

MP-IDSA

Issue Brief

Early Military Lessons from Russia's Special Military Operation in Ukraine

Deepak Kumar

March 28, 2022

S*ummary*

It has been more than four weeks since Russia started its Special Military Operation in Ukraine. It is apparent that Russia's bid for a speedy triumph over Ukraine has not ensued. A stoic resistance aided by propitious Western support has been a key factor in Ukraine standing up to the might of the Russian military. Notwithstanding that the end state of the conflict is still afar for both parties, Russia's military operation has raised several questions. While any conclusive thoughts can seem premature amidst a raging conflict, yet there are enough early lessons for the strategic and military practitioners to decipher and take note of.

After months of military build-up and brinkmanship, Russia invaded its ex-Soviet neighbour Ukraine in the wee hours of 24 February 2022. Russian forces launched a multi-pronged attack along three fronts—Northern, Eastern and Southern.¹ It’s been more than four weeks since then and the operations still continue. An early analysis of the conflict and war fighting so far, throws light on some enduring lessons for the military strategists and planners. This issue brief aims to make the military assessment by reconstructing the follow up battle events of both the sides up till now.

Preparatory Actions

Russia began to *create* military conditions for achieving its objectives in Ukraine soon after a pro-Western regime came in Ukraine in 2013.² Apart from bolstering its economy and moulding politics and diplomacy, Russia started developing military hardware self-sufficiency and reorganising its military organisations and structures. Military exercises and actual combat situations in Syria put its armed forces to the test. To keep the battle narrative ambiguous, an intensive information warfare effort was devised. Russia concentrated on accumulating a war chest capable of withstanding Western sanctions for a length of time. This pored itself in building a foreign reserve of about US\$ 650 billion and conserving significant reserves of gold.³ The second step was to *sequence* its above preparatory actions and the final step was the *arrayal* of forces and resources to achieve the military strategy.

Likely End State

Russia’s likely or probable ‘War Aims’ have been decoded by inferring Russia's likely end state, which might be one or more of the following:

- New Ukrainian government politically aligned with the Kremlin (Regime change).
- New government militarily neutral and dependent on Russia for its defense, and which could possibly become a CSTO (Collective Security Treaty Organisation) member in a later time horizon.
- Seeking neutrality guarantee through constitutional amendment.
- Recognition of independence of DPR (Donetsk People's Republic) and LPR (Luhansk People’s Republic).
- New government economically integrated into the EAEU (Eurasian Economic Union).
- Transparent borders between Russia and Ukraine.

¹ [“Russia Mobilises for Assault on Kyiv as its Troops Storm Ukraine”](#), *Financial Times*.

² Max Fisher, [“Everything You Need to Know About the 2014 Ukraine Crisis”](#), *Vox*, 3 September 2014.

³ Nicholas Gordon, [“Banks are Stopping Putin from Tapping a \\$630 billion War Chest Russia Stockpiled before Invading Ukraine”](#), *Fortune*, 3 March 2022.

On the other hand, Ukraine aided by the Western powers may be having two immediate war aims: (a) Defeat Russia’s invasion; and (b) Liberate all Russian-occupied territories including Crimea and Donbass region.

Military Objectives

The likely military objectives of the Russian special military operations can be deduced as: (a) swift advance to the objective area, (b) destruction of Ukraine’s military potential and armed forces, (c) capture and occupation of Eastern Ukraine—Donbass region and adjoining areas, and (d) control of Baltic Sea and Sea of Azov. An early achievement of the above military objectives was a necessity to *create military conditions for favourable outcome during negotiations*.

Force Levels

It is widely assessed that Russia has about 170–175 Battalion Tactical Groups (BTGs)⁴ across its five military commands.⁵ From the available resources, according to estimates, a likely force level of up to 90–100 BTGs have been applied by Russia⁶ on three Army Offensives—Northern, Eastern and Southern. A strategic reserve of 20–25 BTGs (20 per cent of allocated BTGs) may have been initially kept for reinforcement or contingency operations. It is very likely that the remaining BTGs from other Russian military commands may have been staged closer to Russia’s western borders.⁷ Numerically, Russia has applied a force of about 100 BTGs, airborne and special forces (approximately 2,00,000 personnel) against Ukraine’s defence forces with a strength of 2,50,000 personnel. The force levels are nearly matching whereas an offensive should have a weight at least three times more. This probably begets a question whether the Russians spread themselves thin on the battlespace.

⁴ A Russian infantry or tank regiment/brigade typically has three manoeuvre battalions. The brigade/regiment’s assets can be pooled to form one or two Battalion Tactical Groups (BTGs) averaging 800 personnel each. A BTG is usually based around an infantry battalion’s three motor-rifle infantry companies (each with 11 BMP tracked fighting vehicles or BTR-80/82 personnel carriers), but reinforced by a fourth tank company with 10 tanks, typically T-72B3s. For tank-heavy BTGs, that ratio is reversed. Both types of BTGs are reinforced by two or three batteries of mobile rocket artillery and/or self-propelled howitzers (122- and 152-millimeter caliber), for a total 12–18 artillery systems—an enormous amount of fire support for a battalion-sized unit. Furthermore, a BTG may integrate one or two mobile surface-to-air missile batteries; an anti-tank company equipped with long-range anti-tank guided missiles; and supporting combat engineer, electronic warfare and reconnaissance platoons. This gives BTGs a broad toolkit of capabilities at hand to deal with tactical problems without needing to request support from higher headquarters.

⁵ Dmitry Gorenburg and Michael Kofman, [“Here’s What We Know about Russia’s Military Buildup Near Ukraine”](#), *The Washington Post*, 15 January 2022.

⁶ Rounak Bagchi, [“Explained: How Large is Russia’s Military Build-up around Ukraine?”](#), *The Indian Express*, 15 February 2022.

⁷ [“Russia Secretly Mobilising More Troops due to Massive Loss: Ukraine”](#), *Business Standard*, 7 March 2022.

Evaluation of Military Operations

Due to a complete blackout of information from Russian sources, the evaluation is based on the outcomes achieved by both parties thus far. The Special Military Operations appear to have commenced amidst a barrage of long-range operational fires from Russian air and missile forces engaging high-value targets in a set piece *modus vivendi* of shaping and softening the battlespace. The shaping operations were accompanied by a near simultaneous launch of airborne land and sea-based operations. There appears to be a debate on the force levels applied by Russia in the initial part of the military operation. There are indications of a likely use of Airborne Forces (VKV) and the Special Forces⁸ (Spetsnaz) in the initial phases. Russian strategy appears to have been premised on the fact that Russia would be able to capitulate Ukraine with the shock of its firepower at the earliest. When this did not happen amidst a strong West-backed Ukrainian resistance, the Russian strategy seems to have dithered. It appears that the appreciation of quick recapitulation of the Ukrainian government and support of the ethnic Russian and Ukrainian population as liberators was faulty in the hindsight. Some of the military lessons based on operations thus far are covered in the succeeding sections.

Combined Arms War Fighting

Russians’ ‘reluctant’ initial advance and material losses have been attributed to the inability of the BTGs to operate as a cohesive combined arms team, thereby revealing organisational and employment flaws. What is emerging is that the infantry component of the BTGs, about 200 personnel, is distributed to the ‘combat’ companies of BTGs, which is why the Russian BTGs did not have enough troops for encirclement of key objectives and practically no reserves. The subsidiary tasks such as defending the flanks or protecting the corridor was sourced to paramilitary forces and in many cases to conscripts and reservists due to paucity of prepared combat troops with the BTGs. Ukraine Army was able to penetrate and ambush the flanks and tail of Russian columns due to ineffective security by the paramilitary or conscripts. In several quarters, though unverified, there have been reports of Russian tank commanders unable to communicate on encrypted radio communications. Command and Control (C2) is of great essence in combined arms fighting.⁹ It appears that Ukraine, possibly with the help of West, was able to interfere and disrupt C2 capabilities of Russia’s BTGs.¹⁰ That can partially explain frequent tactical pauses. It strongly reinforces the age-old adage that battlefield communications can be paralysed and interfered. Therefore, there is a need to factor redundancies.

Airborne and Special Forces

There was the news of airborne forces in Kiev and an attempted heliborne assault of Hostomel air field 23 kms north-west of Kiev within the first 6–8 hours of the

⁸ [“Russian Equivalent of the SAS Leading Ukraine Attack, Officials Believe”](#), *Evening Standard*, 24 February 2022.

⁹ [“NBC Operations and the Fundamental of Army Operations”](#), FM 3-100/MCWP 3-3.7.1.

¹⁰ [“‘A Serious Failure’: Scale of Russia’s Military Blunders Becomes Clear”](#), *Financial Times*.

commencement of the military operation. The capture of Hostomel air field in early stages would have helped to support the airborne forces in Kiev and create an air bridge to sustain follow-on operations by the ground forces. However, to have conducted the heliborne operations without air supremacy was a risky operation and purportedly not successful. The reported drop zones being located at a large distance from the ground forces and that they could not link up and air supremacy are important lessons from the war on airborne operations.

Airpower

The reluctance of Russia to use airpower after initial two days is perplexing as establishment of air superiority (or at least a favourable air situation) is a prerequisite for successful ground operations. Russia would have maintained a high operational tempo of operations by using airpower. The opposite narrative was that it was done to avoid collateral damage to civilian areas. Was the sub-optimal use of airpower by Russia due to overconfidence or caution or due to the effectiveness of Ukrainian air defence batteries, is still unclear. Russian and Ukrainian air missions and sortie generation capabilities are still not public. What can be discerned is that both sides are not willing to take risks with their aircraft or pilots. For Russia, this has prolonged their ground operations. But, it can be safely discerned that Russia has a distinct advantage in the air and this explains the reason why President Zelensky is pleading for a no-fly zone.¹¹

Drones

Poor situational awareness and Russian military casualties were some of the reasons for Russia's slow progress in the initial stages. Among the many potential explanations, one is that the Russian BTGs lacked Intelligence, Surveillance & Reconnaissance (ISR) assets such as light drones or the assets couldn't keep up with the manoeuvre elements. A plausible reason could be due to Ukraine's anti-drone tactics, air defences and electronic warfare networks. Lack of use of drones has highlighted a key vulnerability in Russia's military operation. As the offensive progresses into the fifth week, there are signs of greater use of Unmanned Aerial Vehicles (UAVs) and drones by Russia. According to the images available in Open-Source Intelligence (OSINT), Russian ISR drones tracked Ukraine's BM-21 to their concealed hide and destroyed the BM-21 battery. The Ukrainian military itself is reported to have said that it was using counter-UAV systems during the heavy fighting around the Azov port of Mariupol. Ukrainian military appears to have used its Turkish-made TB2 combat drones to strike Russian convoys in the initial stages but now their use by Ukraine has gone down. This could be due to attrition and limited numbers (20, according to some sources) which Ukraine may be holding.¹²

¹¹ Andrew Feinberg, [“I Need to Protect Our Sky’: Zelensky Asks for Air Defence Systems and Fighters as Alternative to No-fly Zone”](#), *Independent*.

¹² [“Ukraine Unleashes Turkey's Bayraktar TB2 Drones on Russia: Is it a Gamechanger?”](#), *WION*.

Mobilisation Tactics

The Russian convoy of military vehicles, largely tanks and BMPs (Boyevaya Mashina Pyekhoty), was seen stranded over a long highway of 45–60 kms on the northern offensive. Armoured tanks, BMPs and military vehicles were bunched up in open without even tactical camouflage. This reflects poor standards of tactical training at lower levels. There has also been an intense debate on the purpose (or the lack of it) of the stranded Russian military convoy. Many neutral observers say that this was due to faulty logistics planning,¹³ because of which logistics could not reach fighting troops from logistic bases. This again reaffirms the importance of maintaining logistical balance in operations. Once Russia tightened its supply and logistics, it was able to press its advance from Crimea, Donbass and south to Kiev and Kharkiv.

Employment of Long-Range Operational Fires

Russia appears to have used long-range operational fires of its Kalibr (Caliber) cruise missiles, Iskander ballistic missiles and MBRLs (Multiple Barrel Rocket Launchers) such as Soviet-designed Grad (Hail), Smerch (Tornado) and Uragan (Hurricane) multiple rocket launchers throughout the five weeks of the campaign.¹⁴ This has partly compensated for its scarce use of airpower and reinforced the usefulness of missiles and rockets in future wars vis-à-vis aerial firepower, which is costly and whose losses are bad optics. According to Russia’s Interfax agency, Russia has used its Kinzhal hypersonic missiles in Ukraine for the first time. A point of concern is the indiscriminate losses to civilian infrastructure due to long-range fires. It seems to be pointing to a limited availability of precision munitions and their selective usage on High Value Targets (HVTs) by Russia. On the Ukrainian side, the failure to counter Russian long-range fires reflects the need for not only a robust missile shield for a defender, but also capable ballistic missile acquisition systems.

Importance of Air Defence

Russia appears to have effectively been able to target Ukrainian ground-based static air defence systems with ballistic and cruise missiles, anti-radiation missiles and land vectors (using unguided weapons). However, Ukraine’s mobile-based air defence systems seem to be still active. This is an advantage with mobile air defence systems as it is difficult to locate and destroy them. A timely tactical intelligence and the use of more precision ammunition by Russia would have achieved better results when targeting Ukrainian mobile air defence systems. A disadvantage with mobile system is that, it may not be fully integrated in the overall air defence architecture. Air defence assets such as Man-portable air defense systems (MANPADS)-Stingers and lately the sophisticated NLAW (New Generation Light Anti-tank Weapon) and Javelin systems supplied by the US and the West¹⁵ are being operated by Ukrainian troops and even militia. In absence of a credible integrated IFF (Identification Friend or Foe),

¹³ [“Is Stuck Convoy in Ukraine a Setback for Russia?”](#), *The Economic Times*, 4 March 2022.

¹⁴ [“Ukraine War: What Weapons are Being Used in Russia's Invasion?”](#), *WION*.

¹⁵ Stavros Atlamazoglou, [“Easy-to-use Handheld Weapons Provided by the US are Helping Ukrainians Shred Russian Tanks and Aircraft”](#), *Business Insider*, 21 March 2022.

Ukrainian pilots too would be susceptible to them. There is a lesson for planners in investing in a dedicated Suppression/Destruction of Enemy Air Defence Organisation (SEAD/DEAD organisation) with dedicated platforms for dynamic targeting and IFF, be it airpower, smart ammunition, soft kill technology, damage assessment means or low-cost assets such as drones.

Battlefield Transparency

In modern warfare, there are no advantages of surprise and deception at the operational level except for timings and intentions, as the battlespace is discernible due to advanced ISR systems. Failure to read intentions despite Russia revealing signatures in military exercises, movement of 100 plus BTGs with armour and artillery, ship manoeuvres in Black Sea is telling. Another fallout has been the fact that the Internet has metasized into rural areas. Movement of troops and weapon platforms, military actions and even propaganda can be quickly transmitted. Russia’s inability to disrupt Internet communications in Ukraine have resulted in an information domination by the West. In future conflicts, it will be difficult to completely suppress Internet and social media. Therefore, tactical forces need to reorient and train themselves in fighting in a transparent domain.

Conclusion

Looking at how the events have unfolded in the last four weeks, it can be said that the Russian aim of breaking the political cohesivity of Ukraine through multi-domain military operations has not fully succeeded. Russia has been able to secure the Ukrainian nuclear power sites at Chernobyl and Zaporizhiya. The Russian General Staff reported plans of capitulation and submission of the Ukrainian forces within 48–72 hours have not borne results.¹⁶ Many key cities, including Kiev, have not fallen despite facing four weeks of high-intensity operations. These key cities which after capture should have facilitated subsequent operations as launch pads are serving as islands of resistance. The Russian military operation has taken the shape of grinding attrition warfare¹⁷ instead of the fast-paced manoeuvre blitzkrieg. Long-range fire power on civilian and military infrastructure are likely being used to lower the morale of Ukrainian forces and civilian population. Russians are attempting to reconstitute combat power for a possible long haul fighting in built-up area operations (FIBUA). On the Ukrainian side, the key takeaway has been the stoic resistance and ability to extend Russia’s offensive beyond the fourth week. The Ukrainian forces were able to enforce caution on the Russian air force and have forced the Russian ground forces to slow down and even pause their operational tempo. A flipside in Ukraine’s defence has been the widespread damages to its towns and cities and a massive refugee trail towards its western borders towards the bordering European countries.

¹⁶ Murat Sofuoglu, [“Is the Russian Army Achieving its Strategic Goals in the Ukraine War?”](#), *TRT World*, 7 March 2022.

¹⁷ Cahal Milmo and Serina Sandhu, [“Kremlin Ponders ‘Plan C’ Strategy to Bombard Ukraine into Submission and Destroy Its Economy”](#), *iNews*, 15 March 2022.

About the Author



Col Deepak Kumar is Research Fellow at the Manohar Parrikar Institute for Defence Studies and Analyses, New Delhi.

Manohar Parrikar Institute for Defence Studies and Analyses is a non-partisan, autonomous body dedicated to objective research and policy relevant studies on all aspects of defence and security. Its mission is to promote national and international security through the generation and dissemination of knowledge on defence and security-related issues.

Disclaimer: Views expressed in Manohar Parrikar IDSA's publications and on its website are those of the authors and do not necessarily reflect the views of the Manohar Parrikar IDSA or the Government of India.

© Manohar Parrikar Institute for Defence Studies and Analyses (MP-IDSA) 2022