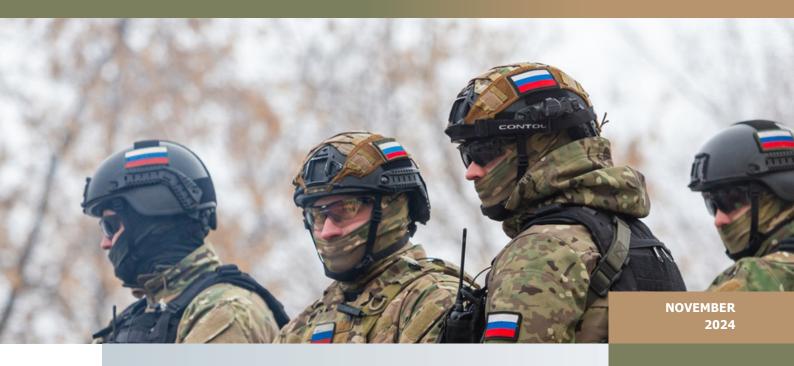
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Russian Military Manpower After Two and a Half Years of War in Ukraine

Yury FEDOROV

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Executive Summary

In addition to a military victory in Ukraine, the Russian leadership is planning to build up sizable troop formations for a possible conflict with NATO in the Baltic region and the Kola Peninsula. In particular, current plans aim for the military manpower to grow by about 350,000, reaching a total of 1.5 million soldiers and commanders. In the context of the current conflict in Ukraine, this cannot be accomplished without a new wave of mass mobilization. The irrecoverable personnel losses per month of about 30,000 soldiers in 2024 are about equivalent to the influx of contract soldiers and volunteers, constituting the combat-capable core of the Russian military manpower over the same period. In turn, the implementation of this new wave of mobilization is being postponed due to the Kremlin's concerns about potentially negative domestic political consequences, as well as the lack of command personnel and weapons for new units. By and large, the longer the war in Ukraine lasts, the more the Russian military machine deteriorates. Consequently, by providing Ukraine with the necessary assistance to continue the war, the West is weakening Russia's military potential and increasing the time required for it to recover its armed forces after the war. Yet, the pressure of the war on Ukrainian society and its political system may cause a political crisis with unpredictable domestic and international outcomes.

Table of Contents

INTRODUCTION	5
ENHANCING RUSSIA'S MILITARY: PLANS AND RESULTS BY 2024	6
NUMERICAL STRENGTH OF RUSSIAN MILITARY PERSONNEL 10	0
Recruitment for and staffing of the Russian Armed Forces troops 10	0
Russian losses in Ukraine1	5
The size of Russian military personnel and the issue of a new mobilization18	8
QUALITY OF THE RUSSIAN MANPOWER22	2
The deficit of command cadres22	2
Poor troop training24	4
Military morale in the Russian army2	5
Prospects of arms supply2	8
CONCLUSION	4

Introduction

During the two and a half years of the large-scale invasion of Ukraine, the Russian Armed Forces have transformed from a military machine built for a blitzkrieg into a force meant for a protracted war. The deficiencies in the planning and command system, logistics, maintenance and support, communications, airborne intelligence, surveillance, and reconnaissance typical of the initial stage of the war have been addressed, although they are still far from being completely fixed. "The Russian army has largely adapted—more or less successfully—to the problems it has encountered in Ukraine", despite the fact that these "adaptations have been no more than interim and sometimes even rudimentary solutions", as French expert Dimitri Minic concluded.¹

The Russian top circles, both military and political, faced major challenges caused by the war in Ukraine. The Western countries are not only providing Ukraine with military support; they are also building up their military power on the eastern flank of the North Atlantic Alliance to deter a possible Russian invasion. Paranoid Russian strategic thinking, in turn, sees the North Atlantic Treaty Organization (NATO)'s growing deterrence capacity as a sign of an impending Western invasion of Russia or as a means of applying so-called "power pressure" upon it. "The expansion of NATO's advanced presence near the borders of the Russian Federation and the Republic of Belarus, as well as the desire of the West to prolong military action in Ukraine to weaken our country" are two things that then Russian Defense Minister Sergei Shoigu called "particularly worrying" in December 2022.2 Additionally, the Russian elites may be worried that NATO's deterrence would stop Russia from invading the Baltic region, which is almost certainly their intended goal, assuming the war in Ukraine ends.

In this context, Moscow aims to achieve two goals. First, to build up a military capability throughout the north-western region that can counterbalance the West's rising military capacity there. Second, to maintain a sufficient level of forces in Ukraine to fight the ongoing war. Thus, the question arises: Will the quantity and quality of Russian military manpower enable Moscow to achieve these goals?

^{1.} D. Minic, "What Does the Russian Army Think About its War in Ukraine? Criticisms, Recommendations, Adaptations", *Russie.Eurasie.Reports*, No. 44, Ifri, September 2023, p. 44, available at: www.ifri.org/.

^{2. &}quot;Zasedanie kollegii Ministerstva oborony" ["Meeting of the Board of the Defence Ministry"], *Kremlin.Ru*, December 21, 2022, available at: http://kremlin.ru/.

Enhancing Russia's military: plans and results by 2024

The Russian Strategic Rocket Forces, Naval Strategic Forces, Space Forces, and Cyber Troops are essentially unaffected by the conflict in Ukraine. This is the Russian Black Sea Fleet, which only sustained significant casualties. About a third of its warships, that is 26 combat vessels,³ including its flagship cruiser Moskva, had been sunk or disabled by Kyiv's forces by midsummer 2024,4 while the other fleets maintained their pre-war configuration and fighting capacities to almost the fullest extent. The Air Force suffered losses that were apparent but not excessive. It lost 129 combat aircraft, or 10-11% of the equipment available at the beginning of 2022, and over 100 attack helicopters, or 25%, and about 40 transport helicopters by the first days of October 2024.5 However, the main Russian ground-combat forces—the Army, Airborne, and Naval Infantry—underwent significant transformations over the course of the two and a half years of the war. Their forces incurred substantial casualties and obtained the largest part of the manpower reinforcement. In this light, and since Moscow remains committed to victory in Ukraine and is also planning to become ready for a large-scale and most probably protracted war with NATO, it seeks to drastically increase its fighting power, above all that of the ground-combat troops and air forces, and for this to create new combat units both in Ukraine and in the north-western areas of Russia bordering Finland and the Baltic states.

The key components of the pertinent plans were initially revealed by Shoigu in December 2022.⁶ With a view to increasing the ground combat services' fighting power, it was planned to raise the authorized number of personnel in the Armed Forces to 1.5 million, which is approximately 50% more than at the outset of the conflict, and convert seven motor-rifle brigades into divisions, and form three new motor-rifle divisions, thus increasing the number of such divisions by more than twice. Also, the nine separate artillery brigades were to be supplemented or replaced by five artillery divisions. In addition to the two assault and two airborne

^{3. &}quot;Update on Ukraine, 10 July, 2024", Intelligence Update, *Defence intelligence*, UK Defence Ministry, July 10, 2024, available at: https://x.com/.

^{4.} N. Sauer, "How the Ukrainians—with no Navy—Defeated Russia's Black Sea Fleet", *The Conversation*, July 19, 2024, available at: https://theconversation.com/.

^{5. &}quot;Attack on Europe: Documenting Russian Equipment Losses During the Russian Invasion of Ukraine", *ORYX*, February 24, 2022. Available at www.oryxspioenkop.com/.

^{6. &}quot;Zasedanie kollegii Ministerstva oborony", op.cit.

divisions already in place, it was projected to create two new assault divisions. In the Naval Infantry force, five brigades were planned to be converted into divisions.

As for the Air Force, it was announced that each of the combined arms and tank armies would have a mixed aviation division and also an Army aviation brigade of 80–100 attack helicopters within it, as well as commanding structures of three air divisions, eight bomber regiments, one fighter regiment, and six army aviation brigades. In total, the plans presented by Shoigu in December 2022 stipulated the formation of 20 divisions in ground-combat services and also 12 air divisions in the Air Force, according to the number of Russian combined arms and tank armies.

To fulfill these plans, the Russian military command envisaged not only boosting the authorized strength of the Armed Forces to 1.5 million men in uniform (as mentioned earlier), but also to increase the number of contracted personnel to 700,000. Since the Kremlin decided in August 2022 to raise the Armed Forces' mandated strength from 1,030 to 1,150 million troops,7 Moscow anticipated increasing the Armed Forces' staff by an additional 350,000 soldiers and officers. If these plans are implemented, it can be expected that the number of Russian troops intended for operations in land theaters and landing operations will increase by 2–2.5 times compared with the prewar level and that they will make up 50–60% of the Russian Armed Forces overall.

The augmentation of Armed Forces personnel and the number of divisions would be followed by organizational improvements of the Armed Forces. It was decided to establish an army corps in Karelia, near the border with Finland, and also re-establish two separate military districts, Moscow and Leningrad, which existed until 2010 and were then merged into one Western military district.

The planned conversion of brigades into divisions and the making of new divisions are both signs of the orientation of Russian military planning toward the conduct of a lengthy war with an adversary roughly comparable in combat strength. In the early 2010s, as part of the first phase of the then military reform, divisions were turned into "lighter" brigades (i.e. units with less heavy armor, such as tanks, infantry fighting vehicles, etc.), with a focus on "small" or, in Russian military terminology, "local" wars and counterguerrilla operations on the periphery of Russian borders. And, since the middle of the last decade, the reverse process has been going on. The divisions, "heavy" units filled with tanks and other armor, are seen as a mighty strike force of ground-combat power. In particular, they are intended for large-scale offensive operations with a breakthrough of the

enemy's defense, deep penetration into rear areas, and the retention of captured territories.

The restoration of the Moscow and Leningrad military districts, the process of which was completed in February 2024,8 resulted from Moscow's views of the western and northwest strategic theaters, in the Baltic region and the Kola peninsula, as the most likely scenes of a future war with the "collective West". One large, amorphous western military district makes it difficult to operate effectively in these areas (and against Ukraine as well), according to Russian military analysts. "The Ministry of Defense made the decision to move to the updated system (of the troop management—YF) since the old one was cumbersome and badly run," said FSB general Alexander Mikhailov.9 Consequently, the Moscow and Leningrad districts were restored, with separate tasks and troop groups assigned to each. The Leningrad district troops are aimed at attacking the three Baltic states and Finland, continued Mikhailov, as the first strategic echelon, while those of the Moscow district are intended to be used against Ukraine and Belarus, as well as to serve as the second strategic echelon for operations in the western theater.

When Shoigu unveiled his bold plans in December 2022, he did not specify when they would be fully implemented. This issue remains unanswered at the moment since it is unclear how and when the conflict in Ukraine will come to a conclusion. The Russian military simply disclosed the plans' state of completion by the end of 2023 and detailed their further implementation in 2024.

In December 2023, Shoigu reported that four divisions, 18 brigades, and 28 regiments, all fully equipped and manned, had been formed, and by the end of 2024, according to him, 14 divisions and 16 brigades are expected to be established.¹⁰ Also, the major organizational reforms in the Russian Armed Forces were completed at the beginning of 2024: the 44th Army Corps was established in Karelia,¹¹ and the two already mentioned military districts have been shaped in place of the Western Military District.¹²

^{8. &}quot;V Rossii poâvilis' Leningradskij i Moskovskij voennye okruga" [Leningrad and Moscow Military Districts have Re-emerged in Russia], *RBC.Ru*, March 1, 2024, available at: www.rbc.ru/.

^{9.} I. Mišina, "Usilenie na Zapad: začem nužny novye Leningradskij i Moskovskij voennye okruga" [Strengthening of the West: Why New Leningrad and Moscow Military Districts are Needed], *Novye Izvestiya*, August 9, 2023, available at: https://newizv.ru/.

^{10. &}quot;V Moskve prošlo zasedanie Kollegii Ministerstva oborony Rossijskoj Federacii", 20 marta 2024 goda [A Meeting of the Board of the Ministry of Defense of the Russian Federation was Held in Moscow, March 20, 2024], Ministry of Defense of the Russian Federation, March 20, 2024, available at: https://function.mil.ru/.

^{11.} Ibid.

^{12. &}quot;Moskovskij i Leningradskij voennye okruga vozroždeny: začem èto ponadobilos'", 24 fevraliya 2024 goda [The Moscow and Leningrad Military Districts were Revived: Why was it Necessary], *Rossiiskaya Gazeta*, February 26, 2024, available at: https://rg.ru/.

This information looks very impressive, but in some cases freshly established military units are made up of staff and command structures only, without personnel and equipment; in other cases, the units' size and composition differ from the previous plans. For instance, the 44th Army Corps was supposed to consist of two assault and three motor-rifle divisions. 13 But at the start of 2024, it was far from being so powerful: it was made up of one motor-rifle division, one motor-rifle, one artillery, and one missile brigade, plus a few support and maintenance units;¹⁴ and by the end of 2024 it will probably provide only between 55% and 60% of the full volume of weaponry required. 15 In most Russian motor-rifle divisions being formed in 2024, a tank regiment is either absent or replaced by a tank battalion.¹⁶ Also, the newly established units are often composed of elements taken from already existing units; thus the total bulk of manpower and armaments either remains mostly unchanged or varies minimally. Because of this, the Russian army's fighting power does not increase in proportion to the realization of very ambitious plans for establishing new regiments, brigades and divisions. So as to provide a more comprehensive assessment of Russia's military capabilities, it's important to assess whether Russia has enough manpower.

^{13. &}quot;Šojgu ob"âvil o sozdanii korpusa u granic Finlândii i uveličenii čislennosti armii" [Shoigu Announced the Creation of a Corps Near the Borders of Finland and an Increase in the Size of the Army], *Delovoi Peterburg*, January 17, 2023, available at: www.dp.ru/.

^{14.} K. Mashovetz, coordinator of the Information Resistance Group, Ukraine, Telegram channel "Zvizdec Mangustu", March 21, 2024, available at: https://t.me/.

^{15. &}quot;Russian Offensive Campaign Assessment", Institute of the Study of War, March 21, 2024, available at: www.understandingwar.org/.

^{16.} K. Mashovetz, coordinator of the Information Resistance Group, Ukraine, Telegram channel "Zvizdec Mangustu", October 3, 2024, available at: https://t.me/.

Numerical strength of Russian military personnel

To determine how many personnel in uniform, particularly in the ground-combat force, Russia has, one should assess the "influx" of personnel and contrast this with the "outflow" of staff resulting from combat deaths, demobilizations for medical reasons, and other causes.

Recruitment for and staffing of the Russian Armed Forces troops

The Russian Armed Forces have four primary categories for both soldiers and non-commissioned officers; there are also four procedures for recruitment. Conscripts, who must serve in the military for a year, are the first group. Some are compelled to participate in fighting even though it is against the law for them to be sent to battle in Ukraine. The second group is made up of "contractors" who agreed to participate in combat activities by signing an appropriate contract with the Ministry of Defense. People mobilized by Putin's decree on September 21, 2022 to fight in Ukraine make up the third group. Furthermore, "volunteers" are individuals who have volunteered to fight through Ministry of Defense-affiliated volunteer organizations, including private military companies, "Shtorm Z" detachments, and BARS formations¹⁷ in the conflict in Ukraine and/or operations in Africa. Although they are not a part of the Armed Forces, these formations are commanded by the military.

These four categories of people differ in terms of their pay scales, terms and duration of service, and legal status. Both contract soldiers and mobilized servicemen who are in the "special military operation zone" earn the same salary and receive equal compensation in the event of injury or death. For a private, a usual salary amounts to approximately 200,000 rubles (2,000 US dollars) per month; in the case of the death of a soldier, the heirs receive around five million rubles. Yet contract soldiers, in contrast to mobilized troops, are granted substantial bonuses upon contract signature by federal and regional authorities, which in the latter case depends on the region's financial capacity; in some regions, such as the

^{17.} BARS is the Russian abbreviation of "Boevoj Armejskij Rezerv Strany" (the combat army reserve of the country).

^{18. &}quot;Skol'ko polučaût kontraktniki i mobilizovannye v 2023 godu" [How Much do Contract Soldiers and Mobilized Soldiers Receive in 2023], *RTVI*, October 1, 2023, available at: https://rtvi.com/.

Khanty-Mansi Autonomous Region, at the beginning of October 2024 it surpasses two million rubles. 19 Volunteer compensation is determined by the terms of the agreement with the specific private military company; it can be higher or lower than that received by contractors. However, volunteers have an advantage – they can be demobilized from the army at the end of their contract, whereas contract soldiers do not have this right.

These differences create tensions between various categories of the military, in addition to unfriendly relationships between men from different ethnic backgrounds. On the one hand, the command seeks to prevent such conflict, which is mostly latent but sometimes open, from expanding beyond reasonable bounds and impairing the military units' combat capability. On the other hand, to tighten control over the servicemen, the military command staffs units from platoon to battalion with a mix of contract soldiers, mobilized personnel, convicts released from serving their sentences in exchange for participating in combat operations, as well as people of various ethnic backgrounds. The idea is that "heterogeneous collectives" are easier to manage as they are made up of diverse interest and cultural groups that are often in conflict with each other. Conversely, maintaining control over "homogeneous" groups with relatively high levels of group cohesion, such as ethnic military units, is far less effective. As a result, there are no ethnic formations in the Russian Armed Forces, except for the Chechen battalions "Akhmat" 20 and the so-called "Wild Division of Donbass".21 Also, after Prigozhin's mutiny and the disbandment of the Wagner Group,²² Russian authorities are avoiding the creation of more or less large mercenary formations that might get out of control. For instance, the "Storm Z" units typically have between 100 and 150 members.²³

^{19. &}quot;Pri zaklûčenii kontrakta v HMAO voennoslužaŝie razovo polučat po 2,75 mln rublej" [When Concluding a Contract in the Khanty-Mansiysk Autonomous Okrug, Servicemen will Receive a One-Time Payment of 2.75 million Rubles], *Vedomosti*, October 4, 2024, available at: www.vedomosti.ru/.

^{20.} Ten or so paramilitary units established in Chechnya are collectively referred to as "Akhmat" or the "Akhmat battalions". A number of them are officially included with the Russian Armed Forces; others with the Russian National Guard (Rosgvardia), yet de facto all of them are under the control of the Chechnya leadership. They typically carry out the duties of military police at the front in Ukraine. The Chechen authorities estimate that they number between 20,000 and 25,000 men, of whom roughly 7,000 fighters were fighting in Ukraine in the middle of 2023. See: "Kadyrov zaâvil o treh diviziâh specnaza 'Ahmat" [Kadyrov Announced Three Divisions of the Special Forces "Akhmat"], *Kavkazsky Uzel*, June 7, 2023, available at: www.kavkaz-uzel.eu/.

^{21. &}quot;The Wild Division of Donbass" is made up of Abkhazian, South Ossetian, and Armenian mercenaries. Until November 2023, it was called the "15th Brigade" or "Fifteen". The total number of fighters is approximately 1,100. See: "Ûgoosetinskih i abhazskih dobrovol'cev perebrosili v Kurskuû oblast'" [South Ossetian and Abkhazian Volunteers have been Redeployed to the Kursk Region], *Radio Svoboda, Kavkaz realii*, August 9, 2024, available at: www.kavkazr.com/.

^{22.} Following the crushing of Prigozhin's insurrection, a part of the "Wagner Group" continued to operate as a de facto self-sustaining mercenary unit in Mali, while major portions joined volunteer units in the Russian National Guard as well as in the Armed Forces that operated in Ukraine and Africa, including the African Corps.

^{23. &}quot;Otrâdy 'Štorm' — èto štrafnye batal'ony. V nih otpravlâût rossijskih voennyh, otkazavšihsâ vypolnât' prikaz ili pojmannyh na upotreblenii alkogolâ" [The "Storm" Units are Penal Battalions. Russian

Although these units are often referred to as "penal battalions," in fact they are staffed by volunteers who are not facing criminal charges as well as by ex-offenders.²⁴

At the beginning of 2022, by the launch of the war, the three services — the Army, Airborne and Naval infantry — had a total of about 360,000 soldiers and officers. Most likely, by the end of the summer of 2022, the Russian leadership realized that the troops they had in Ukraine had suffered heavy losses and were insufficient for waging a successful war. On August 25, 2022, Putin signed the decree to increase the authorized strength of the Armed Forces by 10% to 1,150,000 men by January 1, 2023. On September 21, 2022, the decree on partial mobilization was signed, according to which 300,000 people were mobilized into the Armed Forces by the end of 2022. As a result, by the end of 2022, the actual staff of the Russian Armed Forces, for the first time in many years, reached its permitted level, totaling 1,150,000 servicemen mainly because the actual number of ground-combat troops had climbed to 620,000 soldiers and officers. ²⁶

Over 540,000 people were reportedly recruited into the armed services in 2023 as contract soldiers and volunteers, ²⁷ and an additional 260,000–280,000 conscripts were called for mandatory military duty. If these numbers are true and since a large proportion of conscript personnel are transferred to the contractor category either voluntarily or under pressure, the Russian armed services should have had between 1.6 and 1.7 million men in uniform by the end of 2023. But nothing along those lines occurred.

There are compelling reasons to question whether the Russian Armed Forces have actually recruited the number of contractors just mentioned. First of all, there are doubts raised by the official data on the notable increase in the contractor recruitment rate during the second half of the year. On June 22, 2023, Shoigu announced that 166,000 contractors and volunteers had been recruited into the Armed Forces since the beginning of the year.²⁸ Thus, between January and mid-June, an average of about 30,000 contracts had been signed each month.

Soldiers who Refuse to Follow Orders or are Caught Drinking Alcohol are Sent There], *Meduza*, October 3, 2023, available at: https://meduza.io/.

^{24. &}quot;Kidaem granaty im pod nogi'. Čto izvestno o šturmovom otrâde 'Štorm Z'" [We throw Grenades at their Feet. What is Known about the Assault Unit "Storm Z"], *RTVI*, October 3, 2023, available at: https://rtvi.com/.

^{25. &}quot;The Military Balance, 2022", IISS, February 2022, pp. 192-201.

^{26. &}quot;The Military Balance, 2023", IISS, February 2023, pp. 183-192.

^{27. &}quot;Šojgu: v 2023 godu na službu po kontraktu postupili 540 tys. čelovek" [Shoigu: 540 Thousand People Entered Contract Service in 2023], *Kommersant*, February 20, 2024, available at: www.kommersant.ru/.

^{28. &}quot;'Polučaem každye sutki polk'. Šojgu rasskazal, skol'ko kontraktnikov prihodit v VS RF za sutki" ["We're Getting a Regiment Every Day." Shoigu Told how Many Contractors come to the Russian Armed Forces per Day], *Fontanka.Ru*, June 22, 2023, available at: www.fontanka.ru/.

However, something appears to have happened in mid-summer 2023 that upset this rather stable rate of recruiting. On September 12, 2023, Putin said that 270,000 people had signed contracts with the Ministry of Defense in the last six to seven months.²⁹ If Shoigu's information regarding the number of contract signings up to mid-June was accurate, employing 270,000 men by mid-September meant that the number of contract signings during the two and a half summer months of 2023 after mid-June was about 50,000 per month. As of November 9, 2023, Dmitry Medvedev, the Deputy Head of the Security Council, reported that 410,000 contracts had been signed since the start of the year.30 This means that 140,000 contracts, or 70,000 contracts per month, were signed in October and September alone, which is twice as many as contracts signed monthly in the first eight months of the year. In early December, Medvedev announced that over 452,000 people had been contracted for military service over the year's first 11 months.³¹ Two weeks later, on December 14, Putin stated that 486,000 people had been recruited.³² In other words, he once again claimed that about 2,000 contracts were signed per day. Finally, beginning of 2024, Shoigu claimed in 2023, 540,000 contractors had entered military service; 33 that is, if Shoigu is to be believed, in half a month (since 14 December, when Putin noted the previous number of recruited contractors), the number of contractors increased by more than 60,000, indicating that around 4,000 contracts were signed every day. However, on December 28, 2023, Medvedev announced that in 2023 half a million men had signed contracts with the Armed Forces,³⁴ which is about 8% less than the figure given by Shoigu.

These hectic reports about contractors' recruiting results in the second half of 2023 could be due to a variety of reasons. For instance, at the beginning of that summer, Putin might have voiced disappointment with the rate of recruiting and ordered a large increase. It is also possible that, after the disbanding of the "Wagner Group", which was the most combatcapable component of the Russian Armed Forces, Putin tried to compensate

^{29. &}quot;Putin: za poslednie 6-7 mesâcev dobrovol'no podpisali voennye kontrakty 270 tys. čelovek" [Putin: 270 Thousand People Voluntarily Signed Military Contracts in the Last 6-7 Months], TASS, September 12, 2023, available at: https://tass.ru/.

^{30. &}quot;Medvedev zaâvil, čto s 1 ânvarâ v VS po kontraktu prinâli okolo 410 tys. čelovek" [Medvedev Said that, Since January 1st, about 410,000 People have Joined the Armed Forces under Contract], TASS, November 9, 2023, available at: https://tass.ru/.

^{31. &}quot;Medvedev soobŝil o postuplenii s načala goda na službu v VS RF 452 tys. Čelovek" [Medvedev Announced that 452,000 People have Entered Service in the Russian Armed Forces since the Beginning of the Year], TASS, December 1, 2023, available at: https://tass.ru/.

^{32. &}quot;Putin zaâvil ob otsutstvii neobhodimosti v novoj mobilizacii" [Putin Says there is No Need for New Mobilization], TASS, December 14, 2023, available at: https://tass.ru/.

^{33. &}quot;Šojgu: v 2023 godu na službu po kontraktu postupili 540 tys. čelovek", op. cit.

^{34. &}quot;Medvedev raskryl čislo lûdej, zaklûčivših kontrakt s VS RF za prošedšij god" [Medvedev Reveals the Number of People who Signed Contracts with the Russian Armed Forces over the Past Year], *Fontanka.Ru*, December 28, 2023, available at: www.fontanka.ru/.

for its loss by recruiting additional contract soldiers. However, the Russian military was unable to accomplish this since the average number of contractors for military duty per month was about 30,000 men, which, most likely, still applies today. Early in July 2024, Medvedev declared that 190,000 individuals, or roughly 32,000 men per month, had signed military contracts during the first half of the year. ³⁵ Being unable to carry out Putin's order, Russian commanders might have reported falsified data to him, which is quite a typical practice for the Russian army, infected by the "culture of deception."

What matters most, though, is that when Russian officials mentioned statistics of new contract soldiers, in actual fact, they were referring to the total number of contracts signed but not the total number of newly recruited individuals. Among contracts signed in 2023 and 2024 were many of those that had been signed by contractors whose service in these years was completed but who are required by Putin's decree on the partial mobilization of September 21, 2022 to remain in the Armed Forces "until the end of the period of partial mobilization", 36 which is most likely to last until the ending of the war in Ukraine. Given that, by the beginning of 2022, there were about half a million contractors in the Armed Forces,³⁷ the vast majority of whom were under biannual contracts, a sizeable portion of them were compelled to sign new contracts as otherwise they would be forced to stay in the military but lose the benefits granted to contract personnel, including financial compensation. Since they had renewed their contracts, they were added to the list of newly contracted personnel, even though the latter's quantity had not really grown. Additionally, a number of men recruited under the presidential order on partial mobilization were reportedly forced to sign contracts with the military,³⁸ while a significant number of conscripts of mandatory service were transferred both voluntarily and, more often, by force to contractors³⁹ and may be sent to combat units involved in the war in Ukraine.

Returning to the number of contracts signed in 2023 and 2024 with the Ministry of Defense, one could estimate that they totaled around

^{35. &}quot;Medvedev v prisutstvii ministra oborony Belousova nazval čislo kontraktnikov, nabrannyh v 2024 godu" [Medvedev in the Presence of Defense Minister Belousov Named the Number of Contractors Recruited in 2024], *Fontanka.Ru*, July 4, 2024, available at: www.fontanka.ru/.

^{36. &}quot;Ukaz Prezidenta RF ot 21 sentâbrâ 2022 g. N 647 'Ob ob"âvlenii častičnoj mobilizacii v Rossijskoj Federacii" [Presidential Decree No. 647 of 21 September 2022 "On the Declaration of Partial Mobilization in the Russian Federation"], available at: https://base.garant.ru/.

^{37. &}quot;Prizyv v Vooružennye sily RF. Cifry i fakty" [Draft to the Armed Forces of the Russian Federation. Figures and Facts], TASS, September 29, 2023, available at: https://tass.ru/.

^{38.} A. Kaševarova, Telegram channel "Anastasiâ Kaševarova", July 1, 2024, available at: https://t.me/.

^{39.} Regarding conscripts and mobilized men signing contracts under duress, no statistics are available. However, in Russian social media, there are numerous reports of individual cases of this kind of compulsion, along with legal advice on how a soldier can fend off pressure from a unit's commander. See, for instance: A.V. Kočetkov, legal expert, "Prinuždenie k podpisaniû kontrakta na voennuû službu: poleznaâ informaciâ dlâ prizyvnikov" [Forced to Sign Military Service Contracts: Useful Information for Recruits], October 16, 2023, available at: www.9111.ru/.

30,000 per month. Since it is most likely that the practice of transferring conscripts and mobilized men into contractors continues, the actual "inflow" of new personnel into the Russian Armed Forces was and is currently clearly less (although we don't know exactly how much less) than the number of contracts signed. In the end, when it comes to conscript soldiers who are drafted in any given year, some are transferred to contractors and are fighting in Ukraine, while others replace those who serve in Russian troops that are not involved in the conflict and are demobilized from the army after serving a statutory year.

Russian losses in Ukraine

To ascertain the true strength of the Russian army, it is necessary to assess not only the actual number of newly recruited personnel but also the numbers of combat losses. There is no credible first-hand data on the military losses of Russia and Ukraine in the ongoing war. Both nations regularly report obviously exaggerated information about enemy losses, but carefully maintain secrecy about their own casualties.

Military losses include servicemen killed (KIA) and wounded (WIA) in action, those who died of wounds and illness in hospitals, and those temporarily or permanently unable to fight because of being injured in battle or due to illness, as well as people leaving the Armed Forces for age and other legally recognized reasons. Information that helps one to estimate a part of Russian losses was unintentionally or purposefully given by Putin; he said that, by December 2023, 41,000 servicemen, or around 14% of the 300,000 soldiers and officers mobilized by the decree on partial mobilization, had been demobilized due to non-combat related factors like age, health, and so on.⁴⁰ If what he said is true, it would be reasonable to suppose that, in 2023, a similar share of contractors serving in the military – up to 90,000 men – would have been demobilized for the same reasons.⁴¹

However, the main source of information on Russia's losses is Western military and intelligence organizations, which occasionally or regularly release their own, more or less reliable estimates. The most systemized data regarding the average daily casualties of Russian troops in Ukraine between March 2022 and July 2024, broken down by months, was presented by the British Ministry of Defence.⁴² These data indicate that the number of

^{40.} A. Kolesnikov, "Žit' i rabotat' po-lermontovski" [To Live and Work like Lermontov], *Kommersant*, December 4, 2023, available at: www.kommersant.ru/.

^{41.} As per the Russian Ministry of Defense, the Armed Forces had 640,000 contractual servicemen by the end of 2023; 89,600 is 14% of 640,000. See: "SMI: Minoborony raskrylo čislo služaŝih po kontraktu v armii Rossii" [Mass media: The Ministry of Defence has Revealed the Number of Contract Soldiers in the Russian Army], *Vedomosti*, December 28, 2023, available at: www.vedomosti.ru/.

^{42.} UK Defence Ministry Data. See: "Update on Ukraine, March 3, 2024; April 4, 2024; May 7, 2024, May 31, and August 3, 2024", Intelligence update, *Defense intelligence*, UK Defence Ministry, available at: https://twitter.com/.

Russian troops killed and wounded has been steadily increasing year by year: in 2022, it totaled a little under 100,000 men; in 2023, it rose to 254,000; and, in the first seven months of 2024, it almost reached 200,000 men.⁴³ On May 31, 2024, the British ministry revealed that the total number of Russian causalities, both killed and wounded since the beginning of the war, amounted to up to 500,000.⁴⁴

There has been a large rise in casualties since October 2023; the average daily losses of the Russian army for the first nine months of 2023 were roughly 630, but from November 2023 to July 2024 they jumped to an average of almost 980 per day, or by 30%. 45 Most likely this resulted from the massive Russian offensive in the Donetsk oblast that started in late October 2023. 46 In particular, Russian average daily causalities, both killed and wounded, amounted to 1,260 per day in May 2024 and 1,187 in August 2024. 47

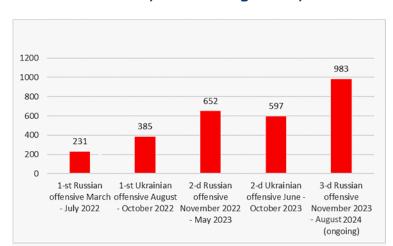


Figure 1: Russian daily average losses (killed and wounded):
March 1, 2022 – August 31, 2024

However, a crucial figure to know is the extent of so-called "irreversible" or "permanent losses", which include both KIA and those WIA who were hospitalized for illnesses and wounds and died there, as well

^{43.} Calculated by data from: "Update on Ukraine, March 3, 2024; April 4, 2024; May 7, 2024 and May 31, 2024", Intelligence update, *Defense intelligence*, UK Defence Ministry, available at: https://twitter.com/.

^{44. &}quot;Update on Ukraine, May 31, 2024", Intelligence update, *Defence intelligence*, UK Defence Ministry, available at: https://x.com/.

^{45. &}quot;Update on Ukraine, April 7, 2024", Intelligence update, *Defence intelligence*, UK Defence Ministry, available at: https://twitter.com/.

^{46.} Calculated from UK Defence Ministry data. See: "Update on Ukraine, March 3, 2024; April 4, 2024; May 7, 2024, May 31, and August 3, 2024", Intelligence update. *Defence Intelligence*, UK Defence Ministry, available at: https://twitter.com/.

^{47. &}quot;Update on Ukraine, September 5, 2024", Intelligence update, *Defence intelligence*, UK Defence Ministry, available at: https://x.com/.

as those of them who were demobilized as a result of wounds and other health reasons. Since neither Russian nor international sources have made this data available, our only option is to use statistics from the Second World War, the Russian wars in Afghanistan and Chechnya, and the American wars in Korea and Vietnam. Available data from official Russian sources and academic studies⁴⁸ indicate that:

- The ratio of KIA and WIA (those delivered to hospitals) was between 2.5 and 3.5 (so for one soldier dead, an average of three were injured).⁴⁹
- The mortality rate of WIA hospitalized was between 3-4% and 7% (USSR in Second World War).
- The percentage of WIA returned from hospitals to combat units was between 75 and 80%.
- The number of ill men moved to hospitals was 2.0–2.5 times greater than the number of WIA (with the exception of the Soviet war in Afghanistan, where this ratio was 8 to 1, due to the poor sanitary conditions in the country and the poor medical-hygienic culture of the Soviet army).
- The mortality rate of ill men hospitalized was about 1–2%.
- The percentage of ill men returned from hospitals to combat units was about 80%.

We may reasonably estimate, based on the extreme values of these ratios, that the overall irreversible losses (thus, KIA plus WIA who died in hospital plus those who were demobilized for any reason) of the Russian army in Ukraine could be roughly 2.2–3.5 times more than the number of KIA. This gives us some framework for evaluating Russian irreversible losses: by mid-2024, the number in this category of losses ("irreversible loss") could be between 330,000 and 525,000 soldiers and officers.

By streamlining the calculations, using the mean values of the aforementioned ratios, we can approximate the total irreversible casualties of Russian forces in Ukraine by mid-summer 2024 to be around 460,000 men.⁵⁰

^{48.} G. Krivošeev, colonel-general (editor), Rossiâ i SSSR v vojnah XX veka: Poteri vooružennyh sil. Statističeskoe issledovanie [Russia and the USSR in the Wars of the 20th century: Losses of the Armed Forces. Statistical Study], Moscow: Olma-press, 2001, available at: http://lib.ru/. E. Gumanenko and I. Samohina, Voenno-polevaâ hirurgiâ lokal'nyh vojn i vooružennyh konfliktov [Military-Field Surgery in Local Wars and Armed Conflicts"], Moscow.GEOTAR-Media, 2011, pp. 40-44, available at: https://books.google.fr/.

^{49.} In the USSR and Russia, the category of "wounded", similar to the Anglo-American "wounded in action", included injured in battle, delivered to medical institutions and registered there as alive. Those who died from wounds during transportation to medical facilities and so on are classified as "killed in battle".

^{50.} The irreversible losses are calculated here on the basis that the total losses (KIA plus WIA) are known and on the assumption that (a) the KIA to WIA ratio is 1:3; (b) the deaths from injuries in

Table 1: Russian irreversible losses, 2022–2024

	KIA plus WIA	Irreversible losses	Average irreversible losses per month
March–December	110,000	90,000	9,000
2022			
2023	250,000	203,000	17,000
January-July 2024	210,000	170,000	24,000

The size of Russian military personnel and the issue of a new mobilization

Evaluating the overall size of Russian military personnel and analyzing key trends of its development is possible by using the data on Russian irreversible losses, contractor recruitment, and the drafting of 150,000 conscripts in the spring of 2024.⁵¹ Additionally, we can analyze noteworthy statistics provided by the International Institute for Strategic Studies (IISS), which show that the number of ground-combat force personnel decreased by roughly 10% in 2023 after increasing by more than 1.7 times the previous year due to "partial mobilization".

Table 2: Russian Armed Forces personnel

(Thousand, by branch, January 1, 2021–January 1, 2024)

	2021	2022	2023	2024
Army (Ground	280	280	550/100	500/100
force)/conscripts				
Navy/Naval infantry	150/35	150/35?	145/30	140/25
Air force	165	165	165	165
Airborne	45	45	40	35
Strategic rocket force	50	50	50	50
Other*	210	210	210	210
Total ground-combat force	360	360	620	560
Total active personnel	900	900	1,160	1,100
Total authorized personnel	1,013	1,013	1,150	1,320

 Railway troops, military science and education, central command, special operation force, maintenance and support

Sources: International Institute for Strategic Studies (IISS). Military Balance, 2021; 2022; 2023; 2024

hospitals account for 3.5% of the WIA; (c) the proportion of those demobilized by injury is 22.5% of the total number of WIA; (d) the percentage for death by disease is 1.5% of ill soldiers in hospitals; (e) the number of sick soldiers hospitalized is 2.25 times greater than that of the WIA; and (f) the share of the ill soldiers demobilized is 20%. The losses data are taken from the monthly information of the British Defence Ministry.

^{51. &}quot;Ukaz Prezidenta Rossijskoj Federacii ot 31.03.2024 g. № 222" [Decree of the President of the Russian Federation on 31.03.2024], *Kremlin.Ru*, March 31, 2024, available at: www.kremlin.ru/.

If the IISS's conclusion on the decline in ground combat force strength in 2023 is accurate, it means that the average monthly flow of contractors to these forces was several thousand less than the average monthly irreversible losses. If over half of the contracts were renewals and/or signed by men who had been conscripted or mobilized, this could be the case. If not very likely, all of this is thinkable, especially because some of the people enlisted in the army by Putin's partial mobilization decree in 2022 were demobilized owing to age, in addition to the permanent losses already noted. Nevertheless, with the available information it is not possible to estimate the likelihood of such events.

It is, however, possible to conclude that, if the level of average monthly irreversible losses for the first seven months of 2024 does not change, which is likely, then by the end of that year these losses will reach 285,000–290,000 people. And, since the monthly number of signed contracts, as already noted, is 31,000–32,000, then, depending on which portion of these contracts are signed by newcomers to military service and how many contracts are renewed or signed by conscripts, the number of ground combat troops may remain at the level of late 2023, increase by a few tens of thousands, or even slightly decrease.

To what extent is the conflict in Ukraine consuming Russian ground combat forces? The response to this question will determine the response to another, even more important one: Is Russia able to deploy forces into the north-western areas of the country while waging the war in Ukraine? Although it is impossible to verify the accuracy of its information, Ukrainian intelligence claims that, as of the start of 2024, there were 462,000 Russian soldiers and officers in occupied Ukrainian land. ⁵² Another 50,000, approximately, were deployed in the three Russian border regions – Bryansk, Kursk, and Belgorod oblasts – as personnel of the Group of Force "Sever", established in April 2024. ⁵³ In the summer of 2024, according to Ukrainian intelligence, the total number of Russian force personnel in Ukraine and border regions increased to 550,000, ⁵⁴ including the troops in "Sever", which number increased by 20,000. ⁵⁵

The 550,000 troops fighting in Ukraine and Russian border regions include 15,000 men in the Russian "first-line reserves", or those who can be sent into combat immediately. In addition, in late August 2024, around

^{52.} A. Kušpit, "V ISW rasskazali, skol'ko sejčas okkupantov voûet v Ukraine" [ISW Told how Many Occupants are Currently Fighting in Ukraine], 24 TV, May 4, 2024, available at: https://24tv.ua/.

^{53.} D. Kvasnevskaâ, "U vraga poâvilas' sobstvennaâ gruppirovka vojsk 'Sever': kakie oblasti ona ohvatyvaet" [The Enemy has Its Own Group of Force "Sever": What Areas it Covers], *24.TV*, April 21, 2024, available at: https://24tv.ua/.

^{54.} A. Džeripa, "Džerelo v GUR: Rosiâni zoseredili v Ukraïni ta na kordoni 550 000 zagarbnikiv" (ukr.) [Source in GUR: Russians Concentrated 550,000 Invaders in Ukraine and on the Border], *Liga.Net*, June 5, 2024, available at: https://news.liga.net/.

^{55.} K. Mashovetz, coordinator of the Information Resistance Group, Ukraine, Telegram channel "Zvizdec Mangustu", August 7, 2024, available at: https://t.me/.

35,000 men were still in formation in reserves.⁵⁶ It is also known that, to stop the Ukrainian incursion into the Kursk region, Moscow was forced to withdraw over 30,000 troops from the front lines, mainly in the Zaporozhskaya oblast,⁵⁷ indicating thus a lack of prepared strategic reserves. If these reserve estimates are correct, the total number of Russian ground combat troops could reach 600,000, with over 90% of them engaged in combat in three Russian border regions and Ukraine; if not, the number of personnel in these Russian services would be a few ten thousand lower.

This allows for a fundamental conclusion to be drawn: without a new wave of mass mobilization, Moscow is not able to wage the war in Ukraine and, at the same time, deploy a significant number of troops in the north-western zone. Theoretically, the new mobilization could succeed in the sense that Russian authorities could call and send to military training facilities a few hundred thousand people. Indeed, during the first wave of mobilization in the final three months of 2022, the Russian military machinery managed to recruit some 300,000 people into the army, in addition to the 120,000 drafted due to the usual autumn conscription in 2022.⁵⁸ Despite the disorderly and chaotic mobilization process, the Russian authorities have demonstrated their ability to enlist in the military 140–150,000 people per month in an emergency.

The expediency of the new wave of partial mobilization in Russia has been a major theme of debate in the nation's elite circles, at least since the end of 2023. According to unverifiable though ostensibly trustworthy intelligence, the military command, above all the head of the General Staff, insists that, without mobilization of some 300,000 people, it will be hard, if ever possible, to defeat the enemy in Ukraine and subsequently provide men for new units that are planned to be formed.⁵⁹ This is opposed by the political wing of the top Russian bureaucracy, which is concerned about a potential negative reaction from the population. Putin himself hopes that the war can be waged without declaring mobilization but by staffing the army with contractors.⁶⁰ To do this, Russian authorities (mainly regional) continually raise the various bonuses that contract soldiers get when they

^{56.} K. Mashovetz, coordinator of the Information Resistance Group, Ukraine, Telegram channel "Zvizdec Mangustu", August 25, 2024, available at: https://t.me/.

^{57.} Telegram-channel "VDV za Čestnost' i Spravedlivost", August 25, 2024, available at: https://t.me/. 58. "Minoborony zaveršilo osennij prizyv. Prizvano bol'še, čem god nazad" [The Ministry of Defense has Completed the Autumn Draft. More People Called Up than a Year Ago], *Fontanka.Ru*, December 29, 2023, available at: www.fontanka.ru/.

^{59.} O. Gerasimenko and I. Žadaev, "Ne hvataet 300 tysâč ryl'. Srazu posle vyborov vlasti mogut gotovit' mobilizaciû" [300,000 "Suckers" are Missing. Immediately after the Elections, the Authorities may Prepare for Mobilization], *Vërstka*, March 22, 2024, available at: https://verstka.media/.

^{60. &}quot;Gerasimov sdelal zaâvlenie o novoj mobilizacii i skazal, kogda sročnikov uberut iz prigraničnyh s Ukrainoj regionov" [Gerasimov Makes Statement about a New Mobilization and Says when Conscripts will be Removed from Border Regions with Ukraine], Telegram-channel Kremvevskaya tabakerka, August 12, 2024, available at: https://t.me/.

sign a contract. These bonuses, when paired with the first-year military pay in certain Russian areas, come to over five million rubles (about \$50,000), which is an impressive amount for the Russian provinces. Another widely used method to replenish the Russian army's numbers without resorting to "partial mobilization" of the Russian populace is the mobilization of Central Asian migrants who have obtained Russian citizenship. However, the main arguments against a new wave of mobilization stem from concerns about how it will be possible to turn a few hundred thousand mobilized people from the disorderly masses into competent fighters and create new combatcapable units out of them, given the shortage of officers, sergeants, and weaponry.

However, the possibility of a fresh round of "partial mobilization" is starting to materialize. Putin issued an order in September 2024 increasing the size of the Russian Armed Forces to 1.5 million personnel, or roughly by 180,000, by December 1, 2024. 62 Since the actual number of Russian military at the beginning of 2024 was approximately 1.1 million, and since it is doubtful that this figure had expanded much by September of this year, it is essential to draft between 350,000 and 400,000 people into the army in order to comply with the Russian president's directive. This cannot be accomplished without a fresh round of mobilization.

^{61.} For example, the average annual salary in the Pskov region in 2024 is expected to be around 600,000 rubles, which is eight times less than the expected income of a contract soldier. See: "Srednââ zarplata v Pskovskoj oblasti v 2024 godu ot Rosstata" [Average Salary in the Pskov Region in 2024 According to Rosstat], GOGOV, September 3, 2024, available at: https://gogov.ru/.

^{62. &}quot;Executive Order Establishing Authorized Strength of Russia's Armed Forces", *Kremlin.ru*, September 16, 2024, available at: http://en.kremlin.ru/.

Quality of the Russian manpower

Any assessment of the fighting capacity of the Russian Armed Forces should include, among others, provisions of troops with weapons, competence of the command staff, sufficiency of personnel combat training, and the manpower's morale and discipline.

The deficit of command cadres

The deficit of command cadres, particularly in those troops actively engaged in combat, makes a new round of mass mobilization largely pointless and also contributes to the qualitative degradation of the Russian Armed Forces. The Russian web resource Mediazona, which maintains in collaboration with the BBC a named list of Russian servicemen killed in Ukraine, 63 estimated in August 2024 that, between February 24, 2022 and July 31, 2024, there had been at least 61,831 military deaths, including 3,815 officer deaths.⁶⁴ In other words, the share of officers in the total number of KIA is about 6%, which is slightly less than the proportion of officers in the personnel of Russian motor-rifle and tank brigades. 65 The Mediazona and BBC are certain that their figures correspond to approximately half of the total number of Russian troops killed in Ukraine, which appears to be a fairly reliable estimate roughly coinciding with the estimate of the British Ministry of Defence. As for the commanding cadres, this indicates that over 7,500 Russian officers have been killed during the conflict in Ukraine.

If we calculate the irreversible losses of Russian officers using the method outlined earlier, one may roughly assess that, in two and a half years, the Russian Armed Forces lost up to 20,000–22,000 (or about 8,500 a year) officers who were killed in action, died in hospital because of wounds and illness, or were demobilized due to health and other reasons. The majority were in ranks from lieutenant to major, and about two thirds

^{63.} This information was gathered from open sources, including photo and video materials from cemeteries and funerals, advertisements in the media and social media about the death of relatives, and so forth.

^{64. &}quot;Russian Losses in the War with Ukraine", Mediazona, available at: https://en.zona.media/.

^{65.} Since 2008, the Russian fully manned Motor Rifle Brigade has had a total of 327 officers, 1,005 sergeants, and 3,061 privates; the Tank Brigade has had 248 officers, 730 sergeants, and 1,928 privates. See: "Štaty brigad novogo oblika.OMsBr" [The Staffing of the New-Look Brigades. SMrBr (Separate Motor Rifle Brigade)], available at: https://mehanik27.livejournal.com/, "Štat tankovoj brigady" [Tank Brigade Staff], available at: https://ilya-kramnik.livejournal.com/.

of them served in the troops engaged in combat operations, above all in motor-rifle and tank regiments and brigades, in the Airborne, in the Naval infantry, and in the Special Forces.⁶⁶

The main source of new officer cadres to make up their losses are Russian military colleges and academies. In Russia, there are 35 of these kinds of schools; their graduates most often join the army at the rank of lieutenant, where they are assigned to the lowest officer positions. Between 14,000 and 15,000 cadets are enrolled in these schools each year;⁶⁷ as a result, every year the same number (or slightly fewer) are put into the army as young officers who have just been awarded their first officer rank. Since only nine out of the 35 military schools train officers for motor rifle, tank, artillery, and airborne forces - the main combatants in the conflict in Ukraine – it is reasonable to assume that the 5,000–6,000 graduates from these schools, or approximately one-third of the total number of graduates from military education facilities, are sent to ground-combat troops fighting in Ukraine. This means that officers graduating from military schools cannot fully compensate for the irreversible losses of command staff. Moreover, most of them are young officers, aged 22 to 24, who have never held a commanding position or had military service practice. For them to become a full-fledged company deputy commander or platoon commander, they must serve for at least many months, if not a full year.

Therefore, during a conflict, the Russian army suffers a shortage of about 2,000–2,500 officers annually in the ground-combat troops. This shortfall is made up for by recruiting reserve officers, most of whom are recent or longer-term graduates of civilian universities where military education is often a fiction, and by designating sergeants who have proven themselves capable during combat as commanders of companies and platoons. Such a practice could compensate for the decline in the number of officers, yet the quality of the commanding cadres is deteriorating. Recent graduates of military schools have definite knowledge of military affairs, but do not have command skills; officers recruited from the reserve usually have neither; and hastily commissioned sergeants have combat experience but lack the knowledge needed to become full-fledged commanders.

The lack of an experienced officer's corps weakens Russia's ability to fight in Ukraine and decreases the likelihood and scope of future rounds of mobilization that would resupply the fatigued soldiers and create new units. This cannot be accomplished without a sufficient number of newly recruited officers constituting at least 10% of the overall numerical strength of the

^{66. &}quot;Russian losses in the war with Ukraine", op.cit.

^{67. &}quot;Šojgu rasskazal o priemnoj kampanii v voennye vuzy" [Shoigu Speaks about the Admissions Campaign in Military Universities], *RIA Novosti*, July 31, 2023, available at: https://ria.ru/.

^{68. &}quot;Počemu nekomplekt mladših oficerov v armii Rossii?" [Why is there a Shortage of Junior Officers in the Russian Army?], July 5, 2023, available at: https://dzen.ru/.

divisions, brigades, headquarters, and other military command and maintenance institutions that are planned to be established.

Poor troop training

The Russian army's irreversible losses in Ukraine by the middle of 2024 significantly surpassed the number of soldiers in Russia's ground-combat forces at the start of the conflict. Put another way, a substantial portion of the troops and officers trained in accordance with the standards recognized in Russia before the war have either passed away or left the army for other reasons. They have been replaced by contract soldiers and people mobilized under the "partial mobilization" edict. In addition, the Russian command has been able to raise the ground-combat force size by about 1.7 times from the starting point of the conflict, largely by enlisting contract soldiers.

Official Russian sources state that, depending on the weaponry the soldiers will employ in combat, the length of training for contractors and mobilized forces ranges from two weeks to three months.⁶⁹ Putin himself has confirmed this; in early December 2022 he said that half of the servicemen who had been mobilized in the last quarter of 2022 had immediately, meaning without any training, been sent to the area of armed fighting in Ukraine.⁷⁰ The other half of the mobilized people were dispatched to the front lines of the war in Ukraine following a few months of military training.

The maximum three-month period for training runs has little in common with the Russian army's training standards, which were derived from the Soviet Union's approach to training soldiers. These standards assume that it takes a soldier around a year to acquire the knowledge and skills required to perform to the fullest extent possible in the army, including in a combat zone. After a year in the army, a soldier is expected to either stay on as a contractor or be demobilized, but at any moment can be called up for military service and sent into battle without the need for any training.

There's a reason behind that. "If there are approximately 100,000 people serving in these positions (privates and junior commanders), in a year they will acquire military occupational specialties and will be demobilized from the ranks," stated General Kartapolov, chairman of the Parliamentary Committee on Armed Forces in December 2023. The same specialties would be acquired by an additional 100,000 people in the next year. Thus "we will have twice as much military mobilization resources" as would be the case, for instance, with a two-

^{69. &}quot;Skol'ko dlitsâ podgotovka v učebnoj časti?" [How Long is the Training in the Training Unit?], Obyasnyaem.Rf [Explaining.RF], April 14, 2023, available at: https://объясняем.pd/.

^{70. &}quot;Council for Civil Society and Human Rights meeting", Kremlin, December 7, 2022. http://en.kremlin.ru/.

year term of soldier's service. Kartapolov further noted that military personnel "in any case undergo this training for at least six months and after that acquire a military occupational specialty". Thereafter, "they spend six months mastering this specialization" during the combat coordination and unit integration process.⁷¹

In theory, this looks like a reasonable arrangement, but the reality of the current war is completely different. For instance, before being transferred to the front, a volunteer gave this account of his training: "They [instructors] spent about three or four days with you. They impart knowledge one-on-one, going over weapon usage and theory. They take you to the gun range and let you practice shooting a little... The teachers are excellent." Then he found himself in a combat unit. "After few days of adapting to the unit, I began performing combat duties. I had already gone for a combat mission on the ninth day." In the training center in Tatarstan before being sent to the war zone, future contractors must complete fire, tactical, and special training, as well as medical preparation, within five days. The second special training as well as medical preparation, within five days.

It seems thus that combat training for contract soldiers and mobilized personnel lasting 4–5 days is far from a rare occurrence in the Russian army. Given that 20,000–30,000 soldiers are lost every month, the Russian military is unable to provide long-term training to contractors, mobilized soldiers, and draftees. More broadly, this indicates that Russian generals are more concerned with the quantity of soldiers on the field than with their combat prowess. After receiving only rudimentary training that lasts just a few weeks and teaches soldiers only how to use small weaponry and perhaps simple arms like mortars, soldiers go to the front knowing virtually nothing about how to conduct themselves in combat. This increases casualties and lowers fighting capability.

Military morale in the Russian army

Combat power is contingent on the morale of troops, mainly their motivation, obedience or disobedience to commands, preparedness to fight in difficult and hazardous environments, and propensity to desert. Official data indicate that the Russian military command can keep troops disciplined to a high enough standard and prevent them from disobeying

^{71. &}quot;V Gosdume zaâvili ob otsutstvii neobhodimosti v dvuhletnej sročnoj službe" [State Duma States there is No Need for a Two-Year Term of Service], TASS, December 4, 2023, available at: https://tass.ru/.

^{72. &}quot;Kak vyžit' na pole boâ. Rossijskij dobrovolec—o realiâh voennyh dejstvij na Ukraine" [How to Survive on the Battlefield. A Russian Volunteer on the Realities of Military Action in Ukraine], *RTVI*, January 25, 2023, available at: https://rtvi.com/.

^{73. &}quot;V Tatarstane prohodât kursy boevoj podgotovki dlâ kontraktnikov" [In Tatarstan, Combat Training Courses are Being Held for Contract Soldiers], *Realnoe vremya*, August 18, 2024, available at: https://realnoevremya.ru/.

orders. In 2023, Russian courts rendered decisions in almost 420 cases involving allegations of "failure to comply with an order".⁷⁴ In the same year of 2023, 5,000 cases were sent to the courts on charges of desertion,⁷⁵ averaging just over 400 cases per month. Gradually, the level of desertion is increasing; in March 2024, around 650 such cases were reviewed in the courts.⁷⁶

The tiny number of cases of disobedience that the courts consider could serve as proof of an excellent state of military discipline, and the officially fixed level of desertion, which is an important quantitative indicator for assessing the morale of the troops, should not cause particular concern in the Kremlin. If this trend continues until the end of 2024, the total number of deserters brought to trial will amount to just under 8,000, or about 1.5% of the acting army, which seems a rather insignificant figure.

In reality, however, the situation looks far from as favorable as suggested by the official statistics since the common practice in the Russian army is that commanders try not to report undesirable information to higher command. There is information that, in many cases, the military command and police manage to apprehend 20–25% of all deserters.⁷⁷ In other words, the actual number of deserters this year may range from 30,000 to 40,000 people, which should already be taken into account when calculating irretrievable losses.

Moreover, the commanders on the battlefield prefer to severely punish the violators themselves within the unit. Those caught attempting to escape from the army, as well as those who disobey orders, face, for example, the so-called "zindans", which are pits dug into the ground and covered with metal grates, have become widely used for placing those who violate discipline.⁷⁸ "The most common measure is to put them in a large pit under the open sky, where they are sent for various 'offenses': drinking alcohol, conflicts with superiors, leaving their post without permission. There are times when a person is thrown into a basement, usually in abandoned buildings, like a school or a hospital, for refusing to fight. They are being tortured there. One month in such a 'cell' under inhumane conditions, a person will go anywhere," testifies a witness who managed to leave the

^{74.} P. Kuznecov, "Byvaet, čtoby bežat', pritvorâûtsâ 'dvuhsotymi' ili 'trehsotymi'" [Sometimes, to Run Away, they Pretend to be "Two Hundred" or "Three Hundred" {Russian Army Language Meaning Killed or Wounded, Respectively}], *Novaya Gazeta Evropa*, February 28, 2024, available at: https://novayagazeta.eu/.

^{75.} Ibid.

^{76. &}quot;Update on Ukraine, April 24, 2024", Intelligence update, *Defence intelligence*, UK Defence Ministry, available at: https://x.com/.

^{77.} A. Finiarel', "Pamâtnik dezertiru: čto izvestno o dezertirstve v rossijskoj armii i stanet li otkaznikov bol'še" [Monument to the Deserter: What is Known about Desertion in the Russian Army and will there be more Refuseniks], *Re:Russia*, September 22, 2023, available at: https://re-russia.net/.

^{78. &}quot;Update on Ukraine, April 30, 2023", Intelligence update, *Defence intelligence*, UK Defence Ministry, available at: https://x.com/.

ranks of the Russian army.⁷⁹ There are also public beatings and even rapes.⁸⁰

In other words, the relatively high level of discipline in the Russian army is maintained by the fear of harsh punishment that does not conform to any legal norms or rules. This gives reason to suggest that, in terms of military morale and methods of maintaining military discipline, the Russian army is comparable to the European mercenary armies of the 17th and 18th centuries. This is a manifestation of its profound transformation from a relatively modern semi-professional army, which it was before the war began, into a mercenary army. Its main combat-ready core is formed from contract soldiers, whose compensation is a few times higher than the average salary in the country, especially in depressed regions, from which the majority of contract soldiers come. High incomes, compared to the average, are the sole or primary motivation that attracts people to the Russian Armed Forces and encourages them to risk their lives on the battlefield. Historical experience shows that such armies are a quite effective means of waging wars when the situation is favorable for them; however, they tend to become disobedient and disband if the level of losses exceeds a certain critical threshold, which is significantly lower than in the case of conscript or volunteer armies motivated by patriotic feeling. Additional features of the Russian army are related to the mass recruitment of criminal elements into its ranks. As a result, Russian military units are gradually acquiring the characteristics typical of prisons and other places of detention.

The harsh treatment of soldiers is complemented by the frequent incompetence of the command staff, the commanders' desire to carry out orders without regard for casualties, and full-scale window-dressing. Anastasia Kashevarova, a Russian, independent but ultra-militarist blogger, wrote that top military commanders had "initially miscalculated, the junior and mid-level command staff perished," "sycophants and butchers" had been given command, "and the people going to the front died under their leadership. There is no responsibility. Losses are concealed. Mobilization is suspended, internal social problems remain unresolved, there is an outflow of volunteers, and those who do come are a sight that brings tears to the eyes. And there are unreliable reports about the capturing of a certain settlement... while in reality it is not captured yet, and the guys were simply driven at any cost to seize that damn village to match the false report."81 Because of this, the gap between the command staff and the rank-and-file

^{79.} A. Strel'nikov, "Pytki i âmy: kak dezertirov iz armii RF vozvraŝaût na front" [Torture and Holes in the Ground: how Deserters from the Russian Army are Returned to the Front Lines], *DW*, July 24, 2024, available at: www.dw.com/.

^{80. &}quot;Zastavlâli sovokuplât'sâ i spravlâli na nih maluû nuždu" [They Forced them to Copulate and Pissed on Them], *Nasha niva*, February 2, 2024, available at: https://nashaniva.com/ru/.

^{81.} A. Kaševarova, Telegram channel "Anastasiâ Kaševarova", September 14, 2024, available at: https://t.me/.

soldiers is widening, and the latter's discontent is growing; this could turn into hatred toward the officer corps and, in the event of a political crisis, loss of control by the military command.

Prospects of arms supply

By the end of August 2024, the Russian army had lost almost all tanks it had at the outset of the war; approximately 70% of infantry fighting vehicles, 20% of artillery pieces, and more than 35% of MLRS (multiple launch rocket systems). The inability of the military industry to provide troops with enough armaments to compensate for these weapon losses and to equip the newly formed brigades and divisions also imposes restrictions on the quantitative and qualitative growth of the Russian Armed Forces.

Table 3: Russian ground-combat troops' armament losses, February 24, 2022—August 25, 2024

	As on February 2022	Lost
Tanks	3,400	3,336
Infantry fighting vehicles	6,570	4,500
Artillery pieces	5,900	1,220
MLRS	1,115	410

Sources: Military Balance, 2022. IISS, London. 2022. pp. 193-194; Attack on Europe: Documenting Russian equipment losses during the Russian invasion of Ukraine. ORYX.

Given the almost complete lack of reliable official information on the functioning of the Russian military industry, the evaluation of its production capacity is extremely difficult. It is only known that military enterprises have switched to three-shift work, that the budgetary funding of arms production has increased several times, and that, shortly before the invasion of Ukraine, Russia purchased a considerable amount of modern equipment abroad, including high-precision machine tools, which Russian industry is unable to produce on its own. Nonetheless, it is possible to evaluate the manufacturing capacities of the Russian military-industrial complex thanks to statistics provided by IISS regarding the quantity of weapons held by Russian regular troops.

Table 4: Russian ground-combat troops' armaments, 2022—2024

	2022	2023	2024
Tanks	3,400	2,070	2,000
Infantry fighting vehicles	6,570	5,370	5,180
Artillery pieces	5,859	5,400	5,360
MLRS	1,115	945	1,020

Sources: Military Balance, 2022; 2023; 2024

During the first 10 months of the war, by January 1, 2023, the number of armors in the ground-combat troops decreased significantly, indicating that Russian industry was unable to compensate for their losses on the battlefield, and a noticeable gap between losses and the ability to replenish them has emerged-especially obvious in the case of armors, tanks and IFV. In 2023, the production of armor and artillery increased, and it seems that industry was able to produce armaments in quantities enough to make up for the losses. At the same time, the ratio of heavy weaponry to personnel declined. In 2022, for instance, there were 3,400 tanks 360,000 soldiers and officers in the ground-combat troops; two years later, these numbers changed to 2,000 and 560,000. Because of this, there is a greater usage of infantry unsupported by armor in battles than there was in the first year of the war, which results in a rise in manpower losses.

It can also be assumed that, in 2024, the growth in military production, if it grows at all, will not be significant. The transition to threeshift operation of military-industrial enterprises in 2023 most likely means that their existing equipment is fully used, and therefore the growth of production requires additional machinery (including imported), the attraction of new contingents of labor, the construction of new production facilities and so on. All this looks questionable. British experts from the RUSI concluded: 82 "Russia faces significant limitations in the longevity and reliability of its industrial output. Of the tanks and other armored fighting vehicles, for example, approximately 80% are not new production but are instead refurbished and modernized from Russian war stocks. The number of systems held in storage means that while Russia can maintain a consistent output through 2024, it will begin to find that vehicles require deeper refurbishment through 2025, and by 2026 it will have exhausted most of the available stocks. As the number of refurbished vehicles goes down, industrial capacity can go into making new platforms, but this will necessarily mean a significant decrease in vehicles delivered to the military."

In fact, most of the weapons and military hardware intended for the ground-combat troops' supply are not brand-new items but have been taken out of storage in the country's east, where they had been kept since 1990–1991 and sent to factories for repair and modernization. During the course of the two-year conflict, their stocks were drastically depleted and most probably might last no longer than a year and a half of hostilities at the current rate of depletion.

Table 5: Stocks of ground-combat troops' armaments in storage facilities in eastern Russia, 2022–2024

	2022	2024		
Tanks	10,200	4,000		
IFV	8,500 2,800			
Artillery	4,200 self-propelled + 12,415	3,600 self-propelled + 6,800		
pieces	towed	towed		

Sources: Military Balance, 2022; 2024.

Conclusion

After two and a half years of battle in Ukrainian territories and a few months in Russian territory (Kursk oblast), Russia finds itself in a challenging, stalemate position. The great bulk of Russian ground-combat power is stationed in Ukraine, where there is still no indication that the conflict will finish soon or that Russia will be able to win the war quickly and decisively. Russia has the manpower reserve to build up to and maintain the planned 1.5 million-man level of its Armed Forces, but only with a new wave of mobilization; the current level of recruiting new contract soldiers and volunteers is approximately equal to irreversible losses plus, perhaps, an important number of deserters. And only in the case of a new wave of mass mobilization will Russia be able to fight in Ukraine at the same time as deploying a combat-capable force, say 200,000 or so men in uniform, in the northwestern regions for confrontation with NATO.

However, the prospects of carrying out a new wave of mobilization in Russia and for protracted war in Ukraine are hampered by a lack of qualified military personnel, both soldiers and especially commanding cadres, diminishing reserves of ground-force armaments lying in storage in the country's east since 1990–1991, and the military industry's incapacity to manufacture new weapons in large enough quantities. It is quite probable that the current arsenals of armaments could sustain between one and a half years of warfare at the current level of combat intensity.

Given these conditions, Moscow is likely to seek a breakthrough in the war in Ukraine, believing it has "window of opportunity" of a year or so to impose on Ukraine and its allies Russia's demands for a political settlement of the conflict. The latter would include not only territorial concessions but, what is more important, the imposition of restrictions on the Ukrainian armed forces and the neutral status of the country. This would pose a serious threat to Europe, as it would allow Russia to concentrate the bulk of its armed forces on the western flank, primarily in the Baltic region, by securing its long border with Ukraine. On the other hand, the inclusion of Ukraine in one form or another in the European security system as a pro-Western and sufficiently powerful military force would become a significant factor in deterring Russia.

These circumstances, along with the fact that the longer the war in Ukraine lasts, the more the Russian military machine deteriorates, present the West with a challenging choice. By providing Ukraine with the financial and military assistance necessary to continue the war, the West, including European states, is weakening Russia's military potential and increasing the

time required for it to recover and qualitatively improve its armed forces after the war. At the same time, one cannot rule out the possibility that Ukrainian society and the government may not be able to withstand the pressure generated by the war, which could lead to a political crisis with unpredictable domestic and international consequences.

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