacity. By itself, the United States controls half the world’s aerospace industrial capacity. It is also the global leader in advanced aerospace technology development, in areas such as propulsion, electronics, space systems, and unmanned systems. Although China’s aerospace engineering and production capabilities are growing, these remain far behind those of the United States; US annual aerospace output is nearly seven times that of China.¹⁰

The coalition’s military aerospace potential is an enduring competitive advantage compared with China’s. And as chapters 7 and 8 explained, aerospace power is the best available matchup against PLA centers of gravity, such as the PLA Navy and the PLA’s land-based antimaritime forces in southeast China. These chapters explained how allied aerospace power can apply the tenets of *JP 5-0* to strike the adversary’s centers of gravity while avoiding having the adversary do the same.

The US and allied coalition is fortunate that the best tool for the Taiwan scenarios, long-range air and space power, is also the tool where the coalition enjoys a substantial and enduring competitive advantage over the adversary. The coalition’s military strategy, war-fighting concept, and mobilization plan should exploit this advantage.

This analysis informs actions that US defense policymakers and planners can take during the current prospective prewar period to deter
a conflict from occurring and to accelerate production of critical capabilities should deterrence fail. In general terms, these actions should expand and diversify assembly capacities for long-range strike platforms like the B-21 Raider bomber aircraft; long-range air-to-surface munitions like the JASSM and the LRASM; affordable mid-range munitions like the Powered Joint Direct Attack Munition; affordable hypersonic air-to-surface munitions; additional and diversified launch capacity to low earth orbit; additional small satellites for reconnaissance, communications, and space domain awareness; and affordable and expendable unmanned air and subsurface vehicles for reconnaissance and autonomous attack.

Given its already dominant position in the global aerospace industry, the United States is well positioned to expand assembly capacities in these areas. The aerospace companies, engineering expertise, management experience, and the labor force are already in place and could either expand existing military assembly capacities or divert existing civilian aerospace capacity to needed military programs when national mobilization programs call on them to do so.

This describes a mobilization program tailored to the military strategy and war-fighting concept most appropriate for attacking the PLA’s centers of gravity exposed in the amphibious assault and blockade scenarios. This mobilization program would accelerate the production of the most useful weapon platforms and munitions and would take advantage of US and allied competitive advantages in aerospace power.

As important, it would avoid expending resources or taking social risks mobilizing military capacity where the United States is not competitive or that would not be relevant to the military problem. For example, the US Navy’s Office of Naval Intelligence concluded that China’s ship production capacity exceeds that of the United States by 232 times; the United States is not competitive with China in naval mobilization.11 And the 2022 CSIS Taiwan war game revealed that US ground forces would have minor relevance in Taiwan scenarios and could expose a vulnerable center of gravity to the PLA’s firepower; ground forces should not be a mobilization priority for Taiwan scenarios.12
What Mobilization Will Cost

The macroeconomic and financial situation in the United States constrains the mobilization options available to policymakers. A mass, World War II–style mobilization, with conscription and mass purchases of military equipment, is not available to a US economy that is already running at full capacity. In addition, the Congressional Budget Office projects the federal government to run a fiscal deficit of 5.8 percent of national economic output in 2024, and the office projects the government’s long-term fiscal situation to dramatically worsen in the decades ahead.\textsuperscript{13} The additional financial burden of a mass mobilization would risk financial calamity. The United States has neither the available labor force nor the financial resources required for a mass mobilization. For these reasons, a narrowly tailored mobilization as described above matches the recommended military strategy and is more economically and financially feasible.

The Pentagon’s proposed budget for fiscal year 2024 provides a starting point for formulating a rough estimate of the cost of a tailored prewar mobilization for prospective Taiwan scenarios.

The table below lists the Pentagon’s fiscal year 2024 budget requests for selected weapon programs that chapters 7–9 have discussed as most relevant for the Taiwan scenarios. The column on the right displays the

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>FY 2024 BUDGET REQUEST (US $BILLIONS)</th>
<th>ADDITIONAL 50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-21 Raider bomber</td>
<td>$5.3</td>
<td>$2.7</td>
</tr>
<tr>
<td>Joint Air-to-Surface Standoff Missile</td>
<td>$1.8</td>
<td>$0.9</td>
</tr>
<tr>
<td>Long Range Anti-Ship Missile</td>
<td>$1.1</td>
<td>$0.6</td>
</tr>
<tr>
<td>Joint Direct Attack Munition (all types)</td>
<td>$0.2</td>
<td>$0.1</td>
</tr>
<tr>
<td>Hypersonic air-to-surface research</td>
<td>$0.5</td>
<td>$0.3</td>
</tr>
<tr>
<td>Unmanned combat aircraft research</td>
<td>$0.1</td>
<td>$0.1</td>
</tr>
<tr>
<td>Unmanned underwater systems</td>
<td>$0.4</td>
<td>$0.2</td>
</tr>
<tr>
<td>Satellite communication, space defense</td>
<td>$5.2</td>
<td>$2.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$14.6</strong></td>
<td><strong>$7.5</strong></td>
</tr>
</tbody>
</table>
cost of adding 50 percent to these programs to expand and diversify their production capacities (amounts are in billions of US dollars, rounded).14

The US Defense Department could apply the additional funding to expand assembly capacity; build redundant and geographically separate assembly facilities; hire and retain additional research, engineering, and manufacturing talent; support new business entrants into the defense industrial base; and deepen component supply chains for critical weapons and systems.

The additional annual spending on programs most useful for preparing for the Taiwan scenarios—roughly estimated at $7.5 billion—is a minimal sum in the context of either the overall US defense budget (0.9 percent of $863 billion for fiscal year 2024) or the total projected output of the US economy in 2024 (0.03 percent of $27,238 billion).15

The US government and taxpayers can afford this sum. Most notably, it would represent a new, precise, and focused way of mobilizing for a war that the mobilization itself would aim to deter from ever occurring.

Needed Now: A Sustainable War-Fighting Concept and Military-Industrial Policy

US and allied policymakers should prepare their wartime mobilization plans well in advance of a prospective conflict. Time will be a critical variable for all combatants, with mobilization laggards risking higher wartime costs and even defeat. Establishing a mobilization plan implies also establishing a military strategy and operational concept in advance, since the mobilization plan should support the strategy and concept.

The US mobilization experience in World War II provides a lesson. This chapter earlier described how US mobilization for the coming conflict began with the Naval Act of 1938, the Navy Expansion Act in 1940, and military conscription in 1940.

Despite these acts of foresight, Roosevelt and his top military officers did not decide on a comprehensive operational concept and supporting military production plan until late November 1942, nearly a year after the United States entered the war. Prewar mobilization plans
were based on World War I and nineteenth-century concepts that called for a massive infantry-centered US military force of 215 army divisions, with air and naval forces providing minor and supporting roles, and war industries starved of labor to fill the army’s ranks.16

But in the summer and autumn of 1942, Admiral William Leahy, Roosevelt’s newly installed military chief of staff, advised Roosevelt to redirect the mobilization program to a military force centered on air and naval power, an inclination that Roosevelt already favored based on his observations of the war and his previous service as assistant secretary of the navy. Roosevelt and Leahy believed that an operational concept centered on globe-spanning and dominant air and sea power would play to US technological and industrial advantages and greatly reduce US casualties compared with the previous ground force-centered mobilization plan.17

By late November 1942, Roosevelt and his military advisors settled on a mobilization plan that called for building 107,000 military aircraft in 1943 (the United States built 299,293 military aircraft during the war) and focusing a naval construction program on aircraft carriers and amphibious shipping, but cutting an army mobilization to ninety divisions.18 This technologically sophisticated operational concept and military force not only defeated the Axis powers, it greatly reduced US casualties compared with what they would have been with the prewar mobilization plan.19

Roosevelt and his advisors should get credit for beginning naval mobilization early, years before the war began. They should get additional credit for fashioning a highly competitive mobilization concept that matched America’s technological and industrial advantages against the adversaries’ vulnerabilities to tactical and strategic airpower and naval maneuver.

However, it is unfortunate that settling on this plan occurred over eleven months after the United States entered the war. This delay postponed the arrival of the massive fully mobilized and war-winning US military force until 1944, which added to the war’s costs. Today’s policymakers have an opportunity to learn from this experience and be fully prepared for this era’s contingencies.
Finally, US policymakers should accept that even if they successfully deter a war against China, the geostrategic competition may last for the rest of this century. The strategy, operational concept, and preparatory mobilization policies these policymakers fashion should be acceptable to US society, find favor with both sides of the political spectrum, be affordable, be flexible during changing conditions, and thus be sustainable for an open-ended period. The concepts and mobilization program described in this chapter and the prior two, which match US competitive advantages against China’s vulnerabilities, meet these criteria.

**A Two-Year Action Plan**

What actions should US and allied policymakers take now to prepare for a military mobilization against China?

1. US and allied policymakers and military planners should decide during a prospective prewar period on the military strategies, operational concepts, and supporting mobilization plans they would employ during alternative Taiwan defense contingencies. As discussed in chapters 7–9, these strategies, concepts, and plans should match enduring US and allied advantages against China’s vulnerabilities and be economically and politically sustainable for an open-ended period. Establishing these policies in advance of need will strengthen deterrence and save time during a contingency, an important competitive variable.

2. US and allied policymakers and planners should meet with aerospace and maritime industry leaders to discuss preparations for mobilizing industry resources to achieve prospective wartime objectives, should it be necessary to do so.

3. The US Congress should appropriate funding to establish a second assembly facility for the B-21 Raider bomber aircraft, ideally at Tinker Air Force Base, Oklahoma, which is geographically separate from the primary assembly facility in California and is the designated site for the bomber’s life-cycle maintenance
and sustainment. Establishing a second assembly line for the B-21 will increase the production rate of the aircraft, provide additional capacity for allies such as Australia to obtain the bomber, and diversify the bomber’s production at a facility farther from the reach of the PLA. In a long military campaign against China, the US Air Force will need to add bomber production capacity, increase the campaign’s tempo, replace inevitable aircraft losses, and provide sufficient bomber capacity to deter possible opportunistic aggression elsewhere.

4. The US Congress should increase funding for research and additional production capacity for weapon systems discussed in this chapter, such as air-to-surface munitions, unmanned autonomous air and undersea vehicles and weapons, and space-based communication and reconnaissance capacity. Funding for these systems in a prewar phase can expand production capacity, increase the pool of engineering talent, deepen supply chains, and support the creation of new entrants into the defense industrial base.

Summing up, US and allied leaders need to disabuse CCP leaders of the notion that China could win a mobilization competition or that China will possess more stamina in a long, even open-ended conflict. US and allied leaders will accomplish this when they establish during the prewar period their strategy for victory and a winning operational concept to achieve that. Perhaps the most effective deterrent action US and allied leaders can take is to prepare now for mobilization and display to CCP leaders that they are doing so. That would go a long way toward convincing China’s leaders that they do not possess useful military options for seizing Taiwan.

NOTES


