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## Ukrainian Military Performance and Outlook

Since Russia launched its 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 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, however. Ukraine's resistance has come with losses in personnel and equipment, and sustainment will be an ongoing consideration.

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 condition 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 in part due to 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 Ukraine's 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 ratio of trained and experienced recruits meant they were able to operate artillery, tank, and support systems that traditionally require more time 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, lowering force quality. Losses are likely higher among regular UAF and Special Forces units, leading to a greater reliance on TDF and Reserve units. Many of these TDF and Reserve units also have sustained heavy casualties, further increasing the ratio of mobilized personnel to regenerate forces. Unlike in the initial period of the war, when most recruits were veterans, at present most new recruits 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 previously had been seeking to develop along NATO standards. The UAF continued to face issues with retention, professional development, and funding. As described above, a 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. Losses among those veterans have increased the importance of developing a professional NCO corps and affected unit-level capability.

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 continues to balance the time to train personnel on conducting complex operations and operating advanced weaponry with ensuring sufficient personnel are deployed at the front line.

### 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 limited replacements. Despite losses, Western security assistance and UAF resilience in repairing and maintaining equipment has been crucial to UAF successes.

Ukrainian officials have emphasized a need for long-range rocket and artillery systems to counter Russia's quantitative and qualitative advantages 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, and ammunition and replacement parts have become scarce. Western provision of artillery, rocket artillery, and ammunition has been crucial in sustaining UAF operations.

The UAF's access to materials, components, and ammunition to operate and repair Soviet- and Russian-era equipment has been a source of concern. Although some Central and Eastern European defense industries are compatible with Soviet and early Russian equipment, these sources are insufficient to meet Ukraine's needs. Additionally, Russian forces have targeted Ukraine's domestic defense industry, affecting its ability to produce and maintain equipment (including ammunition and complex weapon systems).

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

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

Since the start of Russia's 2022 war, the United States has provided Ukraine more than \$37.6 billion in security assistance. The United States and European allies and partners also continue to contribute training, logistics, and intelligence. Observers note the difference and effort to train personnel on operating weapons systems compared to training on maintenance and sustainment, which is crucial to operating systems over the long-term. Western officials continue to consider concerns over escalation, stockpiles and defense industrial production capacity, and available funding to procure and sustain security assistance.

### 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, on basic infantry skills and unit-level development, and, increasingly, combined arms operations.

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. Training will likely grow in importance as the UAF seeks to replace its losses with mobilized personnel.

### Equipment

In the initial phase of the war, U.S. and European provision of anti-tank and short-range man-portable air defense (MANPAD) systems were crucial in deflecting Russia's invasion. As the war has evolved, Western security assistance has adjusted to the conditions and needs of the UAF. Assistance has provided the UAF with capabilities to not only defend but also push back Russian forces.

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 (including Leopard, Challenger, and Abrams), Western fighters, and long-range missiles. Air defense systems remains a top priority for Ukraine security assistance, at both the strategic and tactical level, including 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, infantry fighting 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 body armor, medical equipment, and secure communications also are requested.

## Current Military Performance and Outlook

More than 15 months into the war, the UAF appears to have blunted Russian forces, including via offensives into Kharkiv, Luhansk, and Kherson regions, and is preparing to regain offensive momentum this summer. 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.

The UAF command structure appears to be more centralized than it was earlier in the war. While the UAF seeks to adopt NATO-style principles of command, it still exhibits traits of Soviet-style command, particularly among mobilized officers educated according to Soviet doctrine. Nevertheless, the UAF has demonstrated flexibility and a willingness to adjust operations due to changing circumstances, particularly at the unit and junior levels.

Russia's armed forces retain some advantages in equipment (specifically artillery and long-range fire), air support, and electronic warfare. Ukrainian officials state that its most urgent needs include, in addition to air defense, armored mobility (armored and infantry fighting vehicles), artillery (such as M777), long-range fires, and ammunition. In particular, armored mobility is required to upgrade and equip new and existing units.

Additionally, the UAF still relies on a core of professional units to conduct combined arms operations and spearhead operations, supported by TDF and Reserve units. Recruitment and motivation remain high, but losses, exhaustion, and the need to rotate units likely will remain an ongoing challenge.

As mentioned, training new recruits to replace and expand these professional units could prove decisive in the future. The UAF has established new units with Western equipment, and re-formed existing units in preparation for a summer offensive. It is unclear how these forces will operate and if they have enough support or combat enablers to breach and exploit Russian defensive lines. Beyond this summer, the UAF's ability to regenerate forces and maintain force quality likely will be critical to its success.

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 and artillery. UAF training to operate and maintain these systems likely will determine the extent of 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 (including training and updating processes), breaching equipment (such as mine clearing and bridging capabilities), medical evacuation and care, intelligence, and secure communications to deal with Russian electronic warfare capabilities.

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