

# Russia's War in Ukraine: Military and Intelligence Aspects

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## Russia's War in Ukraine: Military and Intelligence Aspects

Russia's renewed invasion of neighboring Ukraine in February 2022 marked the start of Europe's deadliest armed conflict in decades. After a steady buildup of military forces along Ukraine's borders since 2021, Russia invaded Ukraine on February 24, 2022, with Russian ground forces attacking from multiple directions.

Initially, Russian forces made gains along all lines of advance. However, Russian forces ran into effective and likely unexpected levels of Ukrainian resistance from the invasion's outset. In addition, many analysts and officials assess that, during this first stage of the war, the Russian military performed poorly overall and was hindered by specific tactical choices, poor logistics, ineffective communications, and command-and-control issues. The Ukrainian Armed Forces (UAF), while at a quantitative and qualitative disadvantage in personnel, equipment, and resources, have proven more resilient and adaptive than Russia expected.

Over the course of the first several weeks of the war, Russian President Vladimir Putin and the Russian military had to adjust to various setbacks and other developments on the ground. With many of its advances stalled, Russian defense officials announced in late March 2022 that Russian military operations would focus on eastern Ukraine, including the regions of Donetsk and Luhansk (collectively known as the Donbas, where Russian-led separatists have been fighting since 2014) and that Russia would withdraw its forces around Kyiv and Chernihiv in the north. Russia subsequently gained additional territory in the Donetsk and Luhansk regions and held territory in other regions, including Kharkiv in the northeast and Zaporizhia and Kherson in the south.

In September 2022, Ukrainian forces succeeded in retaking territory in Ukraine's Kharkiv and Kherson regions. In this effort, the UAF demonstrated an ability to deploy forces effectively to conduct offensive operations, and the Russian military continued to suffer from systemic and structural failings. Fighting subsequently has focused on the Donbas, specifically the town of Bakhmut and surrounding territory. Amid intense attritional fighting, both sides have been reforming and reconstituting units for spring offensives after suffering heavy personnel and equipment losses.

Approaching one year since Russia's 2022 invasion, debates continue over each side's ability to establish and equip units capable of conducting offensive operations, with many observers skeptical either Russia or Ukraine will be able to achieve a decisive battlefield victory in the near future. At the same time, both sides anticipate intensive localized offensives.

Prior Congresses have considered numerous measures in response to Russia's aggression against Ukraine. The 118<sup>th</sup> Congress is likely to continue tracking these developments closely as it considers upcoming policy decisions on U.S. and international efforts to support Ukraine militarily, conducts oversight of security assistance, monitors allegations of war crimes, and examines U.S. and international policies to deter further Russian aggression. For other CRS products on Russia's war in Ukraine, see CRS Report R47054, *Russia's 2022 Invasion of Ukraine: Related CRS Products*.

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## Introduction

Russia's renewed invasion of neighboring Ukraine in February 2022 marked the start of Europe's deadliest armed conflict in decades. It also prompted intensive international efforts to respond to the war. Multiple Members of Congress have engaged with U.S. and international measures, including by supporting sanctions against Russia, providing assistance to Ukraine, and bolstering support to neighboring NATO countries. The immediate and long-term implications of the ongoing war are likely to be far-reaching, affecting numerous policy dimensions of concern to Congress.

This report addresses Russian and Ukrainian military and intelligence aspects of the war, which are of interest to many in Congress as Congress considers various legislative measures and conducts oversight of U.S. policy. It provides an overview of the conflict, including the run-up to the invasion, the different phases of the war to date, recent developments on the ground, and the conflict's near-term outlook. The report includes brief discussions about potential Russian war expectations and military command and personnel challenges. For other CRS products related to Russia's invasion of Ukraine, including U.S. policy dimensions, see CRS Report R47054, *Russia's 2022 Invasion of Ukraine: Related CRS Products*.

## Prelude to Invasion: Military Buildup and Force Posture

In mid-October 2021, social media and news outlets began to report significant movement by Russian military forces, with limited Russian transparency, on or near the Ukrainian border and within Ukraine's occupied Crimea region (which Russia claimed to annex in 2014). The buildup came after a sustained increase in Russia's permanent force posture on the Ukrainian border.<sup>1</sup> Since 2014, Russia has created two new Combined Arms Armies (CAAs), one in the Western Military District (20<sup>th</sup> CAA, headquartered in Voronezh) and one in the Southern Military District (8<sup>th</sup> CAA, headquartered in Rostov-on-Don and Novocherkassk) bordering Ukraine. Russia created these CAAs to oversee, coordinate, and manage command and control of units transported to the border. The 8<sup>th</sup> CAA also reportedly commands the separatist units in two Russia-controlled areas in eastern Ukraine (the so-called Donetsk and Luhansk People's Republics, or DNR/LNR).

Throughout December 2021, Russia continued to build up its forces in the region. Prior to the February 2022 invasion, Russia had mobilized between 150,000 and 190,000 personnel and 120 Battalion Tactical Groups (BTGs) on its border with Ukraine,<sup>2</sup> in Belarus, and in Ukraine's occupied Crimea region, according to U.S. government estimates.<sup>3</sup>

Prior to the February 2022 invasion, the Russian military was a tiered readiness force, with personnel levels ranging from 70% to 90% of their authorized strength. Additionally, since 2012-

<sup>1</sup> Michael Kofman, "Putin's Wager in Russia's Standoff with the West," *War on the Rocks*, January 24, 2022.

<sup>2</sup> Battalion Tactical Groups (BTGs) are ad hoc, task-specific formations designed to operate autonomously as combined arms formations. BTGs are built around infantry and armor units, with supporting air defense, artillery, and other units. BTGs comprise the higher readiness units of the Russian military and are staffed by professional (also known as contract) personnel. Each Russian regiment or brigade is intended to generate two BTGs. In August 2021, Russian Defense Minister Sergei Shoigu stated the Russian military had 168 BTGs. Lester W. Grau and Charles K. Bartles, *The Russian Way of War: Force Structure, Tactics and Modernization of the Russian Ground Forces* (Leavenworth, KS: Foreign Military Studies Office, 2016), pp. 34-40; Tass, "Russian Army Operates Around 170 Battalion Tactical Groups—Defense Chief," August 20, 2021.

<sup>3</sup> U.S. Mission to the Organization for Security and Cooperation in Europe, "U.S. Statement for the Vienna Document Joint PC-FSC Chapter III Meeting," February 12, 2022; Department of Defense, "Senior Defense Official Holds a Background Briefing," press release, March 3, 2022.

2014, Russia has expanded its ground forces structure by creating new units without increasing the available personnel. However, as new units were created, the actual staffing level was reduced further due to insufficient personnel. Each Russian brigade or regiment is intended to field and deploy two Battalion Tactical Groups (BTGs) of 700-900 contract soldiers (a third would consist of conscripts), but it became clear that the BTGs varied in staffing levels. Some BTGs deployed with 400-600 contract personnel. The result was that the Russian military had a relatively limited core of deployable maneuver combat formations of contract personnel relative to the total size of the military.<sup>4</sup>

During this buildup, analysts and observers documented the movement of Russian units from across Russia toward Ukraine.<sup>5</sup> The 41<sup>st</sup> and 2<sup>nd</sup> CAAs moved from the Central Military District into Belarus and to Ukraine's northeast border with Russia; the 1<sup>st</sup> Guards Tank Army and the 6<sup>th</sup> CAA moved from the Western Military District to Ukraine's eastern border with Russia; the 49<sup>th</sup> and 58<sup>th</sup> CAAs moved from the Southern Military District to occupied Crimea and to Ukraine's southeast border with Russia; and the 35<sup>th</sup> and 36<sup>th</sup> CAAs (and elements of the 29<sup>th</sup> and 5<sup>th</sup> CAAs) moved from the Eastern Military District to Belarus.<sup>6</sup> In addition, Russia deployed elite units—such as Russian Airborne (VDV), Naval Infantry, and *spetsnaz* (elite light infantry units used for reconnaissance and direct action)—around Ukraine's borders.<sup>7</sup>

The buildup reflected the full range of Russian military capabilities, including artillery and support systems. The ground forces included air defense, artillery and rocket artillery, long-range precision missile systems (Iskander-M short-range ballistic missile [SRBM] systems), electronic warfare, support, and logistics units.<sup>8</sup> Additionally, by February 2022, Russia had mobilized large numbers of Aerospace Forces (VKS) fighter, fighter-bomber, and helicopter squadrons, which some observers believed would play a key role in the initial invasion.<sup>9</sup>

On February 21, 2022, Russian President Vladimir Putin announced that Russia would recognize the independence of the DNR and LNR. Russian recognition appeared to include the entire regions of Donetsk and Luhansk (collectively known as the Donbas), most of which had remained under Ukrainian control since Russia's first invasion of Ukraine in 2014, and not just territory controlled by DNR/LNR.

Shortly thereafter, Putin announced Russia would send “peacekeepers” into the DNR/LNR, claiming they were to defend against Ukrainian plans for invasion and sabotage attempts. These

<sup>4</sup> Dara Massicot, “The Russian Military’s People Problem,” *Foreign Affairs*, May 18, 2022; Michael Kofman and Rob Lee, “Not Built for Purpose: The Russian Military’s Ill-Fated Force Design,” *War on the Rocks*, June 2, 2022.

<sup>5</sup> For more on the Russian military buildup, see CRS Insight IN11806, *Russian Military Buildup Along the Ukrainian Border*, by Andrew S. Bowen.

<sup>6</sup> Units from all 11 Combined Arms Armies (CAAs) and one Tank Army (as well as the 14<sup>th</sup> and 22<sup>nd</sup> Army Corps) were present on the borders of Ukraine in the run-up to the invasion. For more, see Konrad Muzyka, “Tracking Russian Deployments near Ukraine—Autumn-Winter 2021-22,” *Rochan Consulting*, November 15, 2021.

<sup>7</sup> VDV include elite paratrooper and air assault forces. VDV act as Russia’s elite rapid response forces. For more on Russian military capabilities and structure see CRS In Focus IF11589, *Russian Armed Forces: Capabilities*, by Andrew S. Bowen; Christian Haimet, “Russian Troop Buildup Continues on Ukrainian Borders,” *Janes IHS*, February 21, 2022.

<sup>8</sup> Michael R. Gordon and Max Rust, “Russian Buildup near Ukraine Features Potent Weapons Systems, Well-Trained Troops,” *Wall Street Journal*, February 14, 2022.

<sup>9</sup> Russia’s Aerospace Forces include the air force, air defense, and space defenses forces. Russia merged these organizations into the VKS in 2015. Julian E. Barnes, Michael Crowley, and Eric Schmitt, “Russia Positioning Helicopters, in Possible Sign of Ukraine Plans,” *New York Times*, January 10, 2021; Tass, “Russia’s Su-35S Fighter Jets Deployed in Belarus for Upcoming Drills-Ministry,” January 26, 2021.

Russian charges had no basis in fact. Despite denials from Russian officials, Russia had spent months amassing a significant portion of its military capabilities around Ukraine.<sup>10</sup>

On February 24—following months of warning and concern from the Biden Administration, European allies, NATO, and some Members of Congress—Russia launched a full-scale invasion of Ukraine. Russia claimed its invasion was to conduct a “special military operation” to protect the civilian population and to “demilitarize” and “de-Nazify” Ukraine; many observers understood the latter term as a false pretext for overthrowing the democratically elected Ukrainian government.<sup>11</sup>

**Figure I. Ukraine**



**Source:** Congressional Research Service.

## Initial Invasion

On February 24, 2022, hours after Putin’s televised address announcing a “special military operation,” Russia invaded Ukraine with an air and missile attack, using precision-guided munitions (PGMs) against key targets. These early targets included logistics centers, naval installations, command and control centers, air defenses, and critical infrastructure.<sup>12</sup> In the

<sup>10</sup> Tara Copp, “They Could Go at Any Hour Now;’ U.S. Official Warns of Larger Russian Invasion of Ukraine,” *Defense One*, February 23, 2022.

<sup>11</sup> Audrius Rickus, “Baseless Claims of ‘Denazification’ Have Underscored Russian Aggression Since World War II,” *Washington Post*, March 9, 2022.

<sup>12</sup> Isabelle Khurshudyan et al., “As West Unleashes Sanctions, Russian Military Pushes Toward Kyiv,” *Washington Post*, February 24, 2022.

opening stages of the attack, the Pentagon assessed that Russia launched over 100 SRBMs, including Iskander-M SRBMs, and air- and sea-launched cruise missiles.<sup>13</sup>

Some observers believe Russia's initial intent was to achieve air superiority, degrade Ukrainian air defenses, and undermine the Ukrainian military's ability to coordinate defenses and counterattacks. Russia's initial bombardment, however, was more limited in duration and scale than some expected. In particular, analysts noted that the Russian air forces (VKS) failed to conduct effective suppression of enemy air defense missions, either because of an unwillingness to act or because of a lack of capability.<sup>14</sup> The Russian military may have underestimated the level of Ukrainian resistance and been initially hesitant to inflict collateral damage on civilian targets that would be crucial for supporting a Russian occupation.<sup>15</sup> Russia's failure to degrade the Ukrainian air force and air defenses, as well as Ukrainian command and control capabilities, allowed the Ukrainian military to respond more successfully to Russia's invasion than most observers expected, both at the outset and subsequently.

Initially, Russian forces committed to multiple lines of advance rather than concentrating on one single front. In the north, Russian forces attempted to break through Ukrainian defenses around Kyiv, from both the northwest and the east. In the east, Russian forces surrounded Kharkiv and attacked toward Izyum. In the south, Russian forces conducted an offensive to seize Mykolaiv in the southwest and Mariupol in the southeast. Each advance appeared to compete against the others for increasingly limited reinforcements, logistics, and air support.<sup>16</sup> Russian forces advanced quickly toward Kherson (which they captured on March 2, 2022) and eventually turned toward the Ukrainian coastal city of Mariupol. Analysts argue that Russian advances in the south were successful in part because they involved some of Russia's most modern and professional units from the Southern Military District and had better logistical support than other units, due to rail access from Crimea. In other regions, Russia made slow but initially steady progress, seeking to encircle rather than capture major urban centers such as Sumy, Kharkiv, and Chernihiv.<sup>17</sup>

Kyiv was an initial key Russian military target. Led by elite, but comparatively lightly equipped, VDV, *spetsnaz*, and reconnaissance units, Russian forces advanced along the western side of Kyiv and reached the outskirts of the city within days. In the early hours of the invasion, Russian VDV units conducted a risky air assault to seize the Antonov International Airport in Hostomel, on the outskirts of Kyiv. Analysts have argued that the Russian attack to seize the airport was intended to allow the rapid introduction of follow-on VDV units to surround and seize the Ukrainian capital.

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<sup>13</sup> RFE/RL, "Zelenskiy Says Ukraine Has Suffered 'Serious Losses' After Russian Air Strikes Pound Dozens of Targets," February 24, 2022.

<sup>14</sup> Economist, "Curious Case of Russia's Missing Air Force," March 8, 2022. Some analysis subsequently has argued that Russia's initial air campaign was possibly larger and more effective than initially believed. See Justin Bronk, Nick Reynolds, and Jack Watling, *The Russian Air War and Ukrainian Requirements for Air Defense*, RUSI, London, November 7, 2022.

<sup>15</sup> Helene Cooper and Eric Schmitt, "Russian's Assault in Ukraine Slows After an Aggressive Start," *New York Times*, February 25, 2022.

<sup>16</sup> John Paul Rathbone, Sam Jones, and Daniel Dombey, "Why Russia Is Deploying More Troops to Ukraine," *Financial Times*, March 17, 2022; Andrew E. Kramer, "Ukraine's Troops Begin a Counteroffensive That Alters Shape of the Battle with Russia," March 24, 2022; Stephen Fidler and Thomas Grove, "Behind the Front Lines, Russia's Military Struggles to Supply Its Forces," *Wall Street Journal*, April 1, 2022.

<sup>17</sup> Richard Perez-Pena, "Russia Batters and Encircles Ukrainian Cities, as Diplomacy Falters," *New York Times*, March 10, 2022.



Ukrainian forces, however, responded and repulsed the attack, reportedly causing heavy Russian casualties and shooting down several helicopters.<sup>18</sup>

Russian forces ran into effective Ukrainian resistance from the invasion's outset. Despite not announcing a general mobilization until February 25, after the invasion began, the Ukrainian military immediately hindered, deflected, and imposed costs on Russian forces in personnel and equipment. The Ukrainian military exploited numerous tactical and operational deficiencies of Russian forces (which were overextended in many cases), allowing the Ukrainian military to conduct ambushes and counterattacks.<sup>19</sup>

Russian units operated with little tactical sophistication and not as combined arms formations, leaving units exposed and unprepared for Ukrainian resistance, according to observers and analysts.<sup>20</sup> As Director of National Intelligence Avril Haines stated to Congress in early March 2022, "We assess Moscow underestimated the strength of Ukraine's resistance and the degree of internal military challenges we are observing, which include an ill-constructed plan, morale issues and considerable logistical issues."<sup>21</sup>

Overall, training and professionalism of Russian units appeared much lower than expected, even among supposedly "elite" units. For example, elite but relatively lightly equipped units (such as VDV, *spetsnaz*, and reconnaissance units) conducted operations they were not trained for or equipped to conduct, such as advancing into urban areas, where they appeared to suffer heavy casualties due to the lack of heavy armored support.<sup>22</sup>

Russian armored units advanced without infantry support in numerous instances. In one example, Russian National Guard (*Rosgvardiya*) units reportedly advanced alongside, and sometimes in front of, Russian military forces, apparently with little coordination.<sup>23</sup> Contributing to the confusion, observers documented Russian units operating without encrypted communications, often using civilian equipment to communicate.<sup>24</sup>

In addition, the Russian military struggled with command and control, both at the tactical and the operational levels. First, reports indicated there was no overall Russian operational commander at the time. As a result, it appears each CAA and axis of advance was operating independently, with questionable levels of coordination.<sup>25</sup> Second, Russian commanders appeared unprepared for

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<sup>18</sup> Paul Sonne et al., "Battle for Kyiv: Ukrainian Valor, Russian Blunders Combined to Save the Capital," *Washington Post*, August 24, 2022.

<sup>19</sup> For more, see CRS In Focus IF12150, *Ukrainian Military Performance and Outlook*, by Andrew S. Bowen; Mykhaylo Zabrotskyi et al., *Preliminary Lessons in Conventional Warfighting from Russia's Invasion of Ukraine: February–July 2022*, RUSI, London, November 30, 2022.

<sup>20</sup> Mark Galeotti, "Echoes of Afghanistan in Russian Soldiers' Poor Discipline in Ukraine," *Moscow Times*, April 1, 2022; Robert Dalsjo, Michael Jonsson, and Johan Norberg, "A Brutal Examination: Russian Military Capability in Light of the Ukraine War," *Survival* vol. 64, no. 3 (2022), pp. 7-28.

<sup>21</sup> U.S. Congress, House Permanent Select Committee on Intelligence, *Worldwide Threats*, 117<sup>th</sup> Cong., March 8, 2022.

<sup>22</sup> Observers noted these units suffered particularly high casualties, which undermined Russian military effectiveness due to their perceived high professionalism and ratio of contract/professional servicemen. Mark Urban, "The Heavy Losses of an Elite Russian Regiment in Ukraine," BBC, April 2, 2022; James Beardsworth and Irina Shcherbakova, "Are There Even Any Left? 100 Days of War in Ukraine for an Elite Russian Unit," *Moscow Times*, June 4, 2022.

<sup>23</sup> *Rosgvardiya* units are key internal security troops, neither equipped nor trained for conventional combat and likely sent into Ukraine early in the invasion to prevent protests against any new pro-Russian Ukrainian leadership. See CRS In Focus IF11647, *Russian Law Enforcement and Internal Security Agencies*, by Andrew S. Bowen.

<sup>24</sup> Alex Horton and Shane Harris, "Russian Troops' Tendency to Talk on Unsecured Lines Is Proving Costly," *Washington Post*, March 27, 2022.

<sup>25</sup> Reportedly, each CAA brought and set up its own headquarters structure rather than integrating under the command (continued...)



many aspects of the invasion, as evidenced by a lack of coordination among branches (such as VKS and Rosgvardiya) and between units. Reporting indicates that communication problems compounded these command and control issues, contributing to higher-ranking officers moving closer to the frontlines and contributing to casualties among these officers.<sup>26</sup>

Moreover, Russia's cyber operations were largely ineffective during the initial invasion, surprising many observers. Some analysts suggest Russian cyber performance possibly indicates the limitations of cyber operations in a kinetic conflict as well as structural limitations of cyber operations in the Russian military.<sup>27</sup>

### Possible Russian Intentions and Expectations

Observers continue to speculate about Russia's initial objectives and plans in launching its offensive against Ukraine. Many analysts believe Russia's expectations were based on faulty assumptions that undermined Russia's conduct of the invasion. If true, incorrect political assumptions possibly contributed to unrealistic objectives and timetables imposed onto the Russian military, providing a partial explanation for the Russian military's unpreparedness and poor performance.

U.S. officials and some analysts believe Russia's initial operation was to "decapitate" the Ukrainian government and rely on fast-moving, elite units to quickly seize key junctures, similar to Russia's seizure of Ukraine's Crimea region in 2014. Some analysts speculate that Russia may have based such a strategy on assumptions that the Ukrainian military would be ineffective and the Ukrainian political leadership could be easily replaced. As Central Intelligence Agency Director William J. Burns testified before the House Intelligence Committee in March 2022, Russian President Vladimir Putin "was confident that he had modernized his military and they were capable of a quick, decisive victory at minimal cost. He's been proven wrong on every count."

Analysts speculate that Putin and other Russian policymakers may have held these faulty assumptions in part due to poor intelligence and a willingness by subordinates to convey only positive information to Russian decisionmakers. Recent media reporting indicates the FSB overstated its influence and agent networks inside Ukraine, possibly contributing to a false expectation of a quick regime change. Additionally, many observers speculate a relatively small circle of advisers may have outsized influence on Putin and may have contributed to potentially unrealistic assumptions. Observers believe this circle includes Minister of Defense Sergei Shoigu, who may have overstated the Russian military's capabilities.

**Sources:** Adam E. Casey and Seva Gunitsky, "The Bully in the Bubble," *Foreign Affairs*, February 4, 2022; U.S. Congress, House Permanent Select Committee on Intelligence, *Worldwide Threats*, 117<sup>th</sup> Cong., March 8, 2022; Steve Holland and Andrea Shalal, "Putin Misled by 'Yes Men' in Military Afraid to Tell Him the Truth, White House and EU Officials Say," *Reuters*, March 31, 2022; Mark Galeotti, "The Interfering Tsar: Why Putin Is Ukraine's Best Hope of Victory," *The Times*, April 23, 2022; Greg Miller and Catherine Belton, "Russia's Spies Misread Ukraine and Misled Kremlin as War Loomed," *Washington Post*, August 19, 2022; Michael Schwartz et al., "Putin's War," *New York Times*, December 16, 2022.

## March-May 2022

After early March 2022, Russian forces attempted to adapt to the reality of effective Ukrainian resistance. Russia made some changes to its military operations, including more coordination between units and a greater attempt to operate as combined arms formations, increased air

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of the Western or Southern Military Districts, as most analysts expected. Tim Ripley, "Russian Military Adapts Command and Control for Ukraine Operations," *Janes IHS*, March 7, 2022; Helene Cooper and Eric Schmitt, "Russia's War Lacks a Battlefield Commander, U.S. Officials Say," *New York Times*, March 31, 2022.

<sup>26</sup> Compared with Western militaries, Russian commanders have smaller staffs to assist command and generally are closer to the frontlines, which makes casualties among Russian officers more likely. Many analysts, however, have been surprised by the number and ranks of officers killed.

<sup>27</sup> Gavin Wilde, *Cyber Operations: Russia's Unmet Expectations*, Carnegie Endowment, Washington D.C., December 12, 2022; Jon Bateman, *Russia's Wartime Cyber Operations in Ukraine: Military Impacts, Influences, and Implications*, Carnegie Endowment, Washington D.C., December 16, 2022.

support, and significantly higher levels of artillery and rocket artillery fire.<sup>28</sup> By March 7, 2022, U.S. officials believed Russia had committed “nearly 100 percent” of its available forces into Ukraine.<sup>29</sup> The Russian VKS increased its number of sorties and operations, although most missions appeared to employ unguided weaponry rather than PGMs.<sup>30</sup> The increased sortie rate also meant heavier losses for the VKS, including some of its most advanced helicopter, fighter, and fighter-bombers.

Toward the end of March 2022, Russian offensives around Kyiv stalled. After failing to achieve a decisive victory quickly, Russia appeared to re-evaluate its objectives and strategy toward achieving territorial gains in the south and east of Ukraine. On March 25, the Russian Ministry of Defense held a press conference alleging that Russia had mostly met its initial objectives and would move on to the second phase of the operation, focusing on eastern Ukraine, including the Donbas.<sup>31</sup> U.S. National Security Adviser Jake Sullivan stated on April 4, 2022, that “Russia is repositioning its forces to concentrate its offensive operations in eastern and parts of southern Ukraine.... All indications are that Russia will seek to surround and overwhelm Ukrainian forces in eastern Ukraine.”<sup>32</sup>

On April 13, 2022, the flagship of Russia's Black Sea Fleet, the Slava class missile cruiser *Moskva*, reportedly was struck by two Ukrainian R-360 Neptune anti-ship missiles.<sup>33</sup> Russian forces attempted to tow the heavily damaged cruiser back to port in Sevastopol, but the damage was catastrophic and the ship eventually sank. Russia initially denied that the *Moskva* was hit by missiles and claimed it sank in a storm after an accidental fire. Reports indicate the *Moskva* was blockading Odesa and providing air defense support to Russian units in the southwest near Kherson when it was struck.<sup>34</sup> The sinking provided a morale boost to Ukrainian forces and undermined Russian efforts to threaten an amphibious assault against Odessa, potentially freeing up Ukrainian forces defending the city. Russia's new flagship of the Black Sea Fleet is the Project 11356 frigate *Admiral Makarov*.

Subsequently, Russia redirected forces to support operations in the east to cut off Ukrainian military units in the Donbas. On April 12, President Putin stated that Russia's “military operation will continue until its full completion” but said, “Our goal is to help the people in the Donbas, who feel their unbreakable bond with Russia.”<sup>35</sup> The terrain in the Donbas favored Russian forces, with consolidated logistics and its advantages in artillery.<sup>36</sup>

<sup>28</sup> Dan Lamothe, “Russia's Invasion Began with Precision Missiles, But Weapons Are Changing as Siege War Begins,” *Washington Post*, March 1, 2022.

<sup>29</sup> Quint Forgy, “Putin Sends ‘Nearly 100 Percent’ of Russian Forces at Border into Ukraine,” *Politico*, March 7, 2022.

<sup>30</sup> Alan Cullison and Alexander Osipovich, “Russian General Is Killed in Ukraine as Airstrikes Intensify,” *Wall Street Journal*, March 11, 2022; Dan Lamothe, “Russian Air Force Action Increases Despite Flood of Anti-aircraft Missiles into Ukraine,” *Washington Post*, March 22, 2022.

<sup>31</sup> Konrad Muzyka, “Ukraine Conflict Monitor: March 25, 2022,” *Rochan Consulting*, March 26, 2022; Jim Sciutto, “U.S. Intel Assess ‘Major’ Strategy Shift by Russia as It Moves Some Forces away from Kyiv,” *CNN*, March 31, 2022.

<sup>32</sup> White House, “Press Briefing by Press Secretary Jen Psaki and National Security Advisor Jake Sullivan,” press briefing, April 4, 2022.

<sup>33</sup> Adam Taylor and Claire Parker, “‘Neptune’ Missile Strike Shows Strength of Ukraine's Homegrown Weapons,” *Washington Post*, April 15, 2022.

<sup>34</sup> Brad Lendon, “Moskva Sinking: What Really Happened to the Pride of Russia's Fleet?” *CNN*, April 15, 2022.

<sup>35</sup> Anton Troianovski, “Putin Says Peace Talks Are at a ‘Dead End’ and Calls Atrocities in Bucha ‘Fake,’” *New York Times*, April 12, 2022.

<sup>36</sup> Jack Watling, “Why the Battle for Donbas Will Be Very Different from the Assault on Kyiv,” *Guardian*, April 9, (continued...)

Despite the focus on the Donbas, larger Russian objectives remained a concern. On April 22, 2022, Major General Rustam Minnekayev, the then deputy commander of the Central Military District, said in an interview that Russia wanted to take full control of eastern and southern Ukraine, including a possible land bridge to Transnistria, a Russia-supported breakaway territory in Moldova.<sup>37</sup> Instead of an immediate threat to broaden the conflict, many observers believed this statement reflected potentially larger Russian political objectives over the medium to long term, since Russian military force constraints have prevented a serious offensive to capture Odessa and link up with Transnistria.

On April 18, Ukrainian President Volodymyr Zelensky reported a new Russian offensive in the Donbas after a barrage of Russian missile strikes across Ukraine.<sup>38</sup> Russian forces initially conducted slow and gradual probing attacks against Ukrainian forces, including the use of heavy artillery and rocket artillery to support operations. Russia concentrated on pressing Ukrainian forces south of Izyum, west from Severodonetsk toward Kramatorsk and Sloviansk, and from Donetsk to create a large encirclement of UAF.<sup>39</sup> Russian forces could not break through Ukrainian defenses around Izyum, partially resulting from too few units and a gradual deployment, even with reinforcements from the abandoned effort to take Kyiv.<sup>40</sup>

Russia's redeployment of forces away from Kyiv and toward eastern Ukraine indicated that the Russian military needed to rest and resupply after using most of its combat-effective units. During this time, analysts noted the need for Russian personnel reinforcements, not only to replace losses but also to support further Russian offensives.<sup>41</sup> Conditions forced Russia to pull units from foreign bases to help replace and rotate out units and deployed private military companies (including heavy use of the Wagner Private Military Company). Despite the slow pace of Russian progress and need for reinforcements, Director of National Intelligence Avril Haines testified to the Senate Armed Services Committee on May 20, 2022, that "we assess President Putin is preparing for prolonged conflict in Ukraine during which he still intends to achieve goals beyond the Donbas."<sup>42</sup>

A key Russian military objective was the coastal city of Mariupol, in the Donetsk region. The effort to seize the city benefited from Russia shifting operations away from seizing further territory in the Kherson region (which includes Mykolaiv). After weeks of bombardment and fighting, Ukrainian military forces and large numbers of civilians were isolated in the Azovstal iron and steel plant in Mariupol.<sup>43</sup> On April 21, Putin announced that Russia had seized Mariupol and that Russian forces would not assault the Azovstal plant but would surround and seal it off,

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2022; Howard Altman, "Ukraine's Ability to Withstand Russian Artillery Critical to Fight for Donbas," *The Drive*, April 19, 2022.

<sup>37</sup> Mary Ilyushina et al., "Commander Hints at Russian Ambitions Beyond Ukraine," *Washington Post*, April 22, 2022.

<sup>38</sup> Max Seddon and Henry Foy, "Vladimir Putin Abandons Hopes of Ukraine Deal and Shifts to Land-Grab Strategy," *Financial Times*, April 24, 2022.

<sup>39</sup> Konrad Muzyka, "Ukraine Conflict Monitor: April 16-18, 2022," *Rochan Consulting*, April 19, 2022; Christopher Miller and Paul McLeary, "Heavy Weaponry Pours into Ukraine as Commanders Become More Desperate," *Politico*, April 25, 2022; Author correspondence with Michael Kofman.

<sup>40</sup> Mike Eckel, "Fizzled Faltering? 'Anemic'? Why Russia's Donbas Offensive Isn't Going Exactly as Anticipated," RFE/RL, May 3, 2022; Konrad Muzyka, "Ukraine Conflict Monitor: 9-15 May 2022," *Rochan Consulting*, May 15, 2022.

<sup>41</sup> Department of Defense, "Senior Defense Official Holds a Background Briefing," press release, April 8, 2022; *Economist*, "Rob Lee on Why Attrition Will Be a Critical Factor in the Battle for the Donbas," April 23, 2022.

<sup>42</sup> U.S. Congress, Senate Committee on Armed Services, *To Receive Testimony on Worldwide Threats*, 117<sup>th</sup> Cong., May 10, 2022.

<sup>43</sup> Amy Mackinnon, "What the Fall of Mariupol Would Mean for the War," *Foreign Policy*, April 20, 2022.

despite Ukrainian forces' continued resistance.<sup>44</sup> Ukraine announced on May 16 that it had instructed its remaining troops at Azovstal to cease combat missions.<sup>45</sup> Shortly thereafter, Ukrainian troops began surrendering and were evacuated to Russian-controlled areas. On July 29, a massive explosion ripped through a prisoner-of-war camp housing many of the prisoners from Mariupol, killing an estimated 50 prisoners. Russia alleged the explosion was the result of a Ukrainian missile strike, but many observers believe it was some other cause.<sup>46</sup>

Russia also continued its use of long-range PGMs against targets in western Ukraine, but the VKS did not seek further air superiority beyond eastern Ukraine. Russia conducted long-range PGM strikes against what Russian officials said were Ukrainian defense industry and infrastructure targets in an attempt to cripple and undermine the Ukrainian military's long-term capability. However, observers began to note the questionable precision, capability, and quantity of PGMs still available to Russian forces.<sup>47</sup> U.S. officials have stated that most PGMs appear to be air-launched cruise missiles from bombers inside Russia.<sup>48</sup>

## May-September 2022

After the capture of Mariupol, Russia refocused efforts on seizing key urban and infrastructure areas in Donetsk and Luhansk. Due to losses, Russia was unable to concentrate sufficient combat power on multiple advances, forcing it to refocus efforts on a single objective while consolidating its hold on captured territory (such as in Kharkiv, Kherson, and Zaporizhzhia). By mid-May 2022, Russia appeared unable to capture the key cities of Slovyansk and Kramatorsk, a likely target of Russia's refocused offensives. Instead, Russia focused on seizing the towns of Severodonetsk and Lysychansk, which would give Russia almost total control over Luhansk region.<sup>49</sup>

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<sup>44</sup> Michael Schwartz, "Ukrainians in Mariupol's Steel Mill Are Holding On, Despite Intensifying Attacks, a Commander Tells the Times," *New York Times*, April 24, 2022.

<sup>45</sup> Michael Schwartz, "Last Stand at Azovstal: Inside the Siege That Shaped the Ukraine War," *New York Times*, July 27, 2022.

<sup>46</sup> Joyce Sohyun Lee et al., "What We Know About the Blast That Killed Ukrainian POWs in Olenivka," *Washington Post*, August 6, 2022.

<sup>47</sup> John Ismay, "Russian Guided Weapons Miss the Mark, U.S. Defense Officials Say," *New York Times*, May 9, 2022; Thomas Newdick, "We May Have Our First Sight of a Russian Bomber Launching Missiles at Ukraine," *The Drive*, May 11, 2022.

<sup>48</sup> Department of Defense, "Senior Defense Official Holds a Background Briefing," press release, May 18, 2022.

<sup>49</sup> Frederick W. Kagan, Kateryna Stepanenko, and George Barros, "Russian Offensive Campaign Assessment, May 28," *Institute for the Study of War*, May 28, 2022.

**Figure 2. Donbas Region of Ukraine**

**Source:** Congressional Research Service.

In contrast to the early days of the invasion, the fighting in the Donbas resembled a more traditional conventional conflict of slow but intense fighting, and Russia reverted to its traditional reliance on the massed use of artillery and rocket artillery. Russian forces appeared to conduct a pincer movement to cut off Ukrainian forces in Severodonetsk and Lysychansk.<sup>50</sup> In the north, Russian forces pushed southeast from Izyum, capturing Lyman and attempting to make several crossings of the Siverskyi Donets river near Bilohorivka, but came under Ukrainian artillery fire and suffered heavy casualties. In the Donbas, Russia relied heavily on Wagner PMC and DNR/LNR units, many of whom were forcibly conscripted.

The UAF continued to staunchly defend territory instead of conducting an organized withdrawal, leading some analysts to

speculate that Ukraine's strategy was to impose as much attrition on Russian forces as possible. Nevertheless, Russian forces, including Chechen Rosgvardiya and DNR/LNR troops, continued their offensive into Severodonetsk and gradually seized control of the city after Ukraine ordered its forces to retreat to Lysychansk. Russian forces continued to advance north from Popasna toward Bakhmut, threatening to cut off UAF units and envelope Lysychansk. Subsequently, the UAF withdrew from Lysychansk to prepared defensive lines between Bakhmut and Siversk.<sup>51</sup>

### Reported Russian and Ukrainian Casualties

Estimates of wartime casualties have varied widely and may not be considered reliable. Due to the continuing state of war, verifying exact numbers of casualties is nearly impossible. Generally, ranges of possible casualties are given as estimates due to the uncertain and changing nature of assessments. Below are some estimates mentioned in various press reports through January 2023.

#### Russian Casualties

**Russia:** Officially, the Russian government stated in late March 2022 that 1,351 soldiers had died and another 3,850 had been wounded. On March 20, 2022, the pro-Kremlin newspaper *Komsomolskaya Pravda* appeared to publish Russian Ministry of Defense figures that listed 9,861 deaths. This figure remains unconfirmed, and the newspaper deleted the report and stated that it had been hacked. Russia has not provided a casualty update since.

**United States:** U.S. estimates of Russian military losses are likely more than 100,000. In January 2023, U.S. Chairman of the Joint Chiefs of Staff General Mark Milley stated that Russia has suffered "significantly well over 100,000" Russian soldiers killed and wounded. Some estimates reported in the media place Russian casualties close to 200,000.

**United Kingdom:** UK estimates of Russian casualties have generally been comparable, if slightly higher, than those of U.S. officials. UK Defense Secretary Ben Wallace in December 2022 stated Russia has suffered over 100,000 casualties.

<sup>50</sup> Konrad Muzyka, "Ukraine Conflict Monitor: May 21-23, 2022," *Rochan Consulting*, May 24, 2022.

<sup>51</sup> Yaroslav Trofimov, "Ukrainian Troops Retreat from Severodonetsk After Weeks of Brutal Battle," *Wall Street Journal*, June 24, 2022; Jonathan Beale, "Ukraine Confirms Russia Captured Eastern City Lysychansk," *BBC*, July 3, 2022.



**Ukrainian Casualties**

Until recently, Ukraine has been reluctant to share casualty figures. In June 2022, Ukrainian officials stated that Ukraine was losing 100-200 soldiers per day during the height of fighting around Severodonetsk. On August 22, 2022, Commander in Chief of the Ukrainian Armed Forces Valery Zaluzhny stated Ukraine had suffered almost 9,000 killed. In November 2022, General Milley stated that Ukraine has “probably” suffered similar casualties to Russia.

**Civilian Casualties**

In February 2023, the U.N. High Commissioner for Human Rights (OHCHR) estimated 7,155 killed and 11,662 injured civilians since the war began. Most observers consider this to be a significant undercount.

**Sources:** Helene Cooper, “Heavy Losses Leave Russia Short of Its Goal U.S. Officials Say,” *New York Times*, August 11, 2022; Ukrainian Ministry of Defense, “Almost 9,000 Ukrainian Defenders Died in the War with the Russian Federation—Zaluzhny,” August 22, 2022; Euromaidan Press, “87,000 Killed Civilians Documented in Occupied Mariupol—Volunteer,” August 30, 2022; Dan Lamothe, Liz Sly and Annabelle Timsit, “Well Over 100,000 Russian Troops Killed or Wounded in Ukraine, U.S. Says,” *Washington Post*, November 10, 2022; Ann M. Simmons and Nancy A. Youssef, “Russia’s Casualties in Ukraine Near 200,000,” *Wall Street Journal*, February 4, 2023; OHCHR, “Ukraine: Civilian Casualty Update,” February 6, 2023.

The UAF suffered heavy casualties during the fighting for Severodonetsk and Lysychansk, including among experienced veterans who volunteered for the Territorial Defense Forces (TDF) and reserve units.<sup>52</sup> The UAF broke up the core of its maneuver formations into smaller units to spearhead localized counterattacks and to shore up TDF and Reserve units staffing defensive positions.<sup>53</sup> Many UAF counteroffensives, such as outside of Kharkiv, slowed as Russian units regrouped and UAF forces concentrated on defending the Ukrainian-controlled areas of the Donbas, leaving TDF units to defend the frontline but unable to launch further offensive action. The UAF also struggled with secure communications and instances of command and control issues between the TDF and regular military, as well as a dire need for artillery and heavy weapon support.<sup>54</sup>

Beginning in mid-May 2022, the UAF began receiving significant shipments of U.S. and Western artillery systems, specifically the U.S. M777 155mm howitzer and ammunition. Security assistance has been critical to sustaining UAF operations and countering the Russian advantage in artillery and rocket artillery, since the UAF was running low on ammunition and parts for its Soviet/Russian artillery systems. Nevertheless, training time and overall shortages have resulted in most UAF units still relying on older Soviet/Russian systems while waiting for new Western weaponry.<sup>55</sup> By July, Ukraine began receiving U.S.-supplied M270 Multiple Launch Rocket Systems (MLRS) and M142 High Mobility Artillery Rocket Systems (HIMARS), providing the UAF with significantly improved targeting ability, including increased range and precision accuracy.<sup>56</sup> Early assessments by U.S. officials and other observers indicated that the UAF were using these systems effectively, including to target key Russian command and control, logistics,

<sup>52</sup> Stephen Kalin, “Ukraine’s War of Attrition Exacts Heavy Toll on Both Sides,” *Wall Street Journal*, June 29, 2022.

<sup>53</sup> Jack Watling and Nick Reynolds, “Ukraine at War: Paving the Road From Survival to Victory,” *RUSI*, July 4, 2022, p. 17.

<sup>54</sup> Thomas Gibbons-Neff and Natalia Yermak, “On Front Lines, Communication Breakdowns Prove Costly for Ukraine,” *New York Times*, June 28, 2022; Viviana Salama, “Ukraine Faces Shortfall in Weapons as It Gears Up for First Major Counteroffensive,” *Wall Street Journal*, July 21, 2022.

<sup>55</sup> CRS In Focus IF12040, *U.S. Security Assistance to Ukraine*, by Christina L. Arabia, Andrew S. Bowen, and Cory Welt; Serhiy Morgunov, “As They Wait for Weapons, Ukrainians Hold the Line with Soviet Artillery,” *Washington Post*, July 27, 2022.

<sup>56</sup> Jack Detsch, “Ukraine Is Bringing a Big Gun to a Knife Fight,” *Foreign Policy*, July 13, 2022.



and transport infrastructure.<sup>57</sup> One significant challenge, however, has been maintaining and repairing the vast number of Western systems the UAF has received, all with different standards and requirements for operating.

Over the rest of July, Russian forces attempted to regroup and take an “operational pause” after suffering heavy casualties capturing Severodonetsk and Lysychansk. Most observers believed Russia had exhausted most of its forces and required time to refit, resupply, and reorganize. Russian forces did not achieve any significant territorial progress over the next weeks, other than small gains between Siversk and Bakhmut, and appeared to focus on solidifying their control over existing territory.<sup>58</sup> Russia increasingly relied on Wagner PMC and DNR/LNR forces to probe UAF lines and then direct artillery and rocket artillery upon making contact. Open-source reporting continued to document instances of low Russian morale and reports of Russian soldiers refusing to fight, resigning from their contracts before deployment, or refusing orders from their superiors.<sup>59</sup>

### Russian Command and Control Challenges

Since the start of Russia's 2022 invasion of Ukraine, reports indicate that Russia has made different attempts to address its command and control issues, including the lack of an overall operational commander. It is difficult for most observers to definitively identify and state the nature of Russian command and control issues due to the changing circumstances and lack of transparency. Recent events and reports, however, have provided greater visibility into the general structure and picture of Russian command.

In April 2022, reports emerged that General Alexander Dvornikov, head of the Southern Military District, was given operational command of Russia's war to help streamline command and control. However, the extent of his direct control and whether he supervised all Russian forces remained unclear. By June, reports emerged that General Dvornikov had been removed from command and replaced by General Gennady Zhidko, the then-head of the Main Military Political Directorate.

In October 2022, General Sergei Surovikin, commander of the Aerospace Forces, reportedly took overall command of Russian forces in Ukraine. As of December 2022, all five Military District commanders, the head of the Airborne forces (VDV), the commander of the Black Sea Fleet, and multiple junior commanders had been replaced. The National Defense Management Center in Moscow has continued to coordinate and manage forces, and appears to have greater oversight and management of Russian forces than in the early stages of the invasion.

After three months, Surovikin was replaced by Chief of the General Staff General Valery Gerasimov, despite a widespread assessment that Surovikin was among Russia's most capable commanders and largely credited with stabilizing Russian lines in the wake of successful Ukrainian offensives. Analysts continue to speculate about the reason for the latest shuffle, from improving coordination among military branches (MoD, PMC Wagner, Rosgvardiya), continued unrealistic battlefield expectations of political leaders, to infighting among elites (particularly within the Ministry of Defense) as they seek to deflect blame for Russian battlefield failures.

**Sources:** Helene Cooper and Eric Schmitt, “Russia's War Lacks a Battlefield Commander, U.S. Officials Say,” *New York Times*, March 31, 2022; Karolina Hird et al. “Russian Offensive Campaign Assessment, July 28, 2022,” *Institute for the Study of War*, July 28, 2022; Russia Experiments with Command and Control in Ukraine,” *Janes IHS*, August 2, 2022; Andrew Roth, “Russia Appoints Notorious General To Lead Ukraine Offensive,” *Guardian*, October 8, 2022; Mary Ilyushina and Natalia Abbakumova, “Kremlin, Shifting Blame for War Failures, Axes military Commanders,” *Washington Post*, October 8, 2022; Mark Galeotti, Pavel Baev, and Graeme P. Herd, “Militaries, Mercenaries, Militias, and Morale in the Ukraine War” *Marshall Center*, November 15, 2022; Francesca Ebel,

<sup>57</sup> Isabelle Khurshudyan and Kostiantyn Khudov, “U.S. Supplied HIMARS Changing the Calculus on Ukraine's Frontlines,” *Washington Post*, July 1, 2022; Illia Ponomarenko, “Ukraine Targets Russia's Ammunition Depots, Undermining Its Artillery Advantage,” *Kyiv Independent*, July 8, 2022.

<sup>58</sup> Konrad Muzyka, “Ukraine Conflict Monitor: 18-24 July 2022,” Rochan Consulting, July 25, 2022; Dara Massicot, “Moscow's New Strategy in Ukraine Is Just as Bad as the Old One,” *Foreign Affairs*, August 15, 2022; Erika Solomon, “Behind Russia's 'Pause' Are Signs of a Troubled Effort to Regroup,” *New York Times*, September 10, 2022.

<sup>59</sup> Timofei Rozhanskiy, “Why Russian Soldiers Are Refusing to Fight in the War on Ukraine,” RFE/RL, July 20, 2022; Pjotr Sauer, “Russian Soldiers Accuse Superiors of Jailing Them for Refusing to Fight,” *Guardian*, August 2, 2022.

"Russia's New Commander Reflects Putin's Plan to Push for Victory in Ukraine," *Washington Post*, January 12, 2023; Mark Galeotti, "Enter Gerasimov," *In Moscow's Shadows*, January 12, 2023.

By early August 2022, as Russian advances stalled, a gradual stalemate and war of attrition began to set in. Russia continued some offensive operations (relying on Russian PMC and LNR/DNR forces) toward Bakhmut and Avdiivka, as well as the town of Pisky, just outside Avdiivka in the Donetsk region.<sup>60</sup> The UAF appeared to prepare a shift from defensive to offensive operations. Ukraine began carrying out a series of partisan attacks (including assassinations) against officials in Russia-occupied regions, Russian government infrastructure, and key air bases and supply positions in Crimea. These attacks, conducted by Ukrainian Special Forces and local supporters, drones, and missile strikes, have destabilized the Russian military's control over the region and forced Russia to devote more forces to counterinsurgency and internal security missions.<sup>61</sup>

International observers remain concerned by the Russian military's occupation and management of the Zaporizhzhia Nuclear Power Plant (ZNPP), the largest nuclear plant in Europe.<sup>62</sup> Some analysts argue that attacks on nuclear power plants could be considered a "war crime" under international law.<sup>63</sup> The International Atomic Energy Agency (IAEA) negotiated with Russia and Ukraine to send an expert mission to ZNPP to "assess the physical damage to the ZNPP's facilities, determine whether the main and back-up safety and security systems were functional and evaluate the staff's working conditions," according to the IAEA. An IAEA inspection team visited the plant on September 1; six IAEA inspectors remained on-site for a few days.<sup>64</sup>

The UAF began preparations for a counteroffensive by conducting strikes across Kherson and Crimea to degrade Russian capabilities and hinder the resupply of its forces in Kherson, including attacks against key logistics targets and the bridges connecting occupied Kherson with the rest of occupied southern Ukraine. According to U.S. Chairman of the Joint Chiefs of Staff General Mark A. Milley, Ukraine conducted over 400 HIMARS strikes by September 8.<sup>65</sup> These strikes likely seriously strained Russian logistics and artillery ammunition supply by targeting previously unreachable depots.<sup>66</sup>

The UAF also deployed high-speed anti-radiation missiles (HARM), used to target radar or electronic warfare systems, on its Russian-made MiG-29 fighters. Russian forces appeared to

<sup>60</sup> Kateryna Stepanenko et al., "Russian Offensive Campaign Assessment, August 2," *Institute for the Study of War*, August 2, 2022.

<sup>61</sup> Isabelle Khurshudyan, Liz Sly, and Adela Suliman, "Crimea Airfield Blast War Work of Ukrainian Special Forces, Official Says," *Washington Post*, August 10, 2022; and Oren Liebermann, "How Ukraine Is Using Resistance Warfare Developed by the U.S. to Fight Back Against Russia," *CNN*, August 27, 2022; Anastasia Tenisheva, "Assassinations of Russia-Installed Officials on the Rise in Occupied Ukraine," *Moscow Times*, September 1, 2022.

<sup>62</sup> For more, see CRS Insight IN11883, *Russian Military Actions at Ukraine's Nuclear Power Plants*, by Mark Holt and Mary Beth D. Nikitin; International Atomic Energy Agency (IAEA), "Director General Grossi Alarmed by Shelling at Ukraine NPP, Says IAEA Mission Vital for Nuclear Safety and Security," press release, August 6, 2022.

<sup>63</sup> George M. Moore, "How International Law Applies to Attacks on Nuclear and Associated Facilities in Ukraine," *Bulletin of the Atomic Scientists*, March 6, 2022.

<sup>64</sup> IAEA Director General Rafael Grossi, press conference, September 2, 2022.

<sup>65</sup> Reuters, "Ukraine Has Struck More Than 400 Russian Targets with HIMARS - U.S. Top General," September 8, 2022.

<sup>66</sup> The Russian military must keep large supplies of ammunition close to the frontlines for resupply due to its reliance on artillery. These supplies present a particularly vulnerable and significant target, especially for long-range systems such as HIMARS. Liz Sly, John Hudson, and David L. Stern, "Crimea Attacks Point to Ukraine's Newest Strategy, Official Says," *Washington Post*, August 18, 2022.

redeploy from Donetsk and Luhansk to southern Ukraine in preparation for a UAF offensive.<sup>67</sup> Observers had noted reports of Ukrainian preparation for an offensive for months but speculated whether the UAF had enough trained personnel and sufficient equipment (such as tanks and armored vehicles to rapidly transport infantry) to sustain offensive operations, as well as possible risks of exposing other fronts to counterattack from Russian forces by drawing away resources.<sup>68</sup>

## Kherson Region Offensive

On August 29, 2022, Ukraine launched a long-awaited offensive into the Kherson region in the south. Some observers and U.S. officials initially believed the offensive was part of a “shaping” strategy to improve the UAF position for future counteroffensives.<sup>69</sup> Some reports indicated that Ukrainian forces, advised by U.S. officials, determined a smaller offensive would give the UAF flexibility to deploy resources to other fronts and conduct multiple counteroffensives against exposed Russian lines.<sup>70</sup>

By early September 2022, UAF offensives had made small but sustained progress across three fronts in Kherson, pushing back some Russian forces. UAF forces ran into significant and determined opposition, including the heavy use of artillery and air support.<sup>71</sup> At the same time, the UAF began an offensive on another front, in the northeastern region of Kharkiv.

## Kharkiv Offensive

In the Kharkiv region, the UAF appeared to exploit a weak point in Russian defenses and captured several towns (such as Balakliya) in early September 2022, potentially opening the possibility of targeting a key resupply city of Kupyansk. Reports document that Rosgvardiya troops, not trained or equipped for frontline combat, and lower-quality LNR troops staffed Russian positions.<sup>72</sup> The UAF appeared to consolidate an estimated core of five to six brigades to launch a counteroffensive.<sup>73</sup> The UAF benefited from Russia pulling its most combat-effective troops south toward Kherson and from apparent Russian intelligence and command failures, as Russia failed to detect the UAF buildup and organize a coordinated response. Spearheaded by tanks and armored vehicles, the UAF quickly exploited its breakthrough with high mobile units that advanced behind Russian forces, conducting ambushes and cutting off Russian

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<sup>67</sup> Russia constructed multiple lines of defense in preparation for a UAF offensive. Including DNR troops, Russia concentrated a large portion of its remaining VDV and *Spetsnaz* units (however, as demonstrated in the early stages of the invasion, they are often insufficiently equipped to defend against a large conventional force), as well as various other conventional Russian forces. Matthew Luxmoore, “Russia Moves to Reinforce Its Stalled Assault on Ukraine,” *Wall Street Journal*, August 28, 2022.

<sup>68</sup> Loveday Morris et al., “On the Kherson Front Lines, Little Sign of a Ukrainian Counteroffensive,” *Washington Post*, August 12, 2022.

<sup>69</sup> Jim Sciutto, “Ukrainian Forces Begin ‘Shaping’ Battlefield for Counteroffensive, Senior U.S. Officials Say,” CNN, August 29, 2022.

<sup>70</sup> Katie Bo Lillis and Natasha Bertrand, “U.S. War Gamed with Ukraine Ahead of Counteroffensive and Encouraged More Limited Mission,” CNN, September 1, 2022; Julian E. Barnes and Helene Cooper, “Ukrainian Officials Drew on U.S. Intelligence to Plan Counteroffensive,” *New York Times*, September 10, 2022.

<sup>71</sup> John Hudson, “Wounded Soldiers Reveal Steep Toll of Kherson Offensive,” *Washington Post*, September 7, 2022; Andrew E. Kramer, “For Ukraine, the Fight Is Often a Game of Bridges,” *New York Times*, September 10, 2022.

<sup>72</sup> Konrad Muzyka, “Ukraine Conflict Monitor, September 6, 2022,” Rochan Consulting, September 7, 2022.

<sup>73</sup> President Zelensky praised the 25<sup>th</sup> Airborne Brigade, 80<sup>th</sup> Air Assault Brigade, and 92<sup>nd</sup> Mechanized Brigade in a televised speech, but observers noted other units present in the initial offensive. BBC, “Zelensky Hails ‘Good News’ as Settlements Recaptured from Russia,” September 7, 2022; Marc Santora, “How Ukraine Gained Momentum Against Russia and Took a Critical Hub,” *New York Times*, September 10, 2022.

reinforcements. By September 8, the UAF had broken through Russian lines and liberated almost 400 square miles, with Russia appearing unable to coordinate effective resistance or reestablish defensive lines despite rushing in reinforcements.<sup>74</sup> The UAF also launched offensives south of Izyum and Lyman to put pressure on Russian forces, threatening to cut off Russian forces in the area.

By September 10, Russian forces had announced a withdrawal from Izyum, a symbolic statement after a near-total rout of Russian forces in the area. The collapse of Russian forces led to the UAF advancing so quickly that UAF command had trouble keeping track of its units.<sup>75</sup> Ukrainian Defense Minister Oleksii Reznikov stated the offensive had gone “better than expected” and that Ukraine’s focus was on consolidating and defending the recaptured territory.<sup>76</sup> By September 11, Russia announced it had withdrawn all forces west of the Oskil River, with Ukraine retaking more than 1,000 square miles of territory and almost all previously occupied territory in Kharkiv region.<sup>77</sup>

During this period, Russian forces continued to disintegrate, including reinforcements such as the 90<sup>th</sup> Tank Division and the newly created 3<sup>rd</sup> Army Corps, which were rushed in to stabilize Russian lines.<sup>78</sup> After recapturing Izyum, the UAF pushed past the Oskil River into Luhansk. The UAF’s new objective was the key hub of Lyman, critical for Russia’s efforts to push further into Donetsk. By this time, it was becoming clear that Lyman, and the Donetsk city of Bakhmut, were turning into key objectives that would influence the trajectory of the conflict over the coming months.<sup>79</sup>

## **Russia’s Claimed Annexation of Ukrainian Territories**

On September 30, Putin announced that Russia would annex the Ukrainian regions of Donetsk, Kherson, Luhansk, and Zaporizhzhia. The announcement came in the midst of multiple successful Ukrainian military offensives and was declared illegal by most of the international community.<sup>80</sup> Putin’s announcement of the annexation may have been intended to re-affirm Russia’s commitment to the war, despite the setbacks, and corresponding to increasing rhetoric by Putin linking the Ukraine conflict to a larger conflict between Russia and the West.<sup>81</sup> In illegally claiming to annex these regions, Putin ended any immediate prospect of negotiations or a diplomatic solution to the war. Putin also created a pretext for further steps to shore up Russia’s failing military operations (such as mobilization and various economic measures to support the

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<sup>74</sup> Jack Detsch, “They Are Pushing Everywhere: Kyiv Goes on the Offensive,” *Foreign Policy*, September 8, 2022; *Economist*, “Ukraine Seizes the Initiative in the East,” September 9, 2022.

<sup>75</sup> *Economist*, “Is Russia on the Run?” September 11, 2022; Mike Eckel, “Turning the Tide? Ukraine Stuns Russia with Counteroffensive but Can’t Claim Victory Yet,” RFE/RL, September 11, 2022.

<sup>76</sup> Jack Watling, “Ukraine Can Now Exploit Russia’s Confusion, But Must Plan Carefully,” *Guardian*, September 10, 2022.

<sup>77</sup> Illia Ponomarenko, “With Successful Kharkiv Operation, Ukraine Turns the War in Its Favor,” *Kyiv Independent*, September 13, 2022.

<sup>78</sup> Siobhán O’Grady and Anastacia Galouchka, “The Letters Left Behind by Demoralized Russian Soldiers as They Fled,” *Washington Post*, September 15, 2022; David Axe, “Pity the Russians Who Get Assigned to the Ill-Fated 90<sup>th</sup> Tank Division in Ukraine,” *Forbes*, September 15, 2022.

<sup>79</sup> Thomas Gibbons-Neff and Natalia Yermak, “Two Cities, Two Armies: Pivot Points in the Fight in Ukraine’s East,” *New York Times*, September 26, 2022.

<sup>80</sup> White House, “Statement from President Biden on Russia’s Attempts to Annex Ukrainian Territory,” press release, September 20, 2022.

<sup>81</sup> Anton Troianovski and Valerie Hopkins, “With Bluster and Threats, Putin Casts the West as the Enemy,” *New York Times*, September 30, 2022.

war), and for presenting Russia as defending itself to a Russian domestic audience. By declaring these territories part of Russia, Putin also opened the possibility of deploying conscripts, which are prevented from being forcibly deployed abroad unless a state of war is declared.

### Russian Personnel and Manpower Challenges

In response to heavy casualties and insufficient recruitment from its shadow mobilization strategies, Russian President Vladimir Putin announced a “partial mobilization” on September 21 with the initial call-up mobilizing 300,000 personnel. The initial mobilization was marked by confusion and a blanket call-up by local and regional officials to meet quotas, instead of a more targeted mobilization of those with recent military experience or technical skills. Putin announced an end to mobilization by late October, but never officially signed a decree ending mobilization. In early December, Putin announced that around 80,000 mobilized personnel were to be deployed in combat units, 70,000 to fulfill support and defensive roles, and 150,000 to conduct training in Russia or Belarus. In December 2022, Russia also announced several major structural changes to the armed forces, including an increase in the size of the military to 1.5 million personnel (including 695,000 contract personnel) and the creation of new units. Most analysts agree the only way to achieve this staffing level is through mobilization.

Heavy casualties to senior contract soldiers and junior officers continue to hamper the Russian military’s ability to train new personnel, since most training is conducted at the unit level by these personnel. Due to the immediate need for reinforcements to stabilize Russian lines, the Russian military sent many mobilized personnel into the frontlines with minimal training and limited equipment. Despite this, it appears at least a portion of the mobilized personnel are undergoing further training to either form new units or serve as more capable replacements in reconstituted units.

Most analysts expect Russia to announce further mobilizations (or the use of conscripts) as it seeks to reconstitute its forces. As noted, however, the military’s ability to integrate and train new personnel is limited, and must be coordinated with the annual conscription intake. Despite the hurdles and chaotic nature of the first round of mobilization, Russia likely has begun a process of creating more orderly structures and processes for future call-ups and is aware of the potential domestic political implications.

Observers and Ukrainian officials acknowledge that, despite the losses, the sheer quantity of these reinforcements has been helpful in blunting further Ukrainian offensives. Wagner PMC has also become a largely independent Russian force, conducting offensives and operations under its leader Yevgeny Prigozhin, including ongoing efforts to seize the town of Bakhmut and the massed recruitment of prisoners from prisons across Russia.

**Sources:** Department of Defense, “Russian Efforts to Raise Numbers of Troops ‘Unlikely to Succeed,’ U.S. Official Says,” press release, August 29, 2022; President of Russia, “Address by the President of the Russian Federation,” press release, September 21, 2022; Brad Lendon, “Putin Can Call Up All The Troops He Wants, But Russia Can’t Train or Support Them,” *CNN*, September 22, 2022; Max Seddon and Christopher Miller, “Vladimir Putin Signal End of Russia’s Popular Mobilization Drive,” *FT*, October 14, 2022; Andrew E. Kramer, “Russia Sends Ill-Trained Draftees Into Combat Amid Losses, Analysts Say,” *New York Times*, November 4, 2022; Greg Miller et al., “Wiped Out: War in Ukraine Has Decimated a Once Feared Russian Brigade,” *Washington Post*, December 16, 2022; Mike Eckel, “Russia Proposes Major Military Reorganization, Conscription Changes, Increase In Troop Numbers,” *RFE/RL*, December 23, 2022; Pavel Luzin, “The Russian Army in 2023,” *Riddle*, January 18, 2023.

## October 2022-Early 2023

By early October 2022, the UAF had continued to capitalize on its success and push Russian forces back into Luhansk. The UAF captured the key hub of Lyman, the earlier scene of heavy fighting in May 2022. Russian forces continued to withdraw, leaving significant amounts of military equipment (including tanks and artillery ammunition) that helped propel further UAF offensives.<sup>82</sup>

<sup>82</sup> Since the first arrivals of M777 howitzers in April, the UAF increasingly relied on Western artillery and ammunition as its stockpiles of ammunition for its Soviet and Russian era artillery dwindled to critically low levels. The provision of Western artillery systems, and its precision targeting capability, proved decisive in the UAF’s ability to support offensive operations. For more, see Yaroslav Trofimov, “Ukraine’s New Offensive Is Fueled by Captured Russian Weapons,” *Wall Street Journal*, October 5, 2022; Marcin Piotrowski, *Military-Technical Assistance to Ukraine: An* (continued...)



In contrast to the collapse of Russian forces in Kharkiv, the UAF faced stiff and determined resistance in Kherson. As noted above, Russia had moved some of its most capable remaining forces in preparation for an expected UAF offensive in the south. As Ukrainian forces retook some territory in Kherson region, Russian forces withdrew to prepared defensive lines and imposed heavy UAF casualties.<sup>83</sup> Western security assistance (such as M777 and HIMARS) again proved crucial by giving the UAF long-range strike capabilities to isolate Russian forces by targeting command and control, logistics, and bridges.<sup>84</sup>

At the same time, the UAF continued to demonstrate flexibility and innovation by conducting multiple strikes deep in Russia.<sup>85</sup> First, apparently modified Ukrainian drones attacked a Russian airbase 170 miles southwest of Moscow, home to Tu-22M bombers used to launch strikes in Ukraine.<sup>86</sup> Second, on October 8, Ukraine blew up parts of the Kerch Bridge connecting occupied Crimea and Russia. In response, Russia launched more than 80 missiles and two dozen drones to attack more than 20 Ukrainian cities.<sup>87</sup> Ukraine also attacked Russia's Engels airbase, home to part of its strategic bomber force, twice in December 2022, again demonstrating Ukraine's ability to strike deep inside Russia.<sup>88</sup>

By autumn 2022, some battlefield momentum had shifted to Ukraine, and Russia faced the prospect of defeat on multiple fronts. Russian forces suffered from a lack of personnel, dwindling equipment and ammunition stockpiles, and low morale. Criticism of the regime and domestic pressure began to build in response to continued battlefield losses.<sup>89</sup> In the wake of these Russian failures, it is possible that Putin began to receive a more accurate understanding of the state of Russian forces and that Russia's current strategy and conventional forces in Ukraine were insufficient.<sup>90</sup>

In response, Putin appointed a new commander of the Russian Joint Group of Forces in Ukraine, General Sergei Surovikin in early October 2022 (see "Russian Command and Control Challenges" text box above). With a reputation for being a competent, if brutal, general, Surovikin's goal was to stem Russian losses and stabilize the frontline.<sup>91</sup> To do so, Surovikin adopted a more defensive strategy. Thousands of mobilized personnel were immediately sent to

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*Assessment of Its Short and Medium-Term Needs*, Polish Institute of International Affairs, Warsaw, December 2022; Egle E. Murauskaite, *U.S. Arms Transfers to Ukraine: An Impact Assessment*, Asymmetric Threat Analysis Center: University of Maryland, January 2023.

<sup>83</sup> Franco Ordonez, "In the Battle for Kherson, Ukrainian Infantry Officers Say Don't Underestimate Russia," *NPR*, October 28, 2022.

<sup>84</sup> Jack Detsch, "Russian Army Keeps Collapsing After Falling Back in Kherson," *Foreign Policy*, October 4, 2022.

<sup>85</sup> There were previously unexplained explosions and reported attacks on military installations but Ukrainian officials refused to comment.

<sup>86</sup> Howard Altman and Tyler Rogoway, "Ukrainian Kamikaze Drone Attacks Bomber Base Deep In Russia," *The Drive*, October 7, 2022.

<sup>87</sup> Meduza, "Putin and Russian Defense Ministry Satisfied with 'High-Precision' Missile Strikes on Ukraine's Civilians," October 10, 2022; BBC, "Russian Attack on City Claimed by Moscow Kills 13," October 10, 2022; James Glanz and Marco Hernandez, "How Ukraine Blew Up a Key Russian Bridge," *New York Times*, November 17, 2022.

<sup>88</sup> Veronika Melkozerova, "Drone Attack Hits Russia's Engels Airbase for Second Time in a Month," *Politico.eu*, December 26, 2022.

<sup>89</sup> Economist, "As Ukraine Smashes Through More Russian Lines, Russians Wonder Whom to Blame," October 3, 2022; Max Seddon, "Kremlin Backers Openly Target Russia's Generals for Battlefield Setbacks," *FT*, October 7, 2022.

<sup>90</sup> Julian E. Barnes, Helene Cooper, Eric Schmitt and Michael Schwartz, "As Russian Losses Mount in Ukraine, Putin Gets More Involved in War Strategy," *New York Times*, September 23, 2022; Paul Sonne, "Putin Faces Limits of His Military Power as Ukraine Recaptures Land," *Washington Post*, October 5, 2022.

<sup>91</sup> Mark Galeotti, "Putin's Attack Dog Brings a Terrible Type of Warfare to Ukraine," *Spectator*, October 10, 2022.



the frontlines, often with limited training and equipment.<sup>92</sup> Despite their poor quality, these fresh troops allowed Russia to reinforce its lines, and in some cases even rotate and rest units. The commander of Ukraine's armed forces, General Valery Zaluzhny, stated bluntly, "Russian mobilization has worked. It is not true that their problems are so dire that these people will not fight. They will."<sup>93</sup>

**Figure 3. Ukraine Airfields and Key Infrastructure**



**Sources:** Congressional Research Service; Janes IHS.

At the same time, and possibly as a result of growing domestic dissent over the conduct of the war, Russia launched a renewed strike campaign targeting key energy infrastructure across Ukraine (see **Figure 3**). Despite a widespread assessment that Russia's stockpile of long-range precision munitions is running low, Russia continued to launch such attacks (including heavy missile barrages in November and December 2022).<sup>94</sup> Evidence indicates that Russia has been producing new munitions, albeit at a rate likely insufficient to replace lost stockpiles and sustain large-scale attacks. In response, Russia has imported Iranian drones to supplement its precision munition stockpile. The use of cheap, but effective, Iranian drones force Ukrainian air defenses to expend their limited munitions, potentially presenting a choice to Ukraine in the near future of whether to prioritize air defense of critical infrastructure or its frontline forces.<sup>95</sup> Additionally,

<sup>92</sup> Robyn Dixon and Natalia Abbakumova, "Angry Families Say Russian Conscripts Thrown to Front Line Unprepared," *Washington Post*, November 20, 2022.

<sup>93</sup> Economist, "An Interview with General Valery Zaluzhny, Head of Ukraine's Armed Forces," December 15, 2022.

<sup>94</sup> Andrew E. Kramer and Megan Specia, "Death Toll of Russian Strike in Dnipro Rises to 40, Ukraine Says," *New York Times*, January 16, 2023.

<sup>95</sup> Phil Stewart and Idrees Ali, "Russia Trying to Exhaust Ukraine's Air Defenses, Pentagon Official Says," *Reuters*, November 19, 2022; CRS Insight IN12042, *Iran's Transfer of Weaponry to Russia for Use in Ukraine*, by Andrew S. Bowen, Carla E. Humud, and Clayton Thomas.

wearing down Ukraine's air defenses would also allow the VKS to operate more freely, in contrast to its current risk averse operations over Ukraine.

In November 2022, Russia announced its withdrawal from the city of Kherson to more defensible lines east of the Dnipro. It appears Putin finally relented to withdrawing from Kherson after reportedly refusing the Russian military's requests for months to retreat from its exposed positions there.<sup>96</sup> Russia appeared to be adjusting its military strategy and adapting to UAF tactics, including attempting to disperse logistics and command and control in response to HIMARS and precision artillery fire.<sup>97</sup> However, a New Year's Day strike by the UAF on Russian mobilized troops housed next to ammunition indicates that the Russian military continues to have issues with lower level command and control and professionalization.<sup>98</sup>

**Figure 4. Ukraine Territorial Control**



**Source:** Congressional Research Service.

**Note:** Lines of territorial control are approximate.

With the establishment of more defensible lines and the introduction of new mobilized personnel, Russia was able to stabilize its lines, including blunting further UAF offenses to seize the key cities of Kreminna and Svatove in Luhansk.<sup>99</sup> Most fighting has become attritional, with a

<sup>96</sup> Mike Eckel, "Bad News Politically, Shrewd Move Militarily? What Russia's Kherson Retreat Means—And What It Doesn't," *RFE/RL*, November 10, 2022.

<sup>97</sup> Isabelle Khurshudyan, Paul Sonne, Liz Sly and Kamila Hrabchuk, "Ukraine Confronts Tougher Fight in Push to Extend Battlefield Wins," *Washington Post*, November 19, 2022.

<sup>98</sup> Victoria Kim, "Russia Says Soldiers' Cellphone Use Led to the Deadly Makiivka Strike," *New York Times*, January 4, 2023.

<sup>99</sup> Borys Sachalko, "We Fight With Our Brains. They Fight With Numbers': Ukrainian Paratroopers On The Battle For The Donbas City of Kreminna," *RFE/RL*, December 28, 2022.

relatively warm winter limiting the ability of either side to conduct rapid offensive maneuvers due to wet and muddy terrain.<sup>100</sup> Russian tactics also have adapted and continue to evolve, with Russian forces conducting probing attacks to identify and fix UAF positions, which are then attacked by smaller, professional units.

The Russian military does not appear to be operating BTGs; what professional units remain appear to operate as Company Tactical Groups and are deployed as mobile reserves or strike groups.<sup>101</sup> These tactics contrast with Russia's reliance on massed artillery during its offensives in the Donbas during the summer. Analysts continue to speculate whether the lower level of artillery fire is due to low stockpiles, more focused fighting areas, conservation of ammunition for upcoming offensives, or logistical challenges.<sup>102</sup>

### Battle for Bakhmut

The Donetsk city of Bakhmut and its surrounding cities have been the scene of intense fighting since the summer of 2022, and continues to be a focus for Russian forces, specifically the Wagner PMC. Most observers agree that while there is some tactical utility in capturing Bakhmut, its strategic value is questionable. Both sides appear to be focusing on the symbolic importance of the city, with Russia seeking to present its capture as part of its pledge to capture the Donetsk region, and Ukraine seeking to demonstrate its determination to defend all of its territory. Some analysts speculate Russian forces were allowed to withdraw from Kherson in expectation of gains in the Donbas, possibly explaining the focus on Bakhmut.

In the struggle for Bakhmut, Wagner and its leader Yevgeny Prigozhin have sought to increase their stature by presenting Wagner as a more capable and competent fighting force than the Russian military. Reports indicate that Prigozhin views the capture of Bakhmut as a way to increase his standing with the Russian leadership and establish Wagner's standing as an independent institution within Russia. Wagner has heavily recruited from prisons and these recruits are viewed as expendable. As of early 2023, U.S. officials estimate Wagner commands up to 50,000 personnel, including 40,000 convicts and 10,000 professional mercenaries. Wagner uses these prisoners in massed human wave attacks to identify and wear down UAF positions, despite suffering heavy casualties in the process. While most Russian casualties are prisoners or low quality fighters, the UAF has devoted considerable resources, including some of its most capable units, to defending Bakhmut. Wagner has been able to make small, incremental gains, including seizing most of the town of Soledar (with the support of VDV units and not solely Wagner PMC personnel), and increasingly threatening UAF control of Bakhmut. Observers continue to debate the extent to which fighting in Bakhmut has drained both Russian and UAF resources and potentially affect each sides' ability to launch offensives in the spring.

**Sources:** Andrew Osborn and Mark Trevelyan, "Russia's 'General Armageddon' Under Pressure to Deliver on Battlefield After Retreat," *Reuters*, November 21, 2022; Andrew Osborn and Felix Light, "Russia's Grim Battle for Bakhmut May Yield Pyrrhic Victory at Best," *Reuters*, December 20, 2022; Tim Lister, "As Russia's Military Stalls, 'Putin's Chef' Serves Up His Wagner Shock Troops to Rescue Ukraine Campaign," *CNN*, January 11, 2023; Paul Soone and Isabelle Khurshudyan, "Bloody Bakhmut Siege Poses Risks for Ukraine," *Washington Post*, January 15, 2023; Illia Ponomarenko, "With the Loss of Soledar, Ukrainian Positions in Bakhmut Jeopardized," *Kyiv Independent*, January 22, 2023; Felix Light, Filipp Lebedev, and Reade Levinson, "A Russian Graveyard Reveals Wagner's Prisoner Army," *Reuters*, January 26, 2023.

After only three months, Surovikin was replaced by Chief of the General Staff Valery Gerasimov in early January 2023. The replacement comes despite a widespread assessment that Surovikin was amongst Russia's most capable commander and was largely credited with stabilizing Russian lines in the wake of successful Ukrainian offensives. While the rationale is unclear, some

<sup>100</sup> Konrad Muzyka, "Issue 245, 16 January – 22 January 2023 (Weekly update)," *Rochan Consulting*, January 23, 2023.

<sup>101</sup> Specifically, remaining VDV units appear to be the Russian military's primary strike group element. Additionally, Russia appears to be relying on dismounted infantry, without tank or armored fighting vehicle support, in contrast to the early phases of the war, possibly as a result from heavy equipment losses, as well as conserving equipment for possible future offensives.

<sup>102</sup> Natasha Bertrand, Oren Liebermann, and Alex Marquardt, "Russian Artillery Fire Down Nearly 75%, U.S. Officials Say, In Latest Sign of Struggles for Moscow," *CNN*, January 10, 2022.

observers speculate that the replacement of Surovikin demonstrates the continued unrealistic battlefield expectations of Russian political decisionmakers, partially due to an apparent disconnect between Russian officers on the ground and the ability to convey accurate and realistic information on the conflict.<sup>103</sup> While it is possible Putin is getting more accurate information on the state of the Russian military, Russia's rhetoric and stated goals indicate there may still be a mismatch between expectations and available resources.<sup>104</sup> Director of National Intelligence Avril Haines noted in December 2022, "I do think he [Putin] is becoming more informed of the challenges that the military faces in Russia, but it's still not clear to us that he has a full picture at this stage of just how challenged they are."<sup>105</sup>

Russia also has launched a number of local offensives in the South (around Vuhledar), continued offensives to seize Bakhmut, and a counterattack in the North around Kreminna. Thus far the attacks have failed to push back UAF forces and reports indicate Russian forces continue to suffer heavy casualties.<sup>106</sup> It is unclear whether these offensives are in fact part of the expected round of offensives this spring, and could be an indication of Russia launching its offensives early without sufficient training and resources.

## Additional Key Issues

Among other issues, observers continue to monitor three issue areas for insight into the war. These topics are the state of Russia's defense industrial base, the role of Belarus, and war crimes. These issues are important variables in the conflict and will continue to influence the trajectory of the war.

### Russian Defense Industrial Base

Since the beginning of the war, Russia has lost or expended a significant amount of equipment, weapons, and ammunition. Not only does Russia need to replace equipment lost in battle, or during retreats such as the route from Kharkiv, it must equip the newly mobilized soldiers and units. As a result, Russia has mobilized its defense industry to a war footing and around the clock production to meet its war needs.<sup>107</sup> Putin has made visits to various defense factories, publicly chastised defense industry officials, and appointed former President and Prime Minister Dmitry Medvedev to a new position of first Deputy Chairman of the Military-Industrial Commission that oversees the defense industry. Russia also enacted legislation to give the government "special

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<sup>103</sup> Mark Galeotti, Pavel Baev, and Graeme P. Herd, "Militaries, Mercenaries, Militias, and Morale and the Ukraine War" *Marshall Center*, November 15, 2022; Francesca Ebel, "Russia's New Commander Reflects Putin's Plan to Push for Victory in Ukraine," *Washington Post*, January 12, 2022; Mark Galeotti, "Enter Gerasimov," *In Moscow's Shadows*, January 12, 2023.

<sup>104</sup> Evan Gershkovich, Thomas Grove, Drew Hinshaw, and Joe Parkinson, "Putin, Isolated and Distrustful, Leans on Handful of Hard-Line Advisers," *Wall Street Journal*, December 23, 2022.

<sup>105</sup> Office of the Director of National Intelligence, "Fireside Chat with DNI Haines at the Reagan National Defense Forum," transcript, December 12, 2022.

<sup>106</sup> Steve Hendrix and Serhii Korolchuk, "Attacking Vuhledar, Russia Prepares New Push to Seize Southeast Ukraine," *Washington Post*, February 4, 2023; Marc Santora, Matina Stevis-Gridneff and Shashank Bengali, "Russia Pays a Bloody Price for Small Gains on Eastern Front," *New York Times*, February 7, 2023.

<sup>107</sup> Yuliya Chernova and Stephen Fidler, "Putin Grips Economy Tighter to Supply Russian War Machine," *Wall Street Journal*, December 6, 2022; Anton Troianovski, "Putin Admits Shortcomings But Vows 'No Limits' to Russia's War Spending," *New York Times*, December 21, 2022.

economic measures” to command the defense industry, but recent data indicates Russia is running a large budget deficit to fund the war and defense industry.<sup>108</sup>

Russia's defense industry faces issues of production capacity. While its defense industry attempts to maximize output of newer systems, a portion of the defense industry's capacity is directed to updating, repairing, and modernizing equipment pulled from storage (such as installing reactive armor on older tanks), especially to replace losses and equip newly mobilized personnel.<sup>109</sup> Additionally, Russia's heavy reliance on artillery in the war (often compensating for a lack of personnel prior to mobilization) has likely reduced Russian munitions stockpiles.<sup>110</sup> Reporting indicates Russia has been forced to purchase munitions from alternative sources, such as North Korea. Increasing ammunition production capacity is a key focus of Russia's defense industry, but constraints are likely to continue for the immediate future.<sup>111</sup>

Due to sanctions and export controls, Russia faces a shortage of critical components for its advanced or modern systems (including helicopters, aircraft, PGMs, guided munitions, and communication equipment).<sup>112</sup> Despite limitations, Russia has been able to partially mitigate shortages by turning to a number of strategies, including sanctions evasion, stockpiling critical components prior to the war, and using civilian or lower-quality instead of military-grade components. These strategies allow Russia to continue production, but rates of production are likely insufficient to meet the military's needs going forward.<sup>113</sup>

Additionally, the demands for mobilized personnel with technical skills are increasingly at odds with the defense industry's needs for those same personnel. While technical workers in the defense industry are exempted from mobilization, the competition for skilled recruits could complicate the defense industry's ability to meet production demands if Russia conducts further rounds of mobilization.<sup>114</sup>

## Belarus

Since November 2022, Russian activity in Belarus has increased. Russia reportedly has increased the number of troops in Belarus, with Russian Defense Minister Sergei Shoigu making several trips to Belarus and Putin visiting in December 2022, raising concerns over the introduction of

<sup>108</sup> Official Russian figures state that its military spending is expected to jump by \$71 billion dollars in 2023, even as Russia recorded a budget deficit of \$47.3 billion in 2022. Pavel Luzin, “The Skyrocketing Costs for Russia's War Effort,” *Jamestown Foundation*, January 12, 2023; Samantha Lock, “Putin Scolds Defense Industry Minister in Televised Meeting for ‘Fooling Around,’” *Guardian*, January 12, 2023; Reuters, “Russia Rainy Day Fund Shrinks by \$38 Billion as Government Plugs Deficit,” January 18, 2023.

<sup>109</sup> Georgy Aleksandrov, “The Barren Barrels,” *Novaya Gazeta.eu*, November 2, 2022.

<sup>110</sup> Stephen Fidler and Ann M. Simmons, “Russia's Munitions Shortages Raise Questions Over How Long It Can Continue Ukraine War,” *Wall Street Journal*, November 22, 2022; Hlib Parfonov, “Russia Struggles to Maintain Munition Stocks,” *Jamestown Foundation*, December 5, 2022.

<sup>111</sup> James Beardsworth, “Is Russia Receiving Weapons From North Korea?” *Moscow Times*, December 18, 2022.

<sup>112</sup> Igor Kossov, “How Many Missiles Does Russia Have Left?” *Kyiv Independent*, January 13, 2023.

<sup>113</sup> Steve Stecklow, David Gauthier-Villars, and Maurice Tamman, “The Supply Chain that Keeps Tech Flowing to Russia,” *Reuters*, December 13, 2022; Shashank Bengali, “Lacking Precision Missiles, Russia is Increasing Its Use of Drones, Ukraine Says,” *New York Times*, January 4, 2022; Pavel Luzin, “Russia's Nagging Arms Production Problems,” *Jamestown Foundation*, January 23, 2023.

<sup>114</sup> Polina Ivanova, Max Seddon, and Daria Mosolova, “They Grabbed Whoever They Could’: Putin's Draft Puts More Strain on Russian Businesses,” *FT*, November 29, 2022; Ian Talley and Anthony DeBarros, “China Aids Russia's War in Ukraine, Trade Data Shows,” *Wall Street Journal*, February 4, 2023.



Belarusian troops and a possible renewed offensive from Belarus.<sup>115</sup> Most observers, however, believe the likelihood of a renewed invasion from Belarus is low. Belarus has thus far resisted Russian pressure to contribute troops, and Russian forces in Belarus are significantly fewer and lower quality than those forces deployed for the initial Russian invasion.<sup>116</sup> However, the Belarusian military is training and equipping mobilized Russian personnel, including from Belarusian ammunition stockpiles.

## War Crimes

Numerous countries, the International Criminal Court (ICC), the United Nations, the Organization for Security and Cooperation in Europe (OSCE), think tanks, and human rights organizations have identified instances of potential Russian war crimes and human rights violations in Ukraine.<sup>117</sup> Calls from the international community for tribunals and structures to investigate possible war crimes in Ukraine continue to grow, with both the EU and ICC proposing tribunals.<sup>118</sup> Among other crimes, Russian forces have been accused of indiscriminate and mass killings, as well as rape and other forms of sexual violence, intentionally targeting civilians, and the forced “filtration” (interrogation and separation) of civilians and noncombatants from occupied territories.<sup>119</sup> Evidence continues to mount that at least some of the atrocities are committed under the direction, or knowledge, of Russian commanders and authorities.<sup>120</sup>

Credible reports also continue to emerge over Russian “filtration camps,” where Ukrainian civilians are interrogated and forcibly removed from their homes.<sup>121</sup> On September 7, the U.S. State Department accused Russia of orchestrating filtration operations, stating that “The United States has information that (individuals) from Russia’s presidential administration are overseeing and coordinating filtration operations. We are further aware that the Russian presidential administration officials are providing lists of Ukrainians to be targeted for filtration.”<sup>122</sup>

Russia continues to launch cruise missiles and other precision guided munitions to strike targets across Ukraine. Russia’s use of these and other missiles has demonstrated a trend of strikes on

<sup>115</sup> Anatoly Kurmanaev, Andrew E. Kramer and Michael Levenson, “Putin Visits Belarus, Stirring New Concern on Future of Ukraine War,” *New York Times*, December 19, 2022.

<sup>116</sup> The Belarusian military is generally understood to have minimal offensive capability and suffers from low readiness, with only a few units considered deployable. Ukrainian officials estimate 10,000 Russian troops are currently stationed in Belarus. For more see, Wilk, *Russia’s Belarussian Army*, 2021; Konrad Muzyka, “The Belarusian Armed Forces: Structures, Capabilities, and Defense Relations with Russia,” *ICDS*, August 2021; Yevhen Kizilov, “Ukrainian Border Guards Report How Many Russian Troops are Deployed in Belarus,” *Ukrainian Pravda*, December 28, 2022.

<sup>117</sup> See, for example, Nick Cumming-Bruce, “U.N. experts find that war crimes have been committed in Ukraine,” *New York Times*, September 23, 2022; BBC, “What War Crimes is Russia Accused Of?” November 14, 2022; Patrick Wintour, “Russian War Crimes Draft Resolution Being Circulated at the UN,” *Guardian*, December 4, 2022.

<sup>118</sup> Reuters, “EU Seeks Tribunal To Probe Possible Russian War Crimes in Ukraine,” November 20, 2022.

<sup>119</sup> Justin Spike, “Bodies Exhumed From Mass Grave in Ukraine’s Liberated Lyman,” *Washington Post*, October 11, 2022; Erika Kinetz, “‘Kill Everyone’: Russian Violence in Ukraine Was Strategic,” *AP*, October 27, 2022.

<sup>120</sup> Yousur Al-Hlou et al., “Caught on Camera, Traced by Phone: The Russian Military Unit That Killed dozens in Bucha,” *New York Times*, December 23, 2022.

<sup>121</sup> National Intelligence Council, “Russian Forces Conducting Detentions and Forced Deportations Through Systematic Filtration Operations,” unclassified press release, June 15, 2022; Marc Santora, “A U.S. Intelligence Report Finds that Russia’s Use of ‘Filtration Centers’ to Detain and Deport Ukrainians Has Intensified,” *New York Times*, July 25, 2022.

<sup>122</sup> U.S. State Department, “Accountability for War Crimes and Other Atrocities in Ukraine: Recent Reporting and the Commitment of Additional Funding,” press release, August 25, 2022; Reuters, “U.S. Demands Russia Halt ‘Filtration’ Operations in Ukraine,” September 7, 2022.



civilian targets and populations and has increased in the wake of Russian battlefield failures.<sup>123</sup> Observers also remain concerned by the Russian military's occupation and supervision of the Zaporizhzhia Nuclear Power Plant, the largest nuclear plant in Europe.<sup>124</sup>

To increase their control over occupied territories, Russian forces allegedly have conducted arbitrary detentions, forced disappearances, interrogations, and reprisals against the civilian population. In particular, Russian forces reportedly have conducted intensive operations to repress and eliminate opposition to Russian rule in the areas they occupy.<sup>125</sup> Russian officials deny these accusations, alleging that they only target legitimate military targets and that other accusations are "lies."<sup>126</sup> Nevertheless, across recaptured territories in Kharkiv and Kherson, Ukrainian forces have uncovered widespread evidence of torture, abuse, and mass graves.<sup>127</sup> Ukrainian officials state they are investigating over 58,000 potential war crimes.<sup>128</sup>

Observers highlight the potential for further war crimes in the context of denials by Russian officials and an unwillingness to address accusations or alter behavior on the ground. One Russian unit alleged to have participated in war crimes in Bucha was honored by Russian President Vladimir Putin for its actions in Ukraine.<sup>129</sup>

## Outlook

As the war in Ukraine reaches the one-year mark in February 2023, analysts and officials believe attrition is the most likely trajectory for the immediate future, albeit with localized offensives and some changes in territorial control by both sides.<sup>130</sup> President Putin and Russian officials have increasingly made statements to prepare the Russian population for a long conflict and are mobilizing the Russian economy and society to support the war.<sup>131</sup> Ukrainian officials,

<sup>123</sup> Human Rights Watch, "Russian Attacks on Energy Grid Threaten Civilians," December 6, 2022; Isabel Coles and Bojan Pancevski, "Russia Targets Infrastructure Across Ukraine in Latest Barrage," *Wall Street Journal*, December 16, 2022; Hanna Arhirova, "Russian Strike Toll: 45 Dead Civilians, Including Six Children," *AP*, January 17, 2023.

<sup>124</sup> For more, see CRS Insight IN11883, *Russian Military Actions at Ukraine's Nuclear Power Plants*, by Mark Holt and Mary Beth D. Nikitin; IAEA, "Director General Grossi Alarmed by Shelling at Ukraine NPP, says IAEA Mission Vital for Nuclear Safety and Security," press release, August 6, 2022.

<sup>125</sup> Erika Kinetz, "We Will Find You': Russian Hunt Down Ukrainians on Lists," *AP*, December 21, 2022; Anthony Deutsche, Anna Voitenko, and Olena Harmash, "Scale of Alleged Torture, Detentions by Russian Forces in Kherson Emerges," *Reuters*, January 12, 2023.

<sup>126</sup> Reuters, "Kremlin Says Ukraine War Crimes Claims Are a Lie," September 19, 2022.

<sup>127</sup> Stephen Kalin, "Ukraine Exhumes Mass Burial Site in City Retaken From Russians," *Wall Street Journal*, September 16, 2022; Lori Hinnant, Evgeniy Maloletka, and Vasilisa Stepanenko, "10 Torture Sites in One Town: Russia Sowed Pain, Fear in Izium," *AP*, October 2, 2022; Carlotta Gall, "'It Was Horror': Ukrainians Share Grim Tales of Russian Occupation," *New York Times*, October 20, 2022.

<sup>128</sup> Michael Biesecker and Erika Kinetz, "Evidence of Russian Crimes Mounts as War in Ukraine Drags On," *AP*, December 20, 2022.

<sup>129</sup> The U.S. State Department has identified Russia's 76<sup>th</sup> Guards Air Assault Division, its subordinate 234<sup>th</sup> Guards Air Assault Regiment, and the 64<sup>th</sup> Separate Motorized Rifle Brigade as involved in possible war crimes in Bucha. U.S. State Department, "Targeting Russia's War Machine, Sanctions Evaders, Military Units Credibly Implicated in Human Rights Abuses, and Russian Federation Officials Involved in Suppression of Dissent," fact sheet, June 28, 2022.

<sup>130</sup> John Hudson, "CIA Director Holds Secret Meeting With Zelensky on Russia's Next Steps," *Washington Post*, January 19, 2023; Department of Defense, "Senior Military Official Holds a Background Briefing," press release, January 23, 2023; Jen Kirby, "One Year In, Both Ukraine and Russia Still Think They Can Win," *Vox*, January 25, 2023; Mike Eckel, "Russia's New Offensive Grinds Into Action As Ukraine Punches Back Hard," *RFE/RL*, February 11, 2023.

<sup>131</sup> Ivo H. Daadler and James Goldgeier, "The Long War in Ukraine," *Foreign Affairs*, January 9, 2023; Michael Kimmage and Maria Lipman, "Wartime Putinism," *Foreign Affairs*, January 13, 2023.

meanwhile, remain committed to recapturing all territory occupied by Russian forces. Nevertheless, observers debate the likelihood of a complete military victory for either side. During a January 2023 press conference, Joint Chief of Staff Chairman General Milley stated, “So from a military standpoint, I still maintain that for this year it would be very, very difficult to militarily eject the Russian forces.... That doesn't mean it can't happen; doesn't mean it won't happen, but it'd be very, very difficult.”<sup>132</sup>

As of early 2023, both sides have been attempting to reconstitute their forces for expected upcoming offensives in the spring.<sup>133</sup> Russian casualties have exacerbated previously existing personnel issues. A significant portion of Russia's casualties have been the core of its professional military, including its contract soldiers, elite units (VDV, Naval Infantry, *Spetsnaz*), and junior officers. Additionally, Russia lost a significant portion of its remaining professional units in offensives in the Donbas during summer and early fall.<sup>134</sup> As a result, Russia has struggled to replace losses, reconstitute, and rotate units, leading to a significant reduction in force quality.<sup>135</sup> While observers note that mobilization has ameliorated Russia's lack of personnel, speculation persists about the quality of troops Russia will be able to reconstitute to conduct offensives. Ukrainian officials also state they expect Russia to conduct further rounds of mobilization.<sup>136</sup> Despite the poor performance of the Russian military, it continues to learn and adapt to conditions, although constrained by the political environment, and is preparing for a long conflict.

Ukraine also is focusing on creating, equipping, and training new units for offensive operations after suffering heavy casualties last summer and in the ongoing battle for Bakhmut. This effort includes units, such as the new 47<sup>th</sup> Separate Assault Brigade, which likely will be used as strike formations to break Russian defenses.<sup>137</sup> The UAF continues to implement reforms to overcome its Soviet-era legacy, but officials stress the UAF likely needs to adapt away from attritional tactics and toward greater maneuverability in its operations.<sup>138</sup> The U.S. supports UAF development through training on systems (such as Bradley and Stryker infantry and armored fighting vehicles) and collective training of UAF units. The U.S. conducts collective training of the UAF at the battalion level on Western style tactics, emphasizing maneuver and combined

<sup>132</sup> Department of Defense, “Secretary of Defense Lloyd J. Austin III and General Mark A. Milley Press Conference Following Ukraine Defense Contact Group Meeting, Ramstein Air Base, Germany,” press release, January 20, 2023.

<sup>133</sup> Karen DeYoung, Dan Lamothe, and Loveday Morris, “Inside the Urgent Push to Arm Ukraine for a Spring Offensive,” *Washington Post*, January 19, 2023; James Waterhouse, “Bakhmut, Kyiv, and the Other Key Ukrainian Cities and Towns in Russia's Sights,” *BBC*, February 6, 2023.

<sup>134</sup> Robe Lee and Michael Kofman, “How the Battle for the Donbas Shaped Ukraine's Success,” *FPRI*, December 23, 2022.

<sup>135</sup> Emblematic of this was the reported heavy losses sustained by the 155<sup>th</sup> Naval Infantry Brigade during an offensive to seize Pavlivka. Not only did the Brigade suffer catastrophic losses, many of the replacements and reinforcements were mobilized soldiers without the level of training or equipment standard for the elite Naval Infantry. The 155<sup>th</sup> also has reportedly suffered significant casualties in Russia's latest offensive in the same areas. Neil MacFarquhar, “Counting Russia's War Dead, with Tips, Clips, and a Giant Spreadsheet,” *New York Times*, December 18, 2022; Ian Lovett and Georgi Kantchev, “Russia Claims Advances, Strengthens Southern Front,” *Wall Street Journal*, February 13, 2023.

<sup>136</sup> Matthew Luxmoore and Evan Gershkovich, “Ukraine Says Russia Is Delaying New Mobilization Amid Stepped-Up Offensive,” *Wall Street Journal*, February 11, 2023.

<sup>137</sup> As well as new units under the Ministry of the Interior (including National Guard, Border Guard, and National Police) of all volunteer brigades called the “Offensive Guard.” Ukrinform, “New Units Created in Armed Forces of Ukraine to Be Equipped with New Western Equipment,” January 23, 2023; Tim Lister, Fred Pleitgen, and Matthias Somm, “As a Russian Offensive Looms, Ukraine Races to Train Military on New Western Weapons,” *CNN*, January 23, 2023.

<sup>138</sup> Natasha Bertrand, Alex Marquardt, and Katie Bo Lillis, “The U.S. and Its Allies Want Ukraine to Change Its Battlefield Tactics in the Spring,” *CNN*, January 24, 2023.

arms operations. Additionally, the U.S. trains UAF brigade level leadership to coordinate, integrate, and sustain combined arms operations.

This outlook underpins the recent heavy emphasis by Kyiv to secure additional Western equipment such as tanks and armored personnel carriers to support offensive operations. The new supplies of U.S. and Western tanks and armored fighting vehicles are intended to provide improved fire capability and protection, including from all but the latest Russian anti-tank guided missiles. Instead of dispersing systems, the United States is training individual UAF units on the operation and sustainment of specific systems, reflecting their demanding requirements for operation and maintenance. Observers remain concerned over the ability of the UAF to maintain and support the various equipment variants it is receiving, each with different maintenance, ammunition, and training requirements.<sup>139</sup>

Another crucial factor that will likely influence the outcome of any future offensives is the availability of artillery ammunition. Both sides appear to be using less artillery compared to last summer, possibly indicating either low stockpiles or the conservation of ammunition. Without sufficient artillery support, it may be unlikely either side can conduct successful operations outside of limited tactical offensives (for Russian ammunition issues see “Russian Defense Industry Production” above).<sup>140</sup> Western artillery and its increase in precision targeting were crucial for the UAF’s earlier battlefield successes, especially due to increased precision.<sup>141</sup> However, as many as a third of the UAF’s Western supplied howitzers are out of action at any one time due to losses or repairs from heavy use.<sup>142</sup> With limited ammunition available for its Soviet-era artillery, the UAF is largely reliant on continued supplies of Western artillery and ammunition.<sup>143</sup> In addition, air defense systems and ammunition remains a key ongoing need for the UAF, both at the frontlines and for protecting critical infrastructure.

Some have speculated about the potential for Russia to use nuclear, chemical, or biological weapons if Russian policymakers perceive inadequate military advances or to demonstrate capability. Most analysts, however, believe the likelihood of Russia’s use of nuclear weapons remains low. Nevertheless, in November 2022 CIA Director Burns reportedly conveyed warnings to senior Russian officials over the use of nuclear weapons in Ukraine.<sup>144</sup>

## Issues for Congress

Congress continues to track developments in the war in Ukraine closely, especially as it considers U.S. and international efforts to support Ukraine militarily and respond to events on the ground.

<sup>139</sup> Loveday Morris et al., “Ukraine Faces Logistics Hurdles Ahead of Tank Deliveries,” *Washington Post*, January 26, 2023; CRS In Focus IF12040, *U.S. Security Assistance to Ukraine*, by Christina L. Arabia, Andrew S. Bowen, and Cory Welt.

<sup>140</sup> Illia Ponomarenko, “As Battle of Bakhmut Nears Culmination, Ukraine’s Artillery Gasps For More Ammo,” *Kyiv Independent*, January 5, 2023; Eric Schmitt, Adam Entous, Ronen Bergman, John Ismay and Thomas Gibbons-Neff, “Pentagon Sends U.S. Arms Stored in Israel to Ukraine,” *New York Times*, January 17, 2023.

<sup>141</sup> Andrew E. Kramer, “With Western Weapons, Ukraine Is Turning the Tables in an Artillery War,” *New York Times*, November 1, 2022.

<sup>142</sup> John Ismay and Thomas Gibbons-Neff, “Artillery Is Breaking in Ukraine. It’s Becoming a Problem for the Pentagon,” *New York Times*, November 25, 2022.

<sup>143</sup> Due to the vast quantities of shells used by the UAF, the Pentagon recently announced it will dramatically increase its production of 155mm artillery shells. John Ismay and Eric Lipton, “Pentagon Will Increase Artillery Production Sixfold for Ukraine,” *New York Times*, January 24, 2023.

<sup>144</sup> Felicia Schwartz and Max Seddon, “CIA Director Warns Russia Against Use of Nuclear Weapons,” *FT*, November 14, 2022.

Intensive interest and activity in the 117<sup>th</sup> Congress may be expected to carry over into the 118<sup>th</sup> Congress, especially with no end in sight to the war.

Since 2014, Congress has supported Ukraine's efforts to protect its territorial integrity, and since FY2016 to include "lethal weapons of a defensive nature" and (since FY2019) "lethal assistance." For FY2022 and FY2023, Congress provided \$48.7 billion in supplemental appropriations in security assistance, of which the Biden Administration has committed more than \$29.3 billion since the start of the 2022 war.<sup>145</sup> In addition to providing further funds to support the UAF and Ukraine's defense of its territorial integrity, Congress remains interested in ensuring proper oversight and accountability of security and assistance. Section 1247 of the FY2023 National Defense Authorization Act supports the interagency Ukraine Oversight Working Group and a whole of government approach to "advance accountability and end-use monitoring of weapons provided in response to the Ukraine crisis" as well as regular briefings and reports to Congress on such efforts (Section 1247, H.R. 7776).

Congress also remains interested in supporting the investigation, documentation, and prosecution of Russian war crimes. Congress passed the *Ukraine Invasion War Crimes Deterrence and Accountability Act* (Section 5948, H.R. 7776) which highlights Russia's deliberate war crimes and supports efforts to document and identify those crimes and perpetrators.

Congress remains concerned regarding malign Russian actors, specifically Russian PMCs such as the Wagner Group. Section 1243 of the FY2023 NDAA requires the Administration to report on the activities and dangers posed by Russian private military companies as well as the sanctions that exist to impede their activities (Section 1243, H.R. 7776). In December 2022, the Holding Accountable Russian Mercenaries Act (HARM Act) was introduced in the House and Senate to designate the Wagner Group as a Foreign Terrorist Organization (H.R. 9381, S. 5164). The Biden Administration designated the Wagner Group a Transnational Criminal Organization in January 2023.<sup>146</sup> Subsequently, the HARM Act was reintroduced in both the House and Senate in 2023.

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<sup>145</sup> CRS In Focus IF12040, *U.S. Security Assistance to Ukraine*, by Christina L. Arabia, Andrew S. Bowen, and Cory Welt and CRS Report R47275, *Department of State, Foreign Operations, and Related Programs (SFOPS) Supplemental Funding for Ukraine: In Brief*, by Emily M. McCabe.

<sup>146</sup> Department of the Treasury, "Treasury Sanctions Russian Proxy Wagner Group as a Transnational Criminal Organization," press release, January 26, 2023.

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