

America Must Remedy Its Dangerous Lack of Munitions Planning

Wilson Beaver and Jim Fein

KEY TAKEAWAYS

The Pentagon was caught off guard by the amount of artillery shells needed by the Ukrainian and Israeli militaries after being attacked, and supply is short.

Shells, missiles, and other munitions are necessary to fight wars as well as to deter them. Currently, the U.S. is not well equipped to do either.

The U.S. must ramp up munitions production fast and focus military aid and sales on strategic priorities, especially in the Indo-Pacific.

Since the end of the Cold War, the U.S. has not bought and built enough munitions to keep pace with the military operations the President and Congress have tasked the Department of Defense (DOD) with conducting. In 2014, the U.S. discovered that it lacked enough precision-guided missiles to take on a non-state actor, ISIS, in a limited campaign. Less than a decade later, it has become apparent that the problem persists, as the effort to arm Ukraine has dangerously depleted America's stores of artillery shells. This deficiency in munitions planning harms America's warfighting capability, endangering its ability to fight future wars. It is vital that the U.S. remedy this deficiency by increasing munitions spending, coordinating with allies, shoring up industry, and doing a better job of husbanding resources.

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The Past: Operation Inherent Resolve and Operation Unified Protector

In 2014, the United States launched Operation Inherent Resolve to degrade and destroy ISIS. Two years of operations later, the Pentagon was raiding stores worldwide for munitions. The current Chair of the Joint Chiefs of Staff, General Charles Brown, stated at the time that the U.S. would “have to do some analysis of where we take risk,”¹ implying that the depletion of munitions stockpiles by some 45,000 bombs risked the ability of the U.S. military to conduct operations in other potential theaters of war.

Based on a 2019 presentation by the Department of the Air Force, by the end of the operation, U.S.-led coalition aircraft had used around 112,458² munitions against ISIS.³ This, despite Operation Inherent Resolve being a limited campaign against a non-state actor.

The Pentagon began rebuilding its missile stores in 2016,⁴ but it took until 2021 before Joint Direct Attack Munition (JDAM) War Reserve Materiel inventory hit “acceptable” levels, as indicated by JDAM procurement returning to pre-2016 levels.⁵

The Present: Ukraine and Israel

Less than a decade later, the Pentagon finds itself in a similar scenario. Ukraine is using about 110,000⁶ 155-mm artillery shells per day, with a stated minimum need to fire 356,400 shells per month, and a capacity of firing 594,000 per month.

The U.S. has shipped about 2 million shells to Ukraine since Russia invaded in February 2022. In contrast, the U.S. Army only procured around 500,000 M795 155-mm artillery shells⁷ in the preceding decade, about one-fourth the amount.

During this time, America has made progress in addressing its deficit in artillery shell production, increasing production to 28,000 per month today from about half that in early 2022. The U.S. is on pace to increase production to 100,000 shells per month in 2025.⁸ But even with a complete pause in shell expenditure, it would take nearly two years—20 months—to reach pre-Ukraine levels of artillery shell reserves at the 100,000 shells-per-month level.

In addition to Ukrainian requirements, Israel needs munitions from the U.S. to deal with existential threats, including Hamas and Hezbollah. Some of those requirements overlap, such as a need for 155-mm artillery rounds, but Israel also requires precision-guided munitions, such as JDAMs and Small Diameter Bombs (SDBs).⁹

The Pentagon was—dangerously, unacceptably, and unwarrantedly—caught off guard by the amount of artillery shells needed by the Ukrainian and Israeli militaries. During Operation Desert Storm in 1991, in a four-day ground war, the U.S. used more than 60,000 artillery shells.¹⁰ That is a pace of 465,000 artillery shells per month against a comparatively weak adversary, further weakened by 43 days of extensive aerial attack. But Congress, the executive branch, and the DOD made commitments to Ukraine before running this basic math.

The Pentagon also should not have been caught off-guard by Israeli requirements after the shortfalls, mentioned above, experienced during Operation Inherent Resolve. Instead, U.S. procurement lagged so far behind the number of munitions required to replenish Israeli stockpiles that the number of JDAM and SDMs procured in 2022—3,000 and 2,000, respectively¹¹—totaled less than the 6,000 bombs that Israel used in the first six days of conflict in Gaza last year.

There is clearly a gap between what Congress and the President have been asking of the Pentagon and the means they have provided. America's own munition problem is compounded by U.S. allies' munitions shortages. During Operation Unified Protector¹²—the 2011 NATO-led intervention in Libya—allied countries lacked enough precision-guided munitions to sustain operations and had to rely on the U.S. for resupply. The French and British ran short on precision-guided munitions less than a month into the conflict, and the U.S. stepped in to fill the capability gap (something the U.S. would be even harder pressed to do in a comparable situation today).

Since Unified Protector, the problem has not improved much. In 2022, Great Britain had enough artillery shells to fire at Russian rates for only two days.¹³ It has so few Tomahawk missiles that it turned the vertical launching system (VLS) cells on its Type 45 destroyers into gyms filled with exercise equipment for personnel.¹⁴ Germany only has approximately 150 operable Taurus cruise missiles,¹⁵ and the situation is not much better throughout the rest of Europe.

The (Possible) Future: Taiwan

The Pentagon's munitions planning problems are not just in the past; they will shape the way that America can fight the next war. For example, wargames have indicated that the Pentagon only has enough critical munitions to fight China, if it launches an invasion of Taiwan, for about a week.¹⁶ That is clearly not enough munitions to engage in a prolonged conflict with China, not to mention maintaining the capability necessary for deterrence, or, if necessary, to go to war in other theaters.

A fight over Taiwan would primarily require high-end anti-ship weapons, ship-defense missiles, and ground-attack munitions to destroy anti-access area-denial systems. The U.S. does not currently have an adequate supply of any of these munitions. Judging by publicly available defense documents, the U.S. has only about 4,000 Tomahawk missiles,¹⁷ around 100 to 200 long-range anti-ship missiles (LRASMs),¹⁸ fewer than 2,000 extended-range joint air-to-surface standoff missiles (JASSM-ERs),¹⁹ and fewer than 1,306 Standard Missile-6s (SM-6s).²⁰

Current procurement plans will not solve the problem, either. Hypersonic missiles, a key emerging technology and military breakthrough, have yet to move past development. Meanwhile, the 2024 Presidential Budget Request calls for no Navy-ordered Tomahawks and only 118 LRASMs, 550 JASSM-ERs, and 125 SM-6s.²¹

To put that into perspective: This is only enough for the 111-strong²² U.S. bomber force to launch 4.95 JASSM-ERs and 1.06 LRASMs per bomber and the Navy's conflict-active²³ destroyers, cruisers, and submarines to fire *zero* Tomahawks and its destroyers and cruisers to fire 1.76 SM-6s each.

Comparing U.S. munitions inventory with the target set that the U.S. would need in order to engage in a future armed conflict exposes this deficiency. The U.S. has suffered from munitions shortages because of limited operations against non-state actors and would be even less equipped to deal with a state actor with a substantial military.

Munitions and the Chinese Fleet

According to the 2024 International Institute of Strategic Studies' *The Military Balance*,²⁴ China has 59 submarines, 42 destroyers, 49 frigates, 50 corvettes, 11 principle amphibious landing ships, 50 landing ships, and 78 landing craft. It also has two aircraft carriers. This does not count China's smaller Navy ships, its coast guard, which has more than 500 (smaller) ships, and its Maritime Militia, which has an unknown number of civilian craft that are available to ferry Chinese troops across the Taiwan Strait.

With between 100 and 200 LRASMs, the U.S. does not have enough air-launched anti-ship missiles to sink China's major surface combatants, even with a 100 percent hit rate. If the JASSM-ER can perform as an anti-ship weapon—which is not proven—air-launched missile capacity still falls far short of what is likely needed, and the diversion of JASSM-ERs to naval targets takes away from an already insufficient stockpile of land-attack munitions.²⁵

While JASSM-ERs and LRASMs are supplemented by weapons such as MK-48 torpedoes in a scenario involving the Chinese fleet, they are most

likely not enough to make up the difference, even without broadening out to include other target sets and strategic needs, such as the ability to maintain post-war deterrence against other threats, such as Iran and North Korea.

Recommendations for the U.S. Government

In order to remedy the U.S. munitions shortage, Congress, the Department of Defense, and other executive branch departments should:

- **Increase munitions production.** First, the U.S. needs to dramatically increase munitions production. The use of multiyear procurement authorities in the FY 2024 National Defense Authorization Act is an important first step, but the amounts of munitions procured still fall well short of what the United States military would need were it to engage in conflict in the Indo-Pacific (which means that the U.S. military is also insufficiently equipped to *deter* a conflict in the Indo-Pacific). The Pentagon and White House could send a demand signal by requesting of Congress a dramatically higher amount of munitions relevant to the Indo-Pacific.
- **Explore how to work with partner countries, such as Japan and South Korea, to increase munitions production capacity.** Some allied countries, such as Japan and South Korea, have significant manufacturing capacity and robust defense industries. The U.S. should take advantage of this capacity and study how allied foreign industry can increase output of U.S.-origin defense equipment, including munitions. Supply falls so short of demand that there would be no harm done to U.S. manufacturing if partners and allies, like Germany and Britain, along with Japan and South Korea, were to dramatically increase production of munitions.
- **Prioritize aid and foreign military sales to countries where the U.S. has the most at stake.** Funding should always flow from strategy. The National Defense Strategy (NDS) identifies China as the primary challenge to the United States, and the Indo-Pacific as the primary arena of competition. Therefore, sales of critical military technology and equipment to partners and allies in the Indo-Pacific have priority. One need only look at the glaring mismatch between funding requested for Taiwan and funding requested for Ukraine in President Joe Biden's 2023 Emergency Supplemental Request (\$61.4 billion for

Ukraine and \$2 billion for the Indo–Pacific) to see that the current funding does not match the NDS.

- **Focus resources and capabilities on priorities.** The U.S. military cannot be everywhere all the time. America has finite resources and therefore must do a better job of husbanding its resources. One minute, the military is being told to pivot to Asia and focus on China, the next minute the President is telling the Pentagon to empty its warehouses of munitions and send them to Ukraine for a conflict deemed secondary in the NDS, all while China continues its military build-up. If the United States is serious about deterring China in the Indo–Pacific, it will have to avoid strategic distractions elsewhere.

Conclusion

The United States has limited resources and must prioritize its defense spending to focus on its top national security concern—detering China in the Indo–Pacific. Strategic distractions in places like Ukraine waste U.S. resources and risk sacrificing what is primary to what is secondary. The U.S. military is dangerously low on munitions and has not been spending enough to replace what is being expended, especially in recent years. If the U.S. military is to deter China, it will need far bigger stores of munitions than it currently has.

Wilson Beaver is Senior Policy Analyst for Defense Budgeting in the Douglas and Sarah Allison Center for National Security at The Heritage Foundation. **Jim Fein** is Research Assistant for National Security and European Affairs in the Allison Center.

Endnotes

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