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## Ukrainian Military Performance and Outlook

Since Russia's renewed invasion of Ukraine in February 2022, the Ukrainian Armed Forces (UAF) have successfully defended against and pushed back Russian forces in many regions, despite several apparent disadvantages. The UAF has demonstrated a great deal of flexibility over the course of the conflict to date, as well as an ability to integrate Western security assistance and training in its military campaigns. The UAF continues to face obstacles sustaining momentum against Russian forces. Ukraine's resistance has come with losses in personnel and equipment, and both sides face risks entering the winter season.

Since early 2022, the Biden Administration and Congress have firmly supported Ukraine's defense of its territorial integrity against Russia's invasion. The UAF's evolving state may be of interest to Congress as Members continue to weigh options and conduct oversight over policies to support Ukraine's defense against Russian aggression.

### Personnel

Some observers note that the UAF's impressive overall performance to date has been due in part to the experience and motivation of its personnel. The UAF continues to benefit from high levels of recruitment and motivation. High losses, however, pose a continued challenge to the UAF's ability to maintain effective, sustained operations.

After Russia's initial invasion of Ukraine in 2014, the UAF gained important combat experience fighting Russian-led forces in the eastern regions of Donetsk and Luhansk (known as the Donbas). This led to a large proportion of trained and experienced veterans among Ukraine's population. These veterans and other volunteers (including foreign recruits) were quickly mobilized into Ukraine's new volunteer Territorial Defense Forces (TDF) and Reserve without the need for lengthy training. The high level of experience and training among recruits meant they were able to operate artillery, tank, and support systems that traditionally require more time for reservists or volunteers to master. These units have been crucial in supporting regular UAF units and enabling them to spearhead operations and counteroffensives.

Since the beginning of the 2022 war, the UAF reportedly has suffered high levels of casualties. Losses are likely higher among regular UAF and Special Forces units, leading to a greater reliance on TDF and Reserve units. Unlike the initial period of the war, when most recruits were veterans, most new recruits and volunteers have little military experience and, as a result, take longer to train.

The UAF faces two major hurdles to training and deploying new personnel. First, at the time of the invasion, Ukraine did not have a fully developed professional

noncommissioned officer (NCO) corps, which it had been seeking to develop along NATO standards before the war. The UAF continued to face issues with retention, professional development, and funding. As described previously, the high proportion of trained veterans, many with combat experience, mitigated to some degree the need for an established NCO corps to train and command new recruits.

Second, the UAF's need for immediate reinforcements creates pressure to deploy troops with only basic training. To sustain combat operations in the current conflict, however, the UAF has continued training recruits to staff professional units, conduct complex operations, and operate advanced weapon systems.

### Equipment

To date, the UAF has sustained significant equipment losses. Some UAF units appear to be operating without mechanized or motorized vehicle support, likely due to losses and maintenance issues. Despite losses, Western security assistance and UAF resilience in repairing and maintaining equipment has been crucial to UAF successes. Repurposing captured Russian equipment during recent offensives likely has mitigated some losses but is unlikely to be sufficient to meet UAF needs or provide long-term relief for its equipment needs.

Ukrainian officials have emphasized their need for long-range rocket and artillery systems to counter Russia's quantitative and qualitative advantage in long-range fire. At the start of the war, Ukraine still relied on Soviet and Russian 122mm and 152mm caliber rocket and artillery systems. Ukraine also had a smaller number of longer-range 220mm and 300mm rocket systems, but it is unclear how many are still in service.

The UAF's access to materials, components, and ammunition to operate and repair Soviet- and Russian-era equipment has long been a source of concern. Although some Central and Eastern European defense industries are compatible with Soviet and early Russian equipment, observers say these industries likely do not have sufficient capacity to support Ukraine. Additionally, Russian forces have targeted Ukraine's domestic defense industry, affecting its ability to produce and maintain equipment (including complex weapon systems) to meet UAF needs. However, during recent advances in Kharkiv and Luhansk, the UAF captured large amounts of Russian equipment, much of which has been redeployed after repairs.

Ukraine's air force and air defenses have proven effective thus far in limiting Russian air superiority. Russia retains air superiority in certain regions, however, and continues to

target Ukrainian air defenses. It is unclear how many operational medium- and long-range air defense systems Ukraine retains, and frontline UAF units primarily rely on short-range man-portable air defense (MANPAD) systems.

## Role of U.S. and Western Security Assistance

Since the start of Russia's 2022 war, the United States has provided Ukraine more than \$17.9 billion in security assistance. The United States and European allies and partners also continue to contribute training, logistics, and intelligence. Observers note a possible tension between the imperative to provide equipment and training for immediate use on the battlefield and the need to provide training to employ these systems effectively over the longer term. There is also tension in balancing Ukrainian requests with concerns about escalating the conflict beyond territorial defense. Another concern, some say, is the impact of such assistance on U.S. and Western stockpiles and the time it would take for domestic defense industries to replenish.

## Training

Prior to Russia's 2022 invasion, the United States and other allies contributed training and advice to the UAF. Current training efforts focus on employing and operating Western security assistance and, increasingly, on basic infantry skills and unit-level development.

The UAF still faces pressure to deploy troops into the field with minimum training to replace losses, but it has increased efforts to prioritize advanced training to support long-term development and the creation of new units capable of combined arms operations. Observers note, however, the UAF's ongoing need for assistance and training in planning, operations, and logistics.

## Equipment

In the initial phase of the war, U.S. and European provision of anti-tank and MANPAD systems appeared crucial in supporting UAF operations. As the war has evolved, however, Western security assistance has adjusted to the conditions and needs of the UAF. Western assistance has provided the UAF with capabilities to not only defend but also push back Russian forces, specifically artillery and rocket artillery. Due to the almost total exhaustion of ammunition for Soviet- and early Russian-era artillery, the UAF is increasingly dependent on Western artillery. Ukrainian officials continue to call for advanced systems such as tanks, fighters, and long-range missiles. In response to continued Russian strikes against Ukrainian critical infrastructure, observers note Ukraine's need for air defense systems to protect critical infrastructure. The UAF also has appealed for more mobile air defense systems to protect units as they advance and support offensive operations.

At the unit level, the UAF has identified protected mobility (e.g., armored vehicles) and unit-level fire support (e.g., mortars) among its needs in order to exploit advances, protect withdrawal, and support operations. Individual supplies such as warm clothing, medical equipment, secure communications, and food likely will play a key role in maintaining unit effectiveness through the coming winter.

## Current Military Performance and Outlook

Over eight months into the war, the UAF appears to have regained momentum from Russian forces, conducting offensives and retaking territory in the Kharkiv, Luhansk, and Kherson regions. The UAF continues to demonstrate high levels of operational flexibility, motivation, and capability. The UAF appears committed to capitalizing on reduced Russian military capability and demonstrating to foreign audiences its ability to retake territory, especially before winter.

The UAF command structure appears to be more centralized, as opposed to the more localized command structure exhibited earlier in the war. Nevertheless, the UAF command has demonstrated flexibility and a willingness to adjust operations due to changing circumstances, particularly at the unit level. It also appears the UAF continues to adopt NATO-style principles of command, such as the delegation of authority to local command as well as to junior and lower-level officers.

Russia's armed forces retain some advantages in equipment (specifically artillery and long-range fire), air support, and electronic warfare. Russia's September 2022 decision to announce mobilization comes after a recognition of drastic losses and lack of personnel. In contrast, Ukraine is likely to continue to recruit large numbers of personnel. The UAF still relies on a core of professional units to conduct combined arms operations and spearhead operations, supported by TDF and Reserve units. As mentioned, training new recruits to replace and expand these professional units could prove decisive in the coming months. The Ukrainian government also may face further infrastructure and resource constraints, including from Russian targeting, which could affect UAF performance.

These developments may factor into congressional decisionmaking on future options regarding whether and how to support Ukraine's defense. Some observers believe UAF capabilities will continue to increase with continued U.S. and Western security assistance, especially in key areas, such as air defenses. UAF training to operate and maintain these systems will likely determine the extent of the improvement in UAF capabilities. Ukrainian officials also note the importance of continued ammunition supplies, especially as the UAF depends increasingly on Western artillery. In addition, the UAF has identified needs in logistics, medical evacuation and care, and intelligence. Communications problems endure, with Russian electronic warfare and a lack of reliable systems hindering the UAF's ability to coordinate operations and integrate intelligence.

Also see CRS Report R47068, *Russia's War in Ukraine: Military and Intelligence Aspects*, by Andrew S. Bowen; CRS In Focus IF11862, *Ukrainian Armed Forces*, by Andrew S. Bowen; and CRS In Focus IF12040, *U.S. Security Assistance to Ukraine*, by Christina L. Arabia, Andrew S. Bowen, and Cory Welt.

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