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The Kharkiv area defence operation in 2022: the course and strategic significance of the north-eastern direction

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Abstract. The relevance of this research article lies in the need to study the leadership experience of the Armed Forces of Ukraine (AFU) and other military formations within the security and defence forces during the repulsion of the russian federation's large-scale invasion of Ukraine.

The article aims to explore the role played by AFU command in countering the enemy's efforts to capture Kharkiv and in leading a counteroffensive to push the enemy back to the state border, thereby eliminating the immediate threat to the city.

The research methodology employs a problem-chronological method of analysis and synthesis, drawing on a wide range of official and unofficial sources. The article highlights examples of successful command by the AFU in the Kharkiv region (Slobozhanskyi operational area), which had a significant impact on the course of hostilities in the east, preventing the enemy from executing plans to encircle and defeat Ukrainian forces in Donbas.

This article has a theoretical focus and does not require further investigation. Its content offers practical value for training command staff within Ukrainian military units and can be utilised in the planning and execution of AFU operations.

Keywords: Armed Forces of Ukraine, Defence Forces of Ukraine, counteroffensive operation of the Defence Forces of Ukraine, Joint Forces operation, operational grouping of troops "Sloboda", mechanised units of the Armed Forces of Ukraine, National Guard of Ukraine, Security Service of Ukraine.

Introduction

The overall military and political situation that developed on the eve of the large-scale invasion of Ukraine by the russian federation's Armed Forces.

Throughout 2021, the military and strategic situation surrounding Ukraine saw a steady rise in tension. Despite an agreement for a mutual ceasefire in the area of the Joint Forces Operation (JFO) from 27 July 2020 to 31 March 2021, periodic shelling and armed clashes continued along the contact line. On 31 March 2021, the russian federation officially ended the ceasefire and began increasing its military presence along the Ukrainian border [1]. Efforts were made to equip the territory, prepare initial and fire positions for missile forces and artillery (MF and A), deploy elements of the comprehensive support system, and conduct live and fire training exercises at training grounds. These exercises mainly focused on preparing and carrying out offensive operations by battalion tactical groups (BTGs). These activities were deliberate and carried out under the pretext of preparing for the planned russian and belarusian strategic exercises "Zapad-2021."



It is believed that during this period, the practical implementation of the document "On the Crisis in Ukraine," developed in moscow in January 2014, took place. This document outlined a comprehensive and large-scale action plan designed to destabilise Ukraine and incorporate 12 of its regions, including Kyiv, into the russian federation [2]. In russia, work began on developing a strategic concept for a large-scale invasion of Ukraine, alongside preparations for the strategic deployment of russian military groupings.

The next phase of escalation began in the autumn of 2021 and lasted until the end of February 2022, just before the large-scale invasion of Ukraine. In preparation for the joint strategic exercises "Zapad-2021," held from 10 to 16 September 2021, the russian federation and belarus deployed up to 200,000 personnel, approximately 80 aircraft and helicopters, up to 760 armoured and military vehicles, over 290 tanks, 240 artillery pieces, multiple launch rocket systems (MLRS), mortars, and up to 15 ships [3].



Military units and battalion tactical groups (BTGs) from the Airborne Forces (AF) and army corps of the Northern and Pacific Fleets were redeployed. All special forces brigades were concentrated along the border with Ukraine. Combat ships—both strike and amphibious—and naval infantry units were redeployed from the Northern and Baltic Fleets, as well as the Caspian Flotilla.

Missile brigades under army command, aviation units from across the russian federation, and military units for operational, technical, rear, and medical support were also moved, including the establishment of field hospitals. Troops were deployed not only within the russian federation and belarus but also in temporarily occupied territories of Donetsk and Luhansk regions and annexed

Crimea. The scale of these redeployments thus far surpassed what would be required for conducting strategic trainings.

Among the objectives set during the exercises were the following: improving operational interoperability between staffs of different levels; advanced command and weapon systems integration; Improving coordination between military command authorities, and enhancing field and air training for units and military formations from the russian federation and belarus during joint mission execution; testing new methods for joint operations by combined assault units in highly urbanised areas; and providing practical experience in military (force) command and control for commanders, officers, and staffs.

Special focus was planned on using vertical envelopments by tactical airborne assault forces, rapid transitions between different combat operations, and creating a complex, dynamic situation. Emphasis was also placed on the actions of units operating independently from the main forces, carrying out deep raids, envelopments, turning movements, and bypassing enemy forces.

By the end of 2021 and the beginning of 2022, the formation of strike groupings had largely been completed, indicating that the decision to invade was made in late summer 2021. This is supported by intelligence data from the United States and the United Kingdom.





The situation escalated significantly after russia presented an ultimatum to NATO countries and the United States on 17 December 2021. The ultimatum demanded a reduction in NATO's military presence in former Warsaw Pact countries and the Baltic states, guarantees that Ukraine, Georgia, and Moldova would not be admitted to NATO, and the creation of new security protocols—both global and specifically for Europe. China voiced support for russia's demands during a meeting between the two countries' leaders in Beijing on the opening day of the 2022 Winter Olympics. This strengthened the russian leadership's confidence in achieving their strategic objectives, including those related to Ukraine [4].

From the end of 2021, leaders from several Western countries shared information about the impending russian invasion of Ukraine. Media outlets in EU and NATO countries repeatedly mentioned specific dates for the start of hostilities. The majority of military experts believed that the Armed Forces of Ukraine would be unable to resist russian troops for more than 72 hours, and that Ukraine's unstable internal political situation would prevent its leadership and defence forces from maintaining control or organising effective resistance. While Ukraine's leadership publicly dismissed the threat of invasion, they nonetheless took practical steps to prepare for and counter the upcoming aggression, as later events demonstrated.

By January 2022, the russian Armed Forces were considered one of the largest in the world, with over 900,000 active personnel and an additional 2 million in reserve.

These included: 105,000 personnel in the ministry of defence of the russian federation; 113,000 in the general staff of the armed forces and directly subordinate units; 280,000 in the Land Forces (LF); 150,000 in the Navy (N); 165,000 in the Aerospace Forces (AF); 50,000 in the Strategic Missile Forces (SMF); 45,000 in the Airborne Forces (ABF); and approximately 200,000 in other military branches, special forces, organisations, and institutions.

The total number of main types of weaponry and military equipment is as follows:

Tanks: up to 13,000 units, including approximately 3,400 units of T-72, T-80, T-90 in service and 9,500 units in storage, in various states of readiness.

Armoured Fighting Vehicles: up to 4,500 IFVs in service and up to 8,500 in storage; around 4,000 APCs.

Operational and Tactical Missile Systems (OTMS): 140 launchers of the "Iskander" OTMS and 240 launchers of the decommissioned "Tochek-U" OTMS, in storage.

Multiple Launch Rocket Systems (MLRS): approximately 1,100 units in service, 2,700 in storage.

Self-Propelled Artillery (SPA) with calibres over 120 mm: 2,050 units in service, up to 4,500 in storage.

Towed Guns and Howitzers with calibres above 100 mm: up to 1,000 units, over 8,000 in storage.

Combat Aircraft: about 1,110 units, including:

Fighters: approximately 500 units;

Fighter-bombers: 110 units;

Tactical bombers: 190 units;

Attack aircraft: 180 units;

Strategic bombers: about 130 units.

Combat Helicopters: around 550 units, including:

Attack helicopters: 400 units;

Transport-attack helicopters: 150 units.

Combat Ships and Boats: 386 units.

In the autumn of 2021, activities were carried out in russia and belarus under the cover of preparing for the “Zapad-2021” exercises, finalising the deployment of russian armed forces strike groups and their operational and logistical support systems along the Western and South-Western strategic axes near Ukraine's borders.

By mid-February 2022, the enemy had established five military groupings for the offensive operation along the following axes.

In the direction of the Polisskyi Operational Area, the grouping included forces from the Eastern Military District, reinforced by Airborne Forces (ABF) units, with up to 23 Battalion Tactical Groups (BTGs) from the 5th, 35th, and 36th Armies, the Eastern Military District's Pacific Fleet coastal forces, and russian Airborne Forces. This grouping consisted of up to 14,100 personnel, 12 OTMS systems, 160 tanks, 807 armoured fighting vehicles (AFVs), 210 artillery systems, and 68 Multiple Launch Rocket Systems (MLRS).

In the direction of the Polisskyi Operational Area, the grouping consisted of Eastern Military District forces, reinforced by Airborne Forces (ABF) units, with up to 23 Battalion Tactical Groups (BTGs) from the 5th, 35th, and 36th Armies, the Pacific Fleet’s coastal forces from the Eastern Military District, and russian airborne forces. The grouping numbered up to 14,100 personnel, with 12 OTMS systems, 160 tanks, 807 armoured fighting vehicles (AFVs), 210 artillery systems, and 68 Multiple Launch Rocket Systems (MLRS).

On the Western strategic axis, the military grouping was formed from units and formations of the Western, Central, and Eastern Military Districts, Aerospace Forces (AF), and Airborne Forces

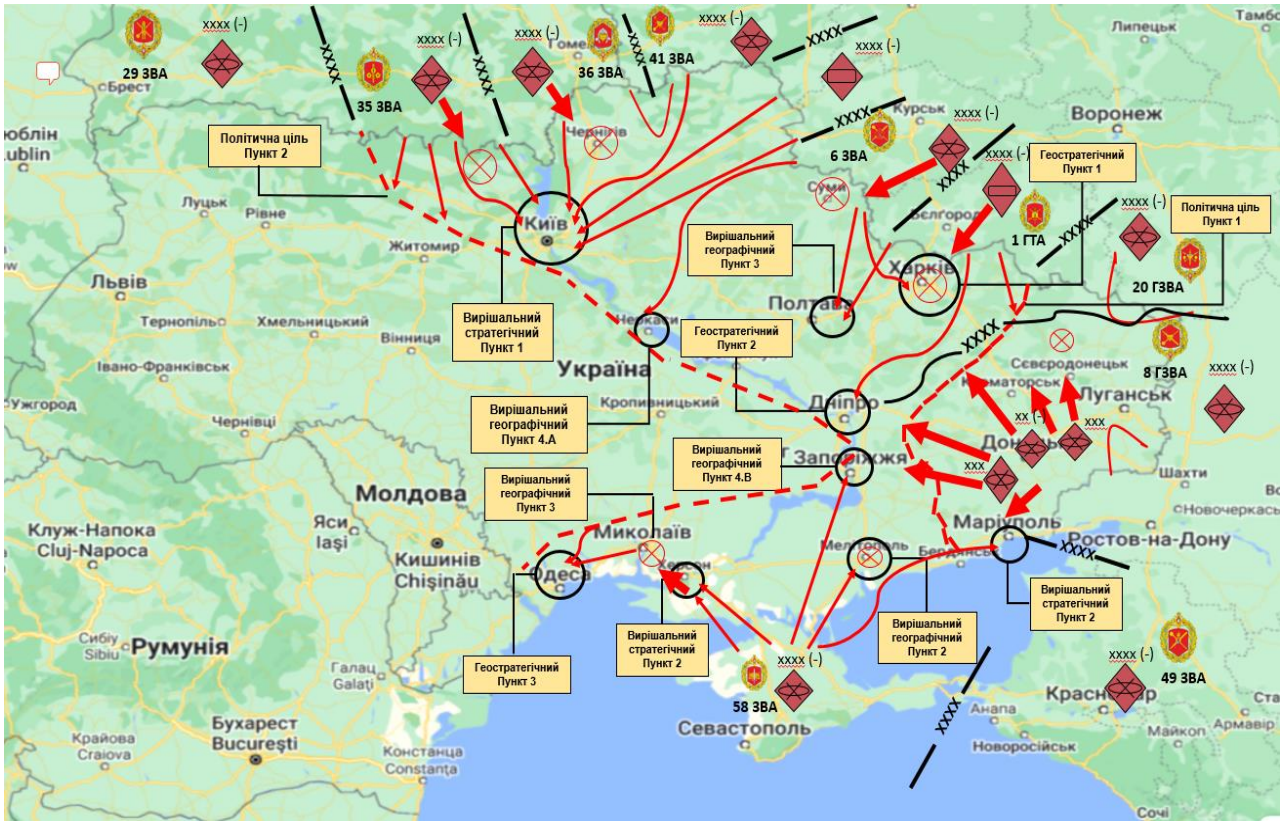
(ABF). The grouping included up to 41 BTGs and 15 Tactical Groups (TG), totalling over 39,500 personnel, with 38 OTMS systems, 869 tanks, 1,764 AFVs, 454 artillery systems, and 226 MLRS systems.

In the direction of the Siversky Operational Area, the grouping of Central Military District forces included up to 16 BTGs and 15 Tactical Groups (16,500 personnel), with 20 OTMS systems, 348 tanks, 959 AFVs, 237 artillery systems, and 114 MLRS systems, sourced from the 2nd, 41st Armies, and 90th Tank Division of the Central Military District.

In the direction of the Slobozhanskyi Operational Area, the grouping of Western Military District forces consisted of up to 25 BTGs (23,000 personnel), with 18 OTMS systems, 521 tanks, 805 AFVs, 217 artillery systems, and 112 MLRS systems, drawn from the 6th, 20th Armies, 1st Tank Army of the Western Military District, and the Pacific Fleet.

On the South-Western strategic axis, the grouping of forces was formed from units of the Southern and Central Military Districts, the Black Sea Fleet, Aerospace Forces, and Airborne Forces. The grouping included up to 43 BTGs (up to 83,700 personnel), with 16 OTMS systems, 966 tanks, up to 2,970 AFVs, up to 1,290 artillery systems, and 407 MLRS systems across the defined axes.

In the direction of the Donetsk Operational Area, the grouping from the Southern Military District included up to 17 BTGs, formed from units of the 8th Army of the Southern Military District, potentially reinforced by units from the 2nd Army of the Central Military District. The grouping numbered up to 58,200 personnel, with 16 OTMS systems, 794 tanks, 1,654 AFVs, 950 artillery systems, and 264 MLRS systems.



In the direction of the Tavriyskyi Operational Area (Crimean Operational Area) and the Azov Operational Zone, the Southern Military District's grouping in the Crimean Operational Area, reinforced by Airborne Forces, consisted of up to 26 BTGs from units of the 8th Army, 22nd Army Corps, and 58th Army of the Southern Military District, the Black Sea Fleet, the Caspian Fleet, and

the 7th Airborne Division (reserve). This grouping comprised up to 25,500 personnel, with 172 tanks, 1,311 AFVs, 337 artillery systems, and 143 MLRS systems.

Overall, the ground military groupings along Ukraine's state border and in the temporarily occupied territory of the Autonomous Republic of Crimea included 107 BTGs with 138,500 personnel, 66 OTMS launchers, up to 2,000 tanks, over 5,570 AFVs, up to 1,950 artillery systems, and up to 700 MLRS systems.

The enemy maintained up to 430 tactical aircraft and up to 380 helicopters in readiness for use. The aviation forces from the Air Force and Air Defence units of the military districts were also prepared for deployment.

4th Air Force and Air Defence Army (Rostov-on-Don), Southern Military District: Combat aircraft – 265 (105 fighters, 78 bombers, 82 attack aircraft), reconnaissance aircraft – 18; helicopters – 243 (of which 160 were attack helicopters).

6th Air Force and Air Defence Army (Saint Petersburg), Western Military District: Combat aircraft – 49 (24 fighters, 25 bombers), reconnaissance aircraft – 16; helicopters – 187 (of which 98 were attack helicopters).

Naval Aviation of the Black Sea Fleet: Aircraft – 31 (12 fighters, 5 bombers, 8 anti-submarine aircraft, 6 reconnaissance aircraft) and helicopters (up to 15 anti-submarine helicopters).

The air component was reinforced by the redeployment of units from the 11th and 14th Air Force and Air Defence Armies of the Eastern and Central Military Districts.

The combat structure of the Black Sea Fleet included: 6 submarines (with cruise missile carriers); 41 ships, including 37 combat ships; 152 boats; and 127 support vessels.

On combat duty in the Mediterranean Sea were: 3 combat ships, 5 combat boats, 3 DESBs (equipped with "Kalibr" cruise missiles), and 2 support vessels.

The naval component of the Black Sea Fleet was reinforced with 9 combat boats: 8 from the Caspian Flotilla and 1 from the Baltic Fleet.

The Black Sea Fleet’s amphibious capabilities were strengthened by amphibious groups from the Northern (NF) – 3 landing ships and the Baltic (BF) – 3 landing ships.

In total, 11 landing ships and 9 landing boats were in readiness for deployment.

Thus, by the second half of February 2022, the formation of a strike grouping for a large-scale invasion of Ukraine was completed at the borders [5].

Methodological Framework

The strategic importance of defending Kharkiv in russia's aggressive plans for the northeastern region.

Kharkiv, Ukraine's first capital and a key administrative centre, is situated in the country's northeast, spanning 370 square kilometres. The city is a major industrial, transport, and scientific hub, with a population of nearly 1.5 million, making it the second-largest city in Ukraine. As a vital logistics centre for eastern Ukraine, Kharkiv also serves as a crucial transport gateway to the Donbas region, earning the title of the "Eastern Gate of the State." Whoever controls Kharkiv effectively controls nearly all of northeastern Ukraine.

Kharkiv, due to its strategic geographical location, has strengthened its economy over the centuries and developed a vast transport network. The city serves as a major transport hub, with key railways and highways connecting to ports on the Black, Azov, and Baltic Seas, as well as to numerous large industrial centres beyond Ukraine.

The city was home to several important military enterprises: Kharkiv State Aviation Production Enterprise, which manufactured An-74, An-74-TK-300, An-148-100 aircraft, KhAZ-30, and their spare parts; PJSC "Khartorn," a leading global developer and manufacturer of control systems for the missile and space industry, energy (including nuclear), and rail transport; and the

Malyshev Tank Factory, which produced T-64, T-80UD, and T-84 tanks, along with BTR-4 armoured personnel carriers, among others.



russia's military-political leadership saw Kharkiv as a critical administrative centre in Ukraine, whose capture would heavily influence the course of the 2022 military campaign. Seizing Kharkiv was prioritised as a crucial objective for russian forces in eastern Ukraine. russian propagandists, political analysts, and eventually the Kremlin leadership and military command believed the majority of Kharkiv's population supported the "russian World" concept and would thus welcome russian forces. They anticipated minimal resistance from the Armed Forces of Ukraine. However, as the events unfolded, it became clear they had grossly miscalculated [6].

The disruption of russian plans to capture Kharkiv
(24 February – 3 March 2022)

To launch the invasion of the Kharkiv sector (Slobozhansky Operational Area), the enemy amassed a military force comprising 25 BTGs from the 6th and 20th General Infantry Armies, the 1st Tank Army of the Western Military District, and separate units from the Northern Fleet's Marine Infantry. The mission to assault Kharkiv was assigned to the 2nd Separate Special Forces Brigade (2nd SFB) and the 25th Separate Motorised Rifle Brigade (25th SMRB).

At dawn on 24 February, with the start of the so-called "special military operation," russian forces crossed the Ukrainian border illegally from the Kursk and Belgorod regions. They advanced towards Kharkiv and Kupiansk, primarily following road networks.

As in other areas, russian forces sought to employ a rapid advance strategy, avoiding direct combat by bypassing cities and attempting to break through into deeper Ukrainian territory. They aimed to capture key strategic points, such as roads, bridges, and railway stations, to isolate Ukrainian forces from logistics hubs located deep behind the front lines.

On the morning of 24 February 2022, russian forces launched their assault on Kharkiv. According to russian prisoners of war, the enemy had set aside three days to capture the city [7].



In the first hours of the invasion, fighting broke out on the approaches to Kharkiv. The village of Tsyrkuny became a strategic point for tank assaults on the city and artillery fire on the Northern Saltivka area. By 25 February, the enemy had reached the ring road surrounding Kharkiv. Simultaneously, they persisted in attempting to infiltrate the city with sabotage and reconnaissance groups (SRGs) aiming to capture key military sites and command centres.

However, in the early stages of the invasion,

the enemy suffered heavy losses in both personnel and military equipment due to the defenders' actions.

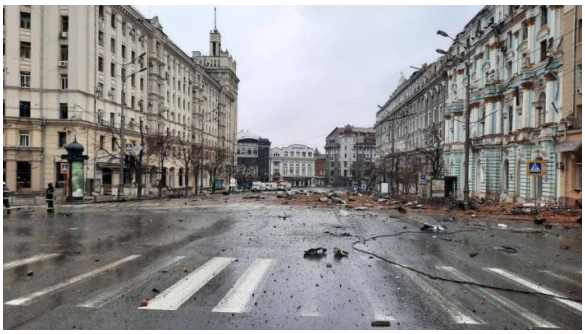
In particular, a column of military vehicles on the Kharkiv front, consisting of 18 wheeled vehicles from the russian national guard, was completely destroyed. The resistance against the occupiers increasingly took on a popular character, as shown by numerous instances. For example, in the Kharkiv region, a woman single-handedly set fire to an enemy armoured personnel carrier using a Molotov cocktail. On 27 February, a russian gru unit in "Tigr" armoured vehicles attempted to break into the city centre. While the column was destroyed, a group of russian special forces managed to break through and capture the premises of School No. 134 on Shevchenko Street, near the heart of Kharkiv. Armed Forces of Ukraine mechanised units, National Guard forces, the Ukrainian Security Service's "Alpha" special forces, and the "FreiKor" DFTG eliminated the enemy sabotage and reconnaissance group.

Following failed attempts to break into the city, russian forces set up fire positions on the north-eastern outskirts and began launching rocket and artillery strikes on both military and civilian targets within Kharkiv. The Northern Saltivka district was the most heavily impacted by the shelling.



On 28 February, the airport and surrounding residential areas were shelled, resulting in the deaths of dozens of civilians, including three children, and leaving around one hundred others injured.

On 1 March, the enemy ramped up artillery shelling of central Kharkiv, targeting both day and night. Residential areas were hit, causing widespread destruction to homes, large fires, numerous casualties, and many injuries.



On 2 March, a missile strike in the city centre killed 29 civilians and damaged the Kharkiv Regional State Administration (KhRSA) building in Freedom Square.

To defend the Kharkiv region, the Defence Forces of Ukraine established the "Sloboda" operational group, comprising two separate mechanised brigades, three territorial defence brigades, an artillery and a rocket brigade, the "Hrim" tactical group, and various other Ukrainian defence units.

By early March, the enemy had suffered significant losses in personnel and equipment while attempting to breach Ukrainian defences in the Kharkiv region. As a result of the successful actions of our units, the enemy was forced to slow the pace of their advance considerably. On 2 March, units from the 93rd Mechanised Brigade, using BMP-2s, captured six advanced russian T-80BVM tanks from the 200th motor rifle brigade. Simultaneously, 22 tank crew members from the russian 2nd tank division, including the deputy regiment commander for armament and the tank battalion commander, surrendered.

By 3 March, the enemy had failed to capture Kharkiv in a swift assault and transitioned to defensive operations with six BTGs from the 6th Combined Arms Army, along with units of the Northern Fleet's Marine Infantry.

Stabilisation of the combat engagement line
(4 March – 28 April 2022)

In March, Defence Forces of Ukraine successfully halted the russian advance towards Kharkiv, forcing the enemy into defensive positions. From 4 March, the enemy began consolidating their positions on the northern and northeastern outskirts of the city, reorganising their troops and replenishing ammunition and military-technical resources.During March and April, russian forces continued to target the city's civilian infrastructure with artillery and airstrikes. Simultaneously, russian units engaged in operations aimed at bypassing Kharkiv from the southeast and advancing towards Izium, thereby threatening Defence Forces of Ukraine in the northern part of the Eastern Operational Zone. To support these efforts, the enemy reinforced their positions around Kharkiv and Izium by deploying additional units from the Baltic and Northern Fleet Marine Infantry. This allowed forces from the Western Military District, numbering up to 16 BTGs, to maintain their blockade of Kharkiv and, after intense fighting, capture the city of Balakliia.

A portion of the invading forces on this front, including units from the 200th Motorised Rifle Brigade (Pechenha) and the 61st Marine Brigade (Sputnik) of the Northern Fleet, suffered heavy losses and were withdrawn for reorganisation and recovery.

Drawing on the 6th Army, the enemy began assembling a formidable strike force in the Kharkiv region, intended for a large-scale offensive. The likely aim was to encircle the Armed Forces of Ukraine from the rear in eastern Ukraine and link up with russian forces advancing from the Zaporizhzhia direction.

With support from assault aviation and missile strikes on Armed Forces of Ukraine positions, the enemy continued to set the conditions for resuming their land offensive, aiming to capture or encircle Kharkiv. At the same time, they attempted to break through the defensive line towards the town of Chuhuiv.

Meanwhile, Ukrainian units launched local combat operations to regain control of settlements on Kharkiv’s outskirts. On 15 March, Ukrainian forces drove the enemy out of Ruski Tyshky, inflicting significant losses. By 25 March, Ukrainian troops had retaken Mala Rogan, and on 27 March, they secured most of Vilkhivka. These actions thwarted russian attempts to bypass Kharkiv from the southeast and advance towards Dnipro and Zaporizhzhia.

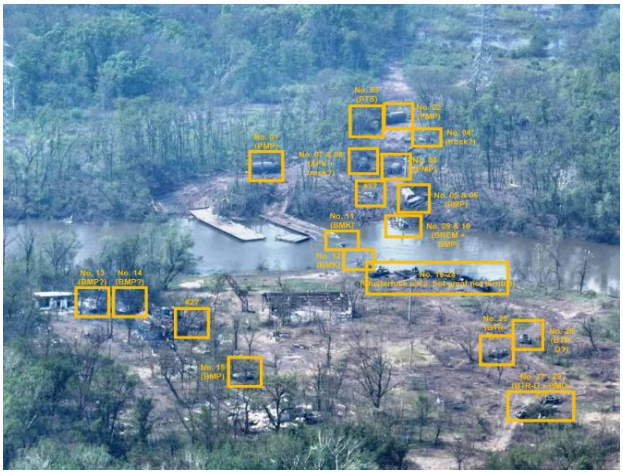
In numerous battles, Ukrainian forces inflicted heavy losses on the enemy in both personnel and equipment. On 7 March, the 92nd Mechanised Brigade liberated the key railway hub of Chuhuiv. During the fighting, the commander of the russian 61st separate marine brigade, Colonel Dmitry Safronov, and the deputy commander of the 11th separate airborne Assault brigade, Lieutenant Colonel Denis Glebov, were killed.

On 9 March, Ukrainian defence units, employing the Stugna-P anti-tank missile system, destroyed a column comprising five T-80U tanks from the 4th Kantemirovskaya Division, a 2S19 Msta-S self-propelled howitzer, two BMP-2 infantry fighting vehicles, and seven trucks. The enemy retreated, abandoning their weapons and military equipment. On the same day, soldiers from the 93rd Mechanised Brigade "Cholodnyi Yar" destroyed a russian vehicle column near Kharkiv, including four out of seven armoured vehicles and BMPs, along with enemy personnel. On 11 March, Ukrainian Special Operations Forces in the Chuhuiv district eliminated a column of enemy military equipment, including tanks, armoured vehicles, and fuel tankers. On 15 March, during a combat engagement, Colonel Igor Nikolaev, commander of the 252nd Motor Rifle Regiment, and Colonel Denis Kurilo, commander of the 200th Brigade, were killed. In total, the 200th Motor Rifle Brigade lost two BTGs, amounting to 1,500 servicemen.

On 20 March, a brigade artillery group from the 81st Separate Airborne Brigade destroyed 15 pieces of russian military equipment near Kharkiv. Two days later, Ukrainian missile and artillery units eliminated a 2S3 Akatsiya self-propelled artillery battery and two KamAZ trucks carrying

ammunition in the same area. By the end of March, the 92nd Mechanised Brigade, supported by other Ukrainian defence units, destroyed two BTGs from the 138th Motorised Rifle Brigade and a combined BTG from the 59th Tank Regiment of the russian armed forces. The headquarters of these units were captured, along with all operational documents, maps, personnel lists, and command vehicles, while over 60 enemy soldiers surrendered.





By early April, the US-based Institute for the Study of War (ISW) reported that russian forces had abandoned their attempts to capture Kharkiv. Their objectives shifted towards advancing southeast from the city to Izium, aiming to link up with russian forces in Luhansk and block the redeployment of Ukrainian mechanised (tank) units from the Kharkiv region. With a significant advantage in manpower (25 BTGs) and artillery, russian forces captured Izium on 1 April.

Throughout April, the nature of the combat around Kharkiv remained largely unchanged. Ukrainian forces maintained defensive positions around the city, inflicting losses on the enemy in both personnel and equipment, while russian forces continued to launch missile and artillery strikes on Kharkiv's civilian infrastructure and its outskirts. Residential areas in Saltivka, Northern Saltivka, Kholodna Hora, Piatykhatky, Derhachi, and Oleksiivka were especially targeted. Additionally, the enemy continued to move reinforcements through uncontrolled sections of the state border, from settlements such as Kozacha Lopan, Lyptsy, Velykyi Burluk, and Dvorichna. As a result, the enemy force partially blockading Kharkiv grew to seven BTGs.

Air battles and combat operations of the air defence units of the Defence Forces of Ukraine.

(February – March 2022)

In the early days of the war, russian aircraft launched numerous strikes on Kharkiv and its surrounding areas, targeting both Ukrainian defence units and the city's civilian infrastructure. The primary aims of the enemy's air forces were to destroy Ukrainian command centres, conduct aerial reconnaissance, target administrative buildings, create chaos among the population, and provide air support to land forces tasked with capturing Kharkiv.Thanks to the coordinated efforts of surface-to-air missile units, air defence units of Land Forces of Ukraine, radar troops, and aviation, the use of russian air assets was significantly curtailed.

In particular, on 6 March, air defence forces shot down two russian Su-25 attack aircraft over Kharkiv.

On 21 March, mobile air defence units of the Armed Forces of Ukraine shot down a russian fighter near Chuhuiv.



On the same day, a mobile group from the Ukrainian Special Operations Forces downed two russian Orlan drones in territory temporarily controlled by the occupiers. On 23 March, in the southeastern part of the Kharkiv region, an air defence missile unit of the Ukrainian Air Force destroyed two enemy aircraft. On 26 March, Ukrainian Air Force air defence missile units shot down a russian bomber and a drone. On 28 March, an air defence unit from one of the Ukrainian Air Assault Forces' brigades destroyed a russian Ka-52 "Alligator" attack helicopter.

On 16 May, National Guard personnel, using the "Igla-10" portable air defence missile system, downed a russian Mi-28 "Night Hunter" attack helicopter near the village of Elitne, east of Kharkiv. In total, during the first months of Kharkiv's defence, air defence units destroyed approximately 50 aerial targets over the city, including both aircraft and drones.

Results

Completion of Kharkiv's defence

(28 April – 4 May)

After the failure of the strategic plan and the attempt to capture Kyiv, russian forces withdrew from the territories of Kyiv, Chernihiv, and Sumy regions to the Belgorod, Voronezh, and Rostov regions of the russian federation. The aim was to restore combat capability and reinforce russian groupings in the temporarily occupied territories of Kharkiv, Luhansk, and Donetsk regions.



On the Kharkiv front, the defence of the city culminated in a counteroffensive operation led by Defence Forces of Ukraine under the overall command of General-Colonel Oleksandr Syrskyi, Commander of the Land Forces of Ukraine. He stated [10] that "the aim of the counteroffensive was to drive the enemy back to the state russian-Ukrainian border, thereby eliminating the immediate threat of Kharkiv's capture. This also compelled the enemy to redeploy some of their forces and resources from the Izium direction, slowing their advance near Izium and preventing them from launching offensive operations towards Sloviansk and Kramatorsk".

The operation was carried out by the 92nd and 93rd "Cholodnyi Yar" Mechanised Brigades, the 80th Separate Air Assault Brigade, the 3rd Tank Brigade, the 103rd and 113th Territorial Defence Brigades, artillery and rocket brigades of the Armed Forces of Ukraine, the 3rd Operational Brigade named after Colonel Petro Bolbochan of the National Guard, and units from the State Border Guard Service of Ukraine. At the onset of the counteroffensive north of Kharkiv (the operational grouping "Sloboda"), they encountered russian forces from the 6th and 41st General Military Armies, the 61st Separate Marine Brigade of the Northern Fleet, and units from the 138th, 25th, and 200th Separate Motorised Rifle Brigades.

On 29–30 April, as a result of offensive operations along the T21117 route, units of the 93rd Separate Mechanised Brigade pushed the enemy out of the villages of Slatyne and Prudyanka.

To halt the further advance of Ukrainian forces towards the border, the enemy began reinforcing and fortifying their forward positions near Kozacha Lopan. In May, the fighting in this sector became largely positional, with only limited gains made by the Defence Forces of Ukraine.

Notably, on 18 May, during an offensive, Ukrainian forces liberated the settlement of Dementiivka.

On 29 April, on the central front, the 113th Territorial Defence Brigade, alongside the 3rd Operational Brigade named after Colonel Petro Bolbochan (3rd OBR) of the National Guard of Ukraine, liberated the village of Ruska Lozova during an offensive. By 7 May, Ukrainian forces had expelled russian troops from Tsyrkuny. To slow the Ukrainian counteroffensive, the occupiers destroyed three road bridges near Tsyrkuny and Ruski Tyshky, but this did not halt the Ukrainian advance. By 10 May, following coordinated actions by Ukrainian defence units, the settlements of Cherkaski Tyshky and Ruski Tyshky were liberated. On the same day, Ukrainian forces entered Pytomnyk. In an attempt to impede further advances, the enemy launched intense artillery strikes on Ukrainian positions.



From 28 to 30 April, units from the 92nd Mechanised Brigade and the 127th Territorial Defence Brigade carried out a rapid offensive, pushing the enemy back 40 kilometres east of the northeastern outskirts of Kharkiv to Staryi Saltiv, liberating the villages of Kutuzivka, Verkhnya Rohanka, Slobidske, and Prylesne. In response, the enemy withdrew to the left bank of the Siverskyi Donets River. By 2 May, Ukrainian forces had secured Staryi Saltiv, and by 6 May, they had gained control of most settlements along the T2104 route, including Shestakove, Fedorivka, Oleksandrivka, Peremoha, and Moldova.

Through their counteroffensive in the Kharkiv region, Ukrainian forces disrupted russian supply lines in the Izium direction, drawing some enemy forces and resources away and preventing them from launching an offensive towards Sloviansk and Kramatorsk.

The scale of the operation in Kharkiv (April–May 2022) was characterised by the American Institute for the Study of War (ISW) as the largest offensive operation carried out by Ukrainian forces since the russian invasion.

On 5 May, russian forces attempted to regain positions near Kharkiv with a failed counterattack near Staryi Saltiv. However, thanks to the decisive actions of the 92nd Mechanised Brigade, the enemy was pushed back to its original positions. Due to heavy losses, units from the 138th Motorised Rifle Brigade were withdrawn to Belgorod for recovery and reinforcements.

Building on this success, on 10 May, Ukrainian forces advanced further north along the Siverskyi Donets River, liberating the villages of Baiark, Zamulivka, Verkhnij Saltiv, and Rubizhne. The soldiers of the 127th Territorial Defence Brigade were especially noted for their actions during these battles.

As a result of a swift offensive, the city of Vovchansk, a crucial logistical hub for russian forces in the Izium region, came within range of the Armed Forces of Ukraine' missile and artillery units. This was reported in the British intelligence daily update on 12 May.

To prevent Ukrainian forces from crossing to the left bank of the Siverskyi Donets River and advancing towards Vovchansk, russian occupiers detonated bridges near the villages of Rubizhne and Staryi Saltiv, along with the Pechenizka Hydro-Electric Power Station.

In response, the enemy concentrated its efforts on halting further Ukrainian progress towards the state border. Specifically, they carried out fire strikes on the positions and battle formations of the advancing Ukrainian defence units.





Meanwhile, russian units remaining on the northern outskirts of Kharkiv continued launching rocket and artillery attacks on residential areas of the city, as well as airstrikes on Ukrainian defence positions. These attacks resulted in civilian casualties. On 8 May, for instance, russian shelling in Kharkiv oblast killed 5 people and injured 6.

The Ukrainian advance posed a significant threat to the Vovchansk railway station, one of two key unloading stations in the enemy's logistics network. The proximity of Ukrainian forces to a range that would allow Ukrainian missile and artillery units to strike this station could severely disrupt the rear supply lines for the entire russian force operating in Kharkiv and Luhansk regions.

The successful Ukrainian counteroffensive to the northeast of Kharkiv forced the russian command to choose between repelling the Ukrainian advance or reinforcing its forces for a continued offensive from the Izium area towards Sloviansk, Kramatorsk, and Severodonetsk-Lysychansk. The russian command opted to bolster its Kharkiv grouping by redeploying units from the Western Military District, which had previously been withdrawn from Kyiv and Chernihiv regions. At the same time, to secure the russian border in Belgorod oblast, up to 19 BTGs were deployed. Furthermore, some forces and resources from the Izium direction were redeployed to prevent Ukrainian units from reaching the rear of the russian grouping in the Izium area. The enemy began constructing a new defensive line along the left bank of the Siverskyi Donets River, while reinforcing its defences in Kupiansk with 4 BTGs to safeguard the supply lines from Belgorod and Valuyki.

The Ukrainian counteroffensive forced the enemy to redeploy some of their forces and resources from the Izium direction to stabilise the situation in northern Kharkiv oblast.

However, this redeployment did not prevent Ukrainian defence units from reaching Ukraine's state border. Moreover, the 92nd Mechanised Brigade successfully crossed the Siverskyi Donets River near Staryi Saltiv and established a bridgehead on the left bank, between the villages of Buhayivka and Khotimlya, threatening to sever russian communication lines in eastern Kharkiv oblast.

On 15 May, the 227th Battalion of the 127th Territorial Defence Brigade pushed russian forces back and reached the state border in the vicinity of Ternova, continuing their advance towards Vovchansk.

On 14 May, the Institute for the Study of War stated: "Ukraine appears to have won the Battle of Kharkiv: Ukrainian forces prevented russian troops from encircling the city, let alone capturing it." That same day, russian forces focused their main efforts on facilitating the withdrawal from Kharkiv, holding positions, securing supply routes to the north and east, and preventing Ukrainian forces from advancing towards the state border. [12]

Conclusion

Starting from 12 May, as a result of the Ukrainian counteroffensive, the enemy lost the

capability to conduct artillery strikes on Kharkiv. By 15 May, residents who had evacuated the city began to return.

Since the invasion began, at least 150 civilians have been killed in Kharkiv by russian shelling, while 98 urban infrastructure facilities were either destroyed or damaged. Over 250 people were rescued during the recovery operations. The areas that endured the most intense shelling included Northern Saltivka, Piatykhatky, the Zhukovskyi settlement, Rohan, and Horyzont – districts closer to the frontline, which were struck by rocket and artillery fire. As they retreated, russian forces mined nearly everything – yards, tree lines, roads, and even children's beds. Consequently, demining became one of the top priorities during stabilisation efforts in the de-occupied territories.

Between 5 and 23 May, Ukrainian forces liberated 24 settlements in Kharkiv oblast from russian occupation.

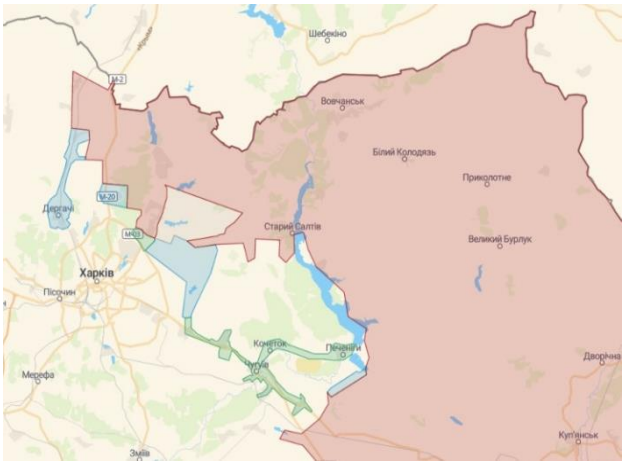
In contrast to the "gesture of goodwill" that saw russian forces withdraw from Kyiv, Chernihiv, and Sumy in late March and early April 2022, the russians opted to hold on to positions in the border zone. This decision aimed to prevent Ukrainian forces from advancing within artillery range of Belgorod, the nearest rear base for the russian grouping in Kharkiv oblast. By early September 2022, russian forces controlled a narrow 10 km strip of the border area, including Kozacha Lopan, Lyptsi, and Vesele.

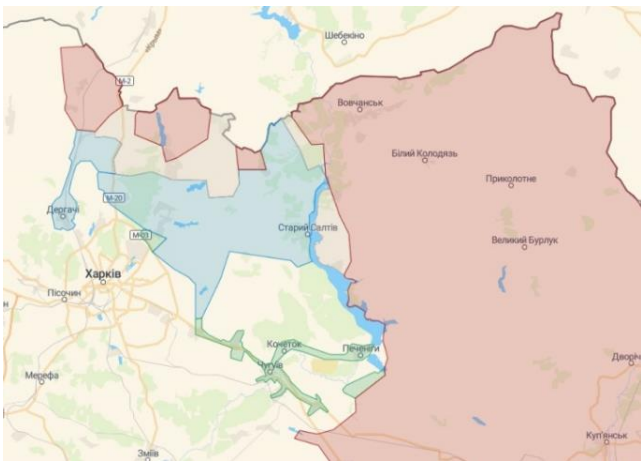


The counteroffensive operation near Kharkiv brought an end to the 80-day defence of the city, which had lasted from 24 February to 14 May 2022.

Assessing the operation’s outcomes, **the President of Ukraine Volodymyr Zelenskyi** remarked, “Ukraine is a country that has shattered the myth of the russian army’s exceptional power. An army that was supposedly capable of conquering anyone it wished in just a few days. But we now have enough strength to look to Ukraine’s future, which remains and will continue to be open to the world” [13].

Thanks to the successful offensive, the enemy was pushed back from Kharkiv by several dozen kilometres, and over two dozen settlements in Kharkiv oblast were liberated. The city’s liberation and the expulsion of russian forces to the border effectively confirmed the russian military’s failure to capture Ukraine’s second-largest city.





The advance of Ukrainian units to the northeast created a threat to the communications of the russian forces in the Izium area and favourable conditions for a successful counteroffensive operation by Defence Forces of Ukraine to liberate the eastern part of Kharkiv oblast in September 2022.

References

1. Chronology of the Russian-Ukrainian War: The Preparatory Phase of a Large-Scale Invasion. (2023). *ArmyInform*. https://armyinform.com.ua/2023/02/23/hronologiya-rosijsko-ukrayinskoyi-vijny-pidgotovcha-faza-shyrokomasshtabnogo-vtorgnennya/
2. *On the Crisis in Ukraine*. *Action Plan for the Destabilization of Ukraine and the Inclusion of 12 Ukrainian Regions and the City of Kyiv into the Russian Federation (2014, Jan.).* National Security Council of russia. http://hai-nyzhnyk.in.ua/doc2/2014(01).plan_putina.php
3. "West-2021" Maneuvers: Russia's New Tricks in Preparation for a Blitzkrieg Against NATO and Ukraine. (2021). *Defence Express*. https://defence-ua.com/army_and_war/strategichni_navchannja_zahid_2021_osoblivosti_pidgotovki_rosiji_do_blitskrigu_proti_nato_ta_ukrajini-4368.html
4. Putin gave the US and NATO an ultimatum on Ukraine. (2021). *New Voice.* https://nv.ua/ukr/opinion/putin-visunuv-ssha-ta-nato-ultimatum-shchodo-ukrajini-shcho-dali-novini-ukrajini-50202858.html
5. Military-historical description of the Russian-Ukrainian war (February–March 2022). (2022). *Center for the Study of Military History of the Armed Forces of Ukraine* (pp. 29–32). https://milhistory.zsu.gov.ua/
6. *City of Kharkiv*. (2022). Kharkiv Development & Investment. https://inkharkiv.com/why-kharkiv/
7. Military-Historical Description of the Russian-Ukrainian War (February–March 2022). (2022). *Center for the Study of Military History of the Armed Forces of Ukraine* (pp. 72–75). https://milhistory.zsu.gov.ua/
8. YEAR OF THE WAR FOR FREEDOM. Military-Historical Outline of the Russian-Ukrainian War (02/24/2022–02/24/2023). (2023). Book I. *Center for the Study of Military History of the Armed Forces of Ukraine* (pp. 161–189). https://www.mil.gov.ua/content/Rik_viiny_za_svobodu_(knyha1).pdf
9. Bronk, J. et al. *The Russian Air War and Ukrainian Requirements for Air Defence* (pp. 12–13).
10. How the Ukrainian military liberated the Kharkiv region in April–May 2022. (2023). *ArmyInform*. https://armyinform.com.ua/2023/05/06/ yak-ukrayinski-vijskovi-vyzvolyaly-harkivshhynu-u-kvitni-travni-2022-roku/
11. Military-historical description of the Russian-Ukrainian war (April 2022) (2022). *Center for the study of military history of the Armed Forces of Ukraine* (pp. 57–60). https://milhistory.zsu.gov.ua/
12. Mason Clark, George Barros, and Carolina Hird. (2022). *Assessment of the Russian offensive campaign,* May 12, 2022. Institute for the Study of War (ISW). https://www.understandingwar.org/backgrounder/ russian-offensive-campaign-assessment-may-12
13. *Counteroffensive of the Ukrainian Defense Forces near Kharkiv* (2022, June 12). President of Ukraine. Official online representation.