

Assessment of the state of  
the Ukraine War  
April 2023

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## Ukraine War Report – April 2023.

March 2023 has been the so far most static month of the entire war in terms of territorial gains by the belligerents ever since the start of the all-out Russian invasion on the 24<sup>th</sup> of February 2022. The net outcome of the month was a mere 70km<sup>2</sup> territorial gain by Russia. In our January and February assessments, we already got to the conclusion that Russia is unlikely to win the war, however, we seem to have still overestimated the momentum of the Russian advance and underestimated upcoming Russian losses.

Besides such turn of events in equipment losses, another one has been the acceleration of arms supplies. In our previous monthly assessment, we noted the discrepancy between the hardening rhetoric of the United States and other Western supporters of Ukraine on the one hand and the lengthy process of arms deliveries. This discrepancy could have been reduced either by toning down the rhetoric or by doubling down on the arms deliveries. In March 2023, the US and its allies seem to have shifted towards the latter: While in February, it seemed that many of the Western tanks promised to Ukraine won't arrive before the end of the rasputitsa mud season in May, and the 31 M1-Abrams tanks promised by the US may take more than a year to arrive. Contrary to this, in March it turned out that many of the western tanks already started to arrive, and it was announced that even the 31 M1-Abrams tanks will arrive by this fall.<sup>1</sup> Another major shift in arms supplies has been that Poland and Slovakia announced the delivery of MIG-29 jet fighters, the first jet fighters since the start of the war.<sup>2</sup>

While we expected Bakhmut to fall in March 2023, against all odds, Ukraine is still holding much of the city, and Russia has so far failed to close the circle around it. Regarding Russian equipment losses in main battle tanks, the emblematic class of equipment that we focus on as an indicator, at the end of January we anticipated Russia to lose about 200 in the upcoming three months of February, March, and April in the documented category registered by Oryx. In reality, it ended up with 247 losses documented by Oryx. in only the two months of February and March, with April still to come. On the side of Ukraine, we expected it to have 120 more losses registered by Oryx in February, March, and April combined. In reality, this became a mere 39 for February and March. According to the method described in our January assessment, we estimate both Russian and Ukrainian actual losses to be about one and a half times higher than the figures documented by Oryx, this should mean about 370 losses on the Russian side, and about 60 on the Ukrainian side. In February the figure regarding losses in main battle tanks was a 9:1 rate favoring the Ukrainian side, which slightly decreased to a 5:1 rate in March. Losses between the 9<sup>th</sup> and 31<sup>st</sup> of March were 89 main battle tanks on the Russian side,

and 17 on the Ukrainian side, which according to our methodology may mean something like 134 on the Russian side, and about 25 on the Ukrainian side.

Regarding estimates on the number of main battle tanks, and emblematic equipment of the present war, more accurate information enables us to revise our own calculations. The most accurate source of Russia's reserve tanks is the researcher that calculated them by using satellite images. Later, using more satellite imagery, and other researchers have joined the project as well, the revised number for 24<sup>th</sup> February 2022 for storage of Russian main battle tanks became 7000, out of which about 2000 were believed to be virtual wrecks with for instance their turret missing, and 5000 in a better shape. Even more important information of the revised data is that it can also estimate the number of storage tanks that Russia removed from storage between 24<sup>th</sup> February 2022, and the end of March 2022, and this number is estimated to be 1500.<sup>3</sup> Why this number is extremely important, is that this gives us knowledge of not only the extent of the stock out of which Russia can mobilize but also the rate by which it can mobilize. Calculating one year means that Russia has the capacity of mobilizing 125 tanks per month. Another analysis published in *The Economist* confirmed that in a month, Russia can manufacture 20 new tanks, and refurbish another 25, and that is unlikely to change before the summer of 2023.<sup>4</sup> This means that out of the 125 tanks mobilized per month, Russia is only able to refurbish 25, and the rest, 100 each month has to be attempted to be deployed without being refurbished, with only regular maintenance. Out of the unrefurbished mobilized tanks, an earlier leak confirmed that 3-4 pieces are needed to reassemble a single functioning one, by putting their functioning parts together into a single piece.<sup>5</sup> Calculating by 100, this means roughly 30 unrefurbished functional storage tanks have been deployed by each month. We assume that we can extrapolate these numbers to the upcoming 1-2 months before Ukraine's counterattack is expected to occur in May or June this year. Using these data, to make sure we do not miss any possible scenario, we set up ranges based on possible differences in the following factor:

- The initial basis of active Russian tanks: So far we have calculated by the 2020 Russian leak of 2700 active main battle tanks at the beginning of the conflict.<sup>6</sup> In order to make sure we don't underestimate Russia's initial strength, here we also prepare scenarios by using an initial basis of 3300 estimates by The Military Balance, also used by the Ukrainian government.<sup>7</sup> For Ukraine, we calculate with an initial basis of roughly 1000.<sup>8</sup>
- Losses: So far we calculated with estimating casualties to be halfway between the figures provided by Oryx<sup>9</sup> (as these only include losses specifically documented by photo or video evidence, thus certainly lower

than the actual number) and numbers provided by the Ukrainian government.<sup>10</sup> To make sure, that we don't overestimate Russian losses, here we also calculate with a low loss scenario, 25% between the Oryx figures and those of the Ukrainian government. As the former is roughly 1,5 times and the latter is 1,25 times higher than the Oryx figures, in each case we calculate by multiplying Oryx figures for Ukrainian losses by the same ratios, to make sure we don't underestimate Ukrainian losses.

- This way, we get four scenarios: Low initial basis combined with low losses, high basis with high losses, high basis with low losses, and low basis with high losses.
- For a fifth scenario, to make sure we don't underestimate anything, we take the unlikely but not outright impossible scenario, if the maximum numbers are true of everything: Initial Russian strength at 3300, all 1500 additional tanks removed from storage successfully deployed, but on the other hand losses as stated by the Ukrainians, and all Russian tanks captured by the Ukrainians successfully deployed as well, instead of calculating with a mere half, that we work with as our standard estimate. As Ukrainian figures for Russian losses are double that of the Oryx figures, here we also calculate with a double number for Ukrainian losses as well.

Tables for the five scenarios:

low initial basis, low losses scenario												
		Russia					Ukraine					
active main battle tanks	initial	unre-furb-ished from storage	refurb-ished	newly manu-factured	losses	total active	initial	captur-ed	receiv-ed in 2022	receiv-ed in 2023	losses	total active
31.1.2023	2700	300	250	200	-2100	<b>1350</b>	1000	275	450	0	-560	<b>1165</b>
31.3.2023	2700	360	300	240	-2400	<b>1200</b>	1000	275	450	0	-610	<b>1115</b>
30.4.2023	2700	390	325	260	-2550	<b>1125</b>	1000	275	450	300	-640	<b>1385</b>
31.5.2023	2700	420	350	280	-2700	<b>1050</b>	1000	275	450	300	-670	<b>1355</b>

low initial basis, high losses scenario												
		Russia					Ukraine					
active main battle tanks	initial	unre-furb-ished from storage	refurb-ished	newly manu-factured	losses	total active	initial	captured	received in 2022	received in 2023	losses	total active
31.1.2023	2700	300	250	200	-2500	<b>950</b>	1000	275	450	0	-675	<b>1050</b>
31.3.2023	2700	360	300	240	-2850	<b>750</b>	1000	275	450	0	-735	<b>990</b>
30.4.2023	2700	390	325	260	-3050	<b>625</b>	1000	275	450	300	-775	<b>1250</b>
31.5.2023	2700	420	350	280	-3200	<b>550</b>	1000	275	450	300	-815	<b>1210</b>

high initial basis, low losses scenario												
active main battle tanks	Russia						Ukraine					
	initial	unre-furb-ished from storage	refurb-ished	newly manu-factured	losses	total active	initial	captured	received in 2022	received in 2023	losses	total active
31.1.2023	330	300	250	200	-2100	<b>1950</b>	100	275	450	0	-560	<b>1165</b>
31.3.2023	330	360	300	240	-2400	<b>1800</b>	100	275	450	0	-610	<b>1115</b>
30.4.2023	330	390	325	260	-2550	<b>1725</b>	100	275	450	300	-640	<b>1385</b>
31.5.2023	330	420	350	280	-2700	<b>1650</b>	100	275	450	300	-670	<b>1355</b>

high initial basis, high losses scenario												
active main battle tanks	Russia						Ukraine					
	initial	unre-furb-ished from storage	refurb-ished	newly manu-factured	losses	total active	initial	captured	received in 2022	received in 2023	losses	total active
31.1.2023	330	300	250	200	-2500	<b>1550</b>	100	275	450	0	-675	<b>1050</b>
31.3.2023	330	360	300	240	-2850	<b>1350</b>	100	275	450	0	-735	<b>990</b>
30.4.2023	330	390	325	260	-3050	<b>1225</b>	100	275	450	300	-775	<b>1250</b>
31.5.2023	330	420	350	280	-3200	<b>1150</b>	100	275	450	300	-815	<b>1210</b>

maximum of everything scenario											
	Russia					Ukraine					
active main battle tanks	initial	mobilized	newly manufactured	losses	total active	initial	captured	received in 2022	received in 2023	losses	total active
31.1.2023	3300	1200	200	-3200	<b>1500</b>	1000	550	450	0	-900	<b>1100</b>
31.3.2023	3300	1500	250	-3600	<b>1450</b>	1000	550	450	0	-1020	<b>980</b>
30.4.2023	3300	1650	250	-3850	<b>1350</b>	1000	550	450	300	-1070	<b>1230</b>
31.5.2023	3300	1800	300	-4100	<b>1300</b>	1000	550	450	300	-1120	<b>1180</b>

This leads us to the seemingly unbelievable conclusion that with the number of functioning main battle tanks, Ukraine will reach something close to parity with Russia! Not on the frontline but regarding the two entire countries! As Russia obviously can't keep all its active tanks in the Ukrainian theater, this suggests an upcoming Ukrainian superiority in main battle tanks in the field by May. This trend is also supported by a further decrease in Russian artillery activity. Between summer 2022 and January 2023, Russian artillery activity (shells per day fired) reduced by 75%,<sup>11</sup> which was calculated with a basis of 60 000, which means 15 000 by January. Newer estimates got to the conclusion that Russian artillery activity further decreased by March to about 10 000 shells per day.<sup>12</sup> Extrapolating this decrease means that Russian artillery activity may decrease by May to around 7-8 thousand shells per day, which would mean parity with Ukrainian artillery activity.<sup>13</sup> This seems parity in artillery activity and superiority in the number of active main battle tanks in the field seems to be in reach for Ukraine by May, which, if our calculations are true, would mean a game-changing shift in the war.

Perhaps the most important single event related to the war during March 2023 was the Moscow visit of Chinese President Xi Jinping on the 20<sup>th</sup> -22<sup>nd</sup> of March, and his summit with Russian President Vladimir Putin there. China has been balancing between the roles of a neutral peacemaker on the one hand, and



Russia's ally against the West on the other ever since the start of the war. It was broadly expected, that the visit will decide this matter in one way or the other. This however hasn't happened, and despite grandiose verbal gestures, especially three events during the meeting signaled the limits of the Sino-Russian friendship:

First, the long-speculated announcement of Chinese arms deliveries, which could have been a game changer in the war helping out Russia, did not come. Xi's Moscow visit was the perfect moment for such an announcement if he wanted to give one. The meeting not only provided the most grandiose environment possible for such an announcement, but it also took place roughly one month after China had announced its peace proposal. Therefore, the visit would have also been an ideal timing to announce arms deliveries on the pretext of Ukraine and its Western supporters not embracing the Chinese peace plan, if that was the intention. The announcement still did not come. This means that while on the verbal and diplomatic level, the visit and the talks there sent a strong message of Chinese support for Russia, on the military level, China remains neutral. Thus Russia can still only rely on Iran and North Korea as its sole partners in significant external military suppliers, when having to compete with military supplies provided to Ukraine by the US and its allies.

Second, alongside his visit to Moscow, Xi Jinping invited leaders of four out of the five Central Asian ex-Soviet republics, Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan for the first China-Central Asia summit scheduled to be held in Beijing in May this year, 2023.<sup>14</sup> This will be the first-ever such a meeting between China and these countries without Russia. These countries were parts of the Soviet Union, and Russia still views most of them as its exclusive sphere of interest: Three of the four, with the sole exception of Uzbekistan are members of Russia's military alliance, the Collective Security Treaty Organization (CSTO), two of the four, Kazakhstan and Kyrgyzstan are members of Russia's economic bloc, the Eurasian Union, and Russia previously rejected Chinese proposals for a China-Russia-Central Asia free trade zone, presumably out of concerns that this would endanger the privileged position that Russia enjoyed in the region compared to China due to the role of the CSTO and the Eurasian Union.<sup>1516</sup> As recently as January 2022, Russia conducted a military intervention in Kazakhstan. The present conflict in Ukraine and earlier conflicts in that country and Georgia showed how violently Russia reacted when it perceived Western intrusion into what it considered the western flank of its very same sphere of interest. A precursor of this move by China may have already been Xi's statement in support of Kazakhstan's sovereignty and territorial integrity last September,<sup>17</sup> which came after Kazakh police crackdowns on alleged pro-Russian separatist agitation following the patterns of what



happened in the Donbas, among Kazakhstan's ethnic Russian minority, mostly settled the country under Soviet-era resettlement programs.<sup>18</sup> Underlying the significance of Xi's invitation, a new investigation by Kazakh police against a pro-Russian separatist organization started at the end of March 2023.<sup>19</sup> Considering all these factors, such a China-Central Asia summit with the exclusion of Russia seems to be a bold and assertive move on behalf of China, appearing to aim to draw these countries into its sphere of influence instead of that of Russia. A move that Russia would have most likely considered unfriendly if not outright hostile, was it not in the dire situation badly needing China's support as it is now.

Third, within a week after Putin and Xi jointly argued against nuclear powers deploying nuclear weapons on the territories of other countries, Russia announced the deployment of nuclear weapons to the territory of its CSTO ally, Belarus, acting contrary to what the two presidents stated during their summit in Moscow. China reacted with a formal protest on behalf of its Ministry of Foreign Affairs.<sup>20</sup> China's protest may be more than a mere gesture to maintain its credibility and reckless act of an ally it otherwise supports: While Belarus is geographically located on the other side of Russia, and should be a headache for Europe and the US, Russia deploying nuclear weapons to the territory of a CSTO ally bares the risk of setting a precedent that Russia could use to try to deploy nuclear weapons to the territory of its Central Asian CSTO allies, Kazakhstan, Kyrgyzstan, and Tajikistan as well, exactly those very countries, that China appears to aim to draw away from Russia's sphere of influence into its own, as highlighted by the announcement of the China-Central Asia meeting scheduled for May this year. While the Central Asian states declared the region to be a nuclear-weapon-free zone back in 2006,<sup>21</sup> and they already seem to have started distancing themselves from Russia and moving towards China, the possibility of Russia trying to use the precedent of Belarus to deploy nuclear arms in the region exactly in order to stop China taking over it, even if already low and on the decrease, cannot completely be ruled out as long as these countries are members of CSTO. And the deployment of Russian nuclear weapons in Kazakhstan for example would be a game changer in the region, one not in favor of China.

These three events showed not only the limits of the efforts China is willing to do in support of Russia but also serious issues of trust between the two supposed allies: The meeting did not hold back China from continuing its pursuit to take over Russia's Central Asian backyard, moreover, with the announcement of a China-Central Asia summit to be held in Beijing in May this year with the exclusion of Russia, it even accelerated it, not having waited till the end of Xi's visit with the announcement. Russia on the other hand made a highly disrespectful gesture by

announcing the deployment of nuclear weapons into Belarus merely days after a joint announcement of the two presidents condemning such acts by nuclear powers. Therefore, if the meeting decided anything at all, that was Russia's hopes of achieving full backing from China in the war, including large-scale arms deliveries. Since before the meeting, Russia did have such hopes, and now it does not, the net outcome of the meeting greatly reduced the chances for a Russian victory in the war.



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- <sup>1</sup> <https://www.nytimes.com/2023/03/21/world/europe/abrams-tanks-us-ukraine.html>
  - <sup>2</sup> <https://www.popularmechanics.com/military/aviation/a43358921/ukraine-getting-mig-29-fighter-jets-from-nato-countries-poland-slovakia/>
  - <sup>3</sup> <https://youtu.be/2PHUK6zkbpc>
  - <sup>4</sup> <https://www.economist.com/the-economist-explains/2023/02/27/how-quickly-can-russia-rebuild-its-tank-fleet>
  - <sup>5</sup> <https://nadinbrzezinski.medium.com/logistics-collapse-945984f5d48e>
  - <sup>6</sup> <https://www.israeldefense.co.il/en/node/45383>
  - <sup>7</sup> <https://www.minusrus.com/en>
  - <sup>8</sup> [https://www.washingtonpost.com/business/what-tanks-will-ukraine-get-and-what-is-special-about-leopard-2/2023/01/25/49a59006-9cd5-11ed-93e0-38551e88239c\\_story.html](https://www.washingtonpost.com/business/what-tanks-will-ukraine-get-and-what-is-special-about-leopard-2/2023/01/25/49a59006-9cd5-11ed-93e0-38551e88239c_story.html)
  - <sup>9</sup> <https://www.oryxspioenkop.com/2022/02/attack-on-europe-documenting-equipment.html>
  - <sup>10</sup> <https://www.minusrus.com/en>
  - <sup>11</sup> <https://edition.cnn.com/2023/01/10/politics/russian-artillery-fire-down-75-percent-ukraine/index.html>
  - <sup>12</sup> <https://www.forbes.com/sites/davidhambling/2023/04/05/when-will-ammunition-shortage-silence-russias-artillery/?sh=120ae05d6d95>
  - <sup>13</sup> <https://www.washingtonpost.com/world/2023/04/08/ukraine-ammunition-shortage-shells-ration/>
  - <sup>14</sup> <https://www.businessinsider.com/xi-snubs-putin-amid-summit-with-central-asia-power-play-2023-3>
  - <sup>15</sup> Wilhelmsen, J., & Flikke, G. (2011). Chinese–Russian Convergence and Central Asia. *Geopolitics*, 16(4), 865-901.
  - <sup>16</sup> Horváth, C. (2014). The Sino-Russian relationship in the mirror of China’s rise and Sino-American rivalry. *Társadalomkutatás*, 32(3), 247-263.
  - <sup>17</sup> [https://www.fmprc.gov.cn/eng/zxxx\\_662805/202209/t20220915\\_10766191.html](https://www.fmprc.gov.cn/eng/zxxx_662805/202209/t20220915_10766191.html)
  - <sup>18</sup> [https://central.asia-news.com/en\\_GB/articles/cnmi\\_ca/features/2022/08/12/feature-01](https://central.asia-news.com/en_GB/articles/cnmi_ca/features/2022/08/12/feature-01)
  - <sup>19</sup> <https://socialbites.ca/latest-news/225274.html>
  - <sup>20</sup> <https://www.newsweek.com/china-russia-ukraine-belarus-xi-putin-nuclear-weapons-1790535>
  - <sup>21</sup> <https://www.un.org/nwfz/content/treaty-nuclear-weapon-free-zone-central-asia>