

Ukraine War: The Second Anniversary

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Abstract

The war in Ukraine is arriving on its second anniversary. After two years, the conflict is at an apparent stalemate, while further US aid is in limbo at Congress. What has been the course of the war up until this point? Why did Ukraine's counterattack fail? What are the prospects for the future? Will Ukraine collapse, or will it outlast the Russian invasion? How many main battle tanks does Russia have left? What is the situation with artillery ammunition? Questions for the upcoming months.

Introduction

The war in Ukraine is reaching its second anniversary. This paper intends to give an overview of these past two years, as well as of the prospects of the future outcome of the conflict. As we will see, the peculiarity of the war is that while on the one hand, as of February 2024, it is a stalemate, on the other hand, it is an unstable one. While there is a stalemate now, the action or the inaction of the US could tilt the balance either way. As Ukraine obviously has neither the demographic, the financial, or the industrial resources remotely near to what Russia has, a complete withdrawal of US support would most likely sooner or later end up in the complete collapse of Ukraine. On the other hand, the US supply of weaponry could still tilt the balance in Ukraine's favor as well.

The course of the war

When the Russian invasion began in February 2022, there was an episode during the first night of the invasion, which we could call phase zero- Russia's attempt to take the capital Kyiv without a regular siege, by a surprise special operation. The plan was to take Kyiv's Hostomel Airport with airborne troops, then land transport aircraft with special operations forces and their armored vehicles on board, then swiftly move them into the city before the Ukrainian forces could react, and topple the Ukrainian government, then wait for Russian regular units to arrive the next day. This plan failed as Ukrainian special forces engaged in heavy fighting with the Russian airborne troops, forcing the transport aircraft to turn back.

After this, the first phase of the regular war lasted from the start of the invasion on the 24th of February until early April 2022. This was the most dynamic phase of the war where Russian-controlled areas expanded dramatically, and Russia seemed to have a realistic chance to take or at least encircle Kyiv. The characteristic of this phase was highly mobile, maneuver warfare, with Russian thrusts entering Ukraine from three directions, from the north from Belarus, from the south from the Crimea, and from the east from Russia itself, attempting a blitzkrieg style takeover of the country. If this attack had been successful, it offered the possibility of dividing the country and encircling its capital Kyiv.

The aim of the war at this stage seems to have been to occupy all of Ukraine: First, phase zero aimed to topple the Ukrainian government. Second, the main thrust of the first phase also aimed to encircle Kyiv, apparently aiming at the Ukrainian government itself. Third, Putin's openly declared war objectives of "demilitarization and denazification" of the entire country would not have been feasible without toppling replacing the legitimate government with a Russian-satellite puppet government, and such a puppet government would not have been capable of exerting control over the entire country without assistance from Russian occupation troops, given the hostility of Western Ukraine to Russian influence. On 27th of February 2022, the government-owned Russian news site, RIA prematurely published an article celebrating the fall of Kyiv, which openly discussed that after the victory, the statehood of Ukraine would be reorganized, and Russia, Ukraine, and Belarus would form some kind of union, in an apparent resurrection of the USSR,¹ greatly changing the power balance in Europe. In this first phase of the war, Russia took 18,63% of Ukraine's territory in about a month.²

The second phase of the war lasted from early April to early September 2022. By late March, the Russian offensive stalled due to logistical problems, heavy losses of both manpower and equipment, especially heavy losses inflicted on its tanks by Ukraine's Javelin missiles, and concentrated Ukrainian operations targeting Russian supply lines. Russia withdrew its troops from northern Ukraine, and this move returned control over 5,54% of the country from Russian to Ukrainian hands.³ Russia subsequently shifted focus to the east and the south, suggesting a change in war objectives, from the takeover of the entire country to merely its southern and eastern regions. This period was marked by a slow and steady Russian advance. This advance was different from that of the first phase. Instead of mechanized thrusts, probably to reduce equipment losses, tactics turned into slow advance dominated by infantry, under the cover of a sustained heavy artillery fire. In this slow advance, Russia took an additional gain of a mere 0,2% of the country's territory.⁴

The third phase of the war from September to November 2022 was marked by massive Ukrainian counterattacks, taking back significant territory from Russian forces. The counterattacks took place in two areas: One in the northeast of the country, in the Kharkiv and Luhansk regions, Ukrainian forces managed to break through the overstretched Russian lines and take back large swaths of land before Russia managed to stabilize its positions again. In the south, Ukraine focused its attacks on the Kherson bridgehead, held by Russian forces on the western bank of the river Dnipro. As the bridgehead was supplied only by two bridges, Ukrainian forces focused on heavy artillery bombardment of these bridges, disturbing Russian supplies when the position of the bridgehead became unsustainable, forcing a Russian withdrawal in November. In these counterattacks, Ukraine retook 2,85% of the country's territory.⁵

The fourth phase of the war since November 2022 can be described as a stalemate. Despite a Russian offensive during the winter of 2022-2023, the Ukrainian counteroffensive during the summer of 2023, and the Russian offensive again since the fall of 2023, changes on the frontline have been minimal. There was no month, in which the net change of control would have been more, than 0,05% of the country's territory.⁶

Lack of a coherent US strategy and possible consequences

An evident characteristic of the war is the lack of a coherent US strategy towards Ukraine. Unwilling to either provide the necessary equipment for Ukraine for a major successful counteroffensive or to negotiate an armistice along the actual line of control, evidences a complete absence of US, and NATO's strategic thinking. In January 2023 for instance, the Ukrainians concluded that they needed 300 top-tier Western tanks for a successful counteroffensive.⁷ In the end, however, Ukraine received only 130 Leopard 2, Challenger, and Abrams tanks,⁸ out of which the 31 Abrams tanks from the US hadn't even arrived before the end of the counteroffensive in the fall of 2023.⁹ Thus, Ukraine had to conduct its counteroffensive with a mere 99 top-tier Western tanks, less than one-third the required amount. In the light of this fact, it is no wonder that the Ukrainian counteroffensive failed. However, the fact that it failed after having been conducted with one-third of the equipment that was seen as necessary for success when planning the offensive, doesn't mean it would have failed had it received the necessary hardware, or that a future counteroffensive would fail if it has the required equipment. The Western allies having encouraged Ukraine to launch a counteroffensive, but having failed to provide the necessary equipment is especially incoherent in light of the fact that the United States has 3700 inactive Abrams tanks in storage. Instead of the 31 tanks they sent, they could have easily sent ten times as many, and could have done so by the start of the counteroffensive. Therefore, the United States not only encouraged Ukraine to counterattack without providing the necessary equipment, it did so while having the capacity to provide the necessary equipment if it wanted to. This is not to mention the fact that the US could also have provided additional weaponry, such as large numbers of F-16 aircraft and ATACMS missiles but did not.

The reasons for the United States' conduct are opaque. But a major reason for having acted so incoherently may have been the fear of nuclear escalation. However if the United States fears nuclear escalation so much, that it was afraid to provide Ukraine with the equipment necessary for a successful counteroffensive, then the more rational choice would have been not to encourage Ukraine's a counteroffensive at all, but to broker a Korea-style armistice along the actual line of control during the winter of 2022-2023, immediately after the successful Ukrainian counterattacks during the fall of 2022. As the war has been a stalemate ever since then, until the recent ominous Ukrainian retreat from Avdiivka. As of early February 2024, the line of control is by and large identical to what it was during the winter of 2022-2023. It would have been better from a strategic perspective, to broker an armistice in early 2023, than it would be now, and it would have also saved thousands of Ukrainian lives. Moreover, had such an armistice been brokered, right after the successful Ukrainian counteroffensive of the fall of 2022, it would have been difficult to deny it having been a partial Ukrainian victory. If such an agreement is brokered sometime in 2024 or later, while it may result in an identical line of control, it would have the appearance of a partial Russian victory after the hype surrounding the 2023 Ukrainian counterattack raised delude expectations.

If the United States intended Ukraine to be successful in its counteroffensive, then it should have provided Ukraine the equipment the latter required. It arguably still do so in the future, as the failure of the counteroffensive doesn't mean that a future counterattack with all the necessary equipment would do so as well. Regarding prospects of a successful Ukrainian counteroffensive, in our earlier analysis, we came to the conclusion that the most realistic hopes for it could be cutting off the land bridge between Russia and Crimea, isolating Crimea, and using it as a bargaining chip for a peace agreement with Russia, where formally ceding Crimea to Russia, Ukraine in exchange could negotiate

to restore its sovereignty over the rest of its territory, and receiving NATO membership as well.¹⁰ As of February 2024 however, there doesn't seem to be any political will in the US to provide more equipment for another Ukrainian counteroffensive, than it did for the 2023 one.

The United States however has not chosen any of these two rational options, either providing the sufficient equipment for a successful Ukrainian counteroffensive, or brokering a Korea-style armistice along the actual line of control, but chose continuing the war instead of an armistice, yet doing so without providing Ukraine sufficient equipment for a successful decisive counteroffensive.

Moreover, should US assistance to Ukraine stop, as seems likely in a polarised election year, it would most likely collapse before the end of 2024. As further aid is in limbo in the US Congress, this possibility cannot be ruled out, although the most recent bill on the issue has already passed the Senate with 22 out of the 49 Republican senators having voted for it as well, showing strong bipartisan support, the House of Representatives is likely to reject further aid. Regarding the prospects of a Russian victory, the Institute for the Study of War concluded that Russia taking over Ukraine as a satellite state would cost more to the US than aiding Ukraine. Ukraine as a Russian client state could boost both Russia's resources and geostrategic position, which would put NATO in a defensive position in Eastern Europe. This would require the US to significantly increase both military assistance to its Eastern European NATO allies, and even direct military presence in the region, to sustain the balance against Russia's enlarged empire. This, could exceed the costs of aiding Ukraine.¹¹ How realistic is such a scenario? Without US aid, Ukraine will collapse before the end of 2024. In such a scenario, Russia could take the whole country, including its extremely hostile western half of Ukraine. Not only did the RIA article uncover that Russia's original intent was to take over the entire country,¹² but a certain pattern of Russian tactics also suggests a high likelihood for such a move in case of a Ukrainian collapse, regardless of the prospective problems of controlling a hostile population. It is a pattern of Russian history, to push territorial expansion to a point, where overstretching eventually causes implosion of the empire. Soviet control was never popular in the Warsaw Pact countries, as we can see in the Hungarian Revolution of 1956, the Prague Spring of 1968, the Berlin Revolt of 1953, Ceausescu's Anti-Soviet turn after 1968, and last but not least, the repeated Polish revolts virtually throughout the entire Cold War era. All this, didn't prevent the Soviets from spending their resources on keeping the region under their control, mostly by direct military occupation, for more than four decades. Anti-Soviet guerilla activity prevailed in the Baltics and western Ukraine well into the 1950s, but this didn't prevent the Soviets from annexing these regions. Soviet rule wasn't too popular in Afghanistan either, and keeping the country under occupation cost a lot, but this didn't prevent the Soviets from doing so for a decade. Russian rule was resisted in Chechnya during the 1990s, and bringing it under government control wasn't cheap, but this doesn't prevent Russia doing what it does. In none of these cases, did the costs of the occupation matter, until it led to the implosion of the Soviet Union, between 1989-1991. Therefore, in case of a Ukrainian collapse, this pattern of Russian history would suggest a high likelihood for a scenario where Russia fulfills the plan uncovered in the RIA article, conquers the entire country, makes it a Russian satellite under a puppet government, and unites Russia, Ukraine, and Belarus under some kind of Union. Of course, guerilla resistance in Ukraine, especially in the western half of the country would be fierce, and the number of Javelin missiles that guerilla units would likely inherit from the Ukrainian military, and distribute among themselves, would make it the European version of the Soviet occupation of Afghanistan. The burdens of such a scenario, would most likely cause Russia to implode again within 10-20 years, but until that point, those decades would most likely be a rough ride for NATO, and especially for Eastern Europe. Anti-Soviet revolts in Warsaw Pact countries didn't prevent Russia from showing an aggressive stance and widespread covert subversive activity towards Western Europe at that time.¹³ In its December 2021 ultimatum, Russia also

demanding NATO withdraw its infrastructure from all its eastern member states that joined the alliance after 1997. Eastern Europe would most likely have to face immense Russian strategic pressure and likely subversive hybrid warfare as well, akin to Soviet cold war tactics.

Trends in equipment supply -artillery and tanks

A war is decided by facts on the ground. Regarding defensive capabilities, the greatest issue is that of supplies of artillery ammunition. If Ukraine doesn't receive enough weapons to launch a successful counteroffensive, then how it could hold out is to sustain such a ratio in artillery shelling, which in turn sustains a ratio in manpower losses, that is beyond the ratio by which Russia demographically outnumbers them. Should Ukraine be able to sustain such a position would mean Russia would run out of manpower faster than Ukraine, and therefore have to withdraw sooner or later.

At the start of the war, Russia fired an astonishing 60 000 rounds of artillery shells per day, as opposed to Ukraine's 6-7 thousand per day. In early 2023, Russia was still firing more than 20 thousand rounds per day. By fall 2023 this had dropped to 10 000 per day, and in this period, Ukraine reached close to parity in rounds fired per day, as the Ukrainian kept firing 6-7 thousand rounds per day. By early 2024 however, due to the halt in US aid, Ukraine's rate dropped to 2 thousand per day as opposed to Russia's 10 thousand. Regarding manpower casualties, Ukraine is believed to have temporarily reached a more than sustainable ratio of 8-10 Russian casualties to each Ukrainian one during the period when it managed to shell 6-7 thousand rounds per day at a time when Russia could already fire only 10 thousand. This ratio fell back to the unsustainable rate of an equal number of Ukrainian and Russian casualties as Ukraine's rate fell back to 2 thousand rounds per day as opposed to Russia's 10 thousand rounds. However these numbers suggest, that should US aid resume, and Ukraine's rate rise again to 6-7 thousand, Ukraine would again reach a casualty ratio where time would be on its side. Long-term prospects mainly depend on production. At the start of the war, Europe produced 230 000 artillery shells by year. In March 2023, the EU promised to deliver 1 million artillery shells to Ukraine in the next 12 months, however couldn't keep this promise, and ended up being able to deliver only half of that in the given period. At the end of January 2024, EU commissioner Thierry Breton announced that in 2024, the EU will be able to produce 1,4 million artillery shells, and in 2025, it will be able to produce 2 million. The United States have reached 28 thousand per month by October 2023, and if Congress approves the Ukraine aid, it plans to reach 60 000 shells per month sometime during the summer of 2024, and 100 000 per month by the end of 2025, which means it should be around 70-80 thousand per month by the end of 2024. Russia on the other hand, increased production from 400 000 shells per year at the start of the war, to 2,1 million shells per year as of early 2024, which is the equivalent of 6000 per day. Altogether, Ukraine has received about 2 million artillery shells from its Western allies since the start of the war, out of which 1 million came from South Korea, and Russia received also about 2 million from Iran and North Korea combined. Russia is also believed to have an additional 3 million Cold War era shells in its stockpile, but in a poor condition, making it highly doubtful how many of these is actually repairable, and how much time and effort their repair would take. For a victory, Russia would find it necessary to fire 15 thousand rounds per day, however the fact that it does not despite of having these additional 3 million old shells, suggests that it has problems making them usable.¹⁴¹⁵¹⁶¹⁷¹⁸¹⁹²⁰²¹

What we can conclude from all this, is that by the summer of 2024, NATO will likely produce enough shells to enable Ukraine to increase its artillery activity to 5000 shells per day as opposed to Russia's 10 000 per day, and that by the turn of 2024-2025, the manufacturing production of NATO will surpass

that of Russia at around 6000 shells per days. As Russia's own production covers only 6000 rounds per day, but it keeps firing 10 thousand per day, this means, the remaining 4000 per day, must be covered from the Iranian and North Korean stockpiles it received, which in turn means that these stockpiles will run out sometime in early 2025. This means that if US aid is resumed, Ukraine is likely to reach a demographically sustainable ratio of Russian resources relative to its own by the summer of 2024, from which point on, time will be working for Ukraine. Later on, with Western production gearing up, and Russia running out of Iranian and North Korean purchases, Ukraine will likely reach long-term artillery superiority sometime in the spring of 2025.

The situation is less clear regarding attack equipment, and main battle tanks, as losses are not exactly known. The think tank, IISS concluded that as of early 2024, Russia still had twice as many active main battle tanks as Ukraine as opposed to a 3:1 ratio favoring Russia at the start of the invasion. By contrast another think tank, the Kiel Institute conclude that Ukraine has already reached parity in active main battle tanks by the summer of 2023.²²²³

How can conclusions diverge to such a degree? The answer is that the exact losses are unknown. The site Oryx gathers documented equipment losses of both sides, and losses confirmed by photographic evidence.²⁴ It is obvious, however, that not all losses are documented by photographic evidence, especially not by what is identifiable beyond a reasonable doubt, therefore, real losses must be significantly higher than the figures of Oryx. Our own calculations confirm, that this uncertainty makes the conclusions of both IISS and Kiel Institute realistic:

How much higher are real losses compared to the numbers of Oryx? 20% higher as it is broadly believed?²⁵ Or could they even be halfway between the numbers of Oryx, and the Ukrainian claimse posted on the site, Minusrus?²⁶ Russian replacement levels are also an additional unknown to the equation. Russia claims, that it replaced 2000 tanks in 2022-2023, while the Ukrainian site, Militarnyi claims, that Russia has only replaced 780 pieces, and the truth can of course be anywhere in between.²⁷

What makes the importance of this uncertainty even more significant, is that this has implications not only for the current number of main battle tanks on each side but also heavy implications for the upcoming months as well. Here, however, both exact losses and replacement are unknown in the equation: According to Oryx, Russia lost 2,5 tanks daily on average between January-October 2023, but 4,9 since October 2023.²⁸ What scale of losses will prevail throughout 2024? The January-October rate, which is the characteristic of a more passive, defensive warfare, or the October-February rate, which is the characteristic of more offensive tactics, presumably characterized by the siege of Avdiivka. And again how much higher are actual losses than the figures documented by Oryx? 20%? Halfway between Oryx and Minusrus? Replacement levels are again an unknown factor in the equation. Russia has upgraded its capacity, but it is not clear, how much. Estimates range from 90 per month²⁹ to 150 per month.³⁰ We can of course, exclude certain extreme scenarios, for instance, in case of a combination of low replacement levels and Oryx seriously underestimating real losses, we can assume that Russia will be smart enough not to maintain the October-February high losses offensive tactics, to spare its dwindling resources. Also if all numbers are favorable, then we can assume Russia will continue its offensive tactics throughout the upcoming spring and summer. However even if we exclude such extreme and irrational scenarios, as we can see in the table below, depending on all these multiple unknowns in the equation, by the summer of 2024, the scenario of Russia running out of tanks to such a degree that Ukraine will gain superiority, and the scenario of Russia maintaining the number of its tanks at a level close to 2000, seems to be equally realistic. As we can see, depending on these factors, the number of active main battle tanks Russia had on the 1st of February 2024 could have been anywhere between 800 and 2087, and how many active main battle tanks Russia will have by the 1st

of July 2024, can end up anywhere between 262 and 1782. This shows, how much the fog of war impairs our ability to predict.

How many tanks does Russia still have? scenarios	initial number	losses if Oryx +20%	losses if half way between Oryx and Minusrus	replacement according to Russia	replacement according to Military	Replacement half way between Russian claims and Military	Active Russian main battle tanks 1st February 2024	Monthly losses if offensive October 2023 - February 2024 Russian tactics continue	Monthly losses if Russia returns to the January 2023 - October 2023 defensive tactics	Replacement low end	Replacement top end	Projected Active Russian main battle tanks 1st July 2024
A1	3300	-3213		2000			2087	211		90		1482
A2	3300	-3213		2000			2087	211			150	1782
B1	3300	-3213			780		867	211		90		262
B2	3300	-3213			780		867	211			150	562
B3	3300	-3213			780		867		90	90		867
B4	3300	-3213			780		867		90		150	1167
C1	3300		-4500	2000			800		126	90		620
C2	3300		-4500	2000			800		126		150	920
D1	3300	-3213				1390	1477	211		90		872
D2	3300	-3213				1390	1477	211			150	1172
D3	3300	-3213				1390	1477		90	90		1477
D4	3300	-3213				1390	1477		90		150	1777

Can the figures of the Kiel Institute about tank parity between Russia and Ukraine, with Russian casualties that much higher than Ukrainian ones actually be true? The classic Clausewitz formula states that the attacker counts on three times as high losses, as the defender, and therefore, the attacker needs to outnumber the defender at least 3 to 1. This suggests, that while from February to August 2022, and during the winter of 2022-2023, Russian casualties should have indeed outnumbered the Ukrainians, as Russia was on the offensive, during the Fall of 2022 and especially during the summer of 2023, Ukraine should have suffered the higher casualties, as it was the one on the offensive, facing especially heavy resistance during the summer of 2023. However the difference between Russian and Ukrainian tactics still seems to support the estimations for Russian casualties being significantly higher than those of the Ukrainians. Russians mostly fight house to house, as they did in Bakhmut, Ukrainians usually outflank the attacker, and wait until the Russians withdraw from it, in order to avoid full encirclement, as we saw in the case of Izyum. Waging an offensive by fighting house to house in urban warfare, will, of course, result in much higher losses than simply outflanking the town, and waiting for the other side to withdraw. Moreover, throughout Ukraine’s attempted counteroffensive during the summer of 2023, Russian tactics were not merely defensive fighting from their fortifications but operated by launching repeated counterpunches to push the attacking Ukrainians back. This, on the micro-level, made Russia the attacking side for even much of the Ukrainian counterattack of the summer of 2023, resulting in high losses. Also, if Russia still had more tanks than Ukraine, then Ukraine

shouldn't have been able to make net territorial gains, not even during the summer. Just because Ukraine announced its counteroffensive, Russia wouldn't have needed to restrain itself. Even though the Ukrainian counteroffensive was by and large unsuccessful, it was a net territorial gain for Ukraine. Had the Russians still had for instance twice as many main battle tanks on the field as Ukraine did, there is no reason why their counterpunches throughout the Ukrainian counteroffensive itself, shouldn't have been more successful, than the Ukrainian counteroffensive itself. The stalemate with minor territorial gains fluctuating between one side and the other, rather supports both sides having a roughly parity of tanks and artillery.

It is also key question as to how long Russia can maintain its current rate of replacement from its storage? This is important because if its stockpiles ran out, Russia would rely on manufacturing new equipment. As its capacity to do so is much lower than its capacity to refurbish equipment from storage, its storage running out could result in a virtual collapse of its equipment supply. We can use estimates from intelligence project, Covert Cabal, which uses open-source satellite images to track how Russia is withdrawing equipment from its storage for refurbishment. They estimate that at the current rate, in its storages, Russia has towed artillery pieces for one and a half years, that is till mid-2025, and self-propelled artillery pieces for three years and ten months.³¹ Even if Russia can use some of the mostly expired 3 million soviet era artillery shells in its stockpiles, running out of towed artillery pieces would hamper its capacity to fire them from mid-2025. Regarding main battle tanks, as of the start of October 2023, Russia had 3525 tanks in acceptable conditions, and 1925 tanks that are beyond repair. During the first half of 2023, Russia withdraws on average 57 main battle tanks from its storage per month on average.³² However as its tank refurbishing capacity tripled in the second half of the year, from then on, we can calculate three times this volume, 170 per month. As an earlier leak confirmed that Russia often needs as many as 3-4 pieces of main battle tanks to reassemble a single functional one, it is no surprise that it needs to withdraw more than it produces at the outcome.³³ Calculating a withdrawal rate of 170 tanks per month, Russia will run out of storage tanks of better condition in 21 months counting from the start of October 2023, which means by mid-2025. Of course, it will still have the 2025 wrecks left at that point, however many of those it will unlikely be able to use at all, and of even those, it may be able to use, it would need many more pieces to reassemble a functioning piece. If we assume that it cannot even use more than half of the wrecks, and to maintain the ongoing levels of refurbishment, even out of those it can use, it needs to withdraw twice as much as it does from the good pieces now, we can assume that after having run out of good pieces, it will run even out of wreckages in an additional 3 months, that is by early fall 2025.

Conclusion

As we can see, a peculiar characteristic of the war is the lack of a coherent US strategy. The US encouraged Ukraine into a counteroffensive in 2023, but together with its allies, it delivered only one-third of the number of top-tier main battle tanks, that Ukraine requested as necessary for a successful decisive counteroffensive, despite US stockpiles having more than enough main battle tanks to easily meet the number with a mere fraction of what they have. The Ukrainian counterattack failed, but as it had to be attempted with a mere one-third of the tanks that were requested as necessary for success, it arguably could have been successful if the required equipment was there, and arguably another counteroffensive could be successful if such equipment was provided, especially if combined with other attack equipment, such as a high number of F-16 aircraft, and ATACMS missiles. There seems to be no political will whatsoever in the US to provide attack equipment for another counteroffensive in a higher quantity, than it provided in 2023, therefore, unless there is a major change in US attitude, a second decisive counteroffensive is unlikely.

On the other hand, the US has not pushed for a Korea-style armistice along the actual line of control either, which would have been the other rational option if there was no political will to deliver sufficient equipment for a successful decisive counteroffensive. It is in this context, left between the two rational options, that the war has turned into a stalemate, which actually suits Russia's attritional style of combat. As of February 2024, the conflict is at a turning point. Should the US stop its aid for Ukraine, it most likely will collapse before the end of 2024, in which case, the worst-case scenario would be Russia taking over the entire country as a client state under a puppet government, which would, in turn, put NATO and especially Eastern Europe under immense strategic pressure, possibly even by subversive hybrid warfare, to enforce the demand that it made in its 2021 ultimatum, for NATO to withdraw its infrastructure from all eastern member states that joined after 1997. This would, as the analysis by ISW points out, force the US to increase both military assistance and direct military presence in the region to keep Russia at bay, which would most likely cost it more, than aiding Ukraine.

On the other hand, if US aid for Ukraine is resumed, the time will most likely soon start to work for Ukraine. As we can see, by the summer of 2024, artillery ammunition production in Europe and the US is expected to reach a level, which, if coming true, will by summer-fall 2024 enable Ukrainian to a level of artillery activity, that would make Russian losses higher than the Russia-Ukraine population ratio, therefore sustainable for Ukraine, but unsustainable for Russia in the long run. By the fall of 2025, stockpiles running out will likely cause a significant drop if not collapse in certain Russian key capabilities. As we could see, artillery shell stockpiles purchased from Iran and North Korea will most likely run out by the spring of 2023, leaving Russia to rely solely on its own production, which would lead to Russia not being able to fire more than 6000 artillery rounds per day, right at the time when NATO production of artillery shells will surpass its own, likely resulting Ukrainian artillery superiority along the entire frontline by spring-summer 2025. By summer-fall 2025, Russia will most likely run out of its stockpiles in both main battle tanks and towed artillery pieces, having to solely rely on the production of new pieces instead of refurbishing pieces from storage. This will most likely start a rapid decline if not collapse in Russian capabilities in main battle tanks and towed artillery. These trends can likely cause a Russian military collapse by fall-winter 2025.

Possible milestones in the war if US aid is continued	Approximate time when expected
NATO artillery ammunition production to reach a level that enables Ukraine to inflict a demographically sustainable ratio of Russian casualties relative to its own	summer-fall 2024
NATO artillery ammunition production to surpass that of Russia	winter 2024-2025
Russia's stockpiles of artillery ammunition received from Iran and North Korea to run out	winter-spring 2025
Russia's storage to run out of inactive towed artillery pieces	summer 2025

Russia's storage to run out of inactive main battle tanks	summer-fall 2025
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On the other hand, this means that if US aid is resumed, Russia has a certain time window for a breakthrough. The first half of the year 2024, before any resumed US aid arrives, and before US and European artillery ammunition production runs up to a level that would enable Ukraine to keep the ratio of Russian to Ukrainian losses demographically sustainable. Knowing this, Russia will most likely keep pushing an offensive strategy throughout the spring of 2024. Given the blurred situation around the number of its remaining main battle tanks, if such a push gets too desperate, it may even put it in a dangerous position as early as the summer of 2024. However as numbers of main battle tanks are highly uncertain, such a scenario is highly uncertain as well. Nevertheless, the expected Russian push throughout the spring of 2024 will likely make this period the most dangerous part of the war for Ukraine, even if US aid is resumed.

Endnotes

- ¹ <https://web.archive.org/web/20220226051154/https://ria.ru/20220226/rossiya-1775162336.html>
- ² https://twitter.com/War_Mapper/status/1756447490453152207/photo/1
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- ¹⁰ <https://danubeinstitute.hu/en/research/the-geopolitical-significance-of-the-ukraine-war>
- ¹¹ <https://www.understandingwar.org/backgrounders/high-price-losing-ukraine>
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