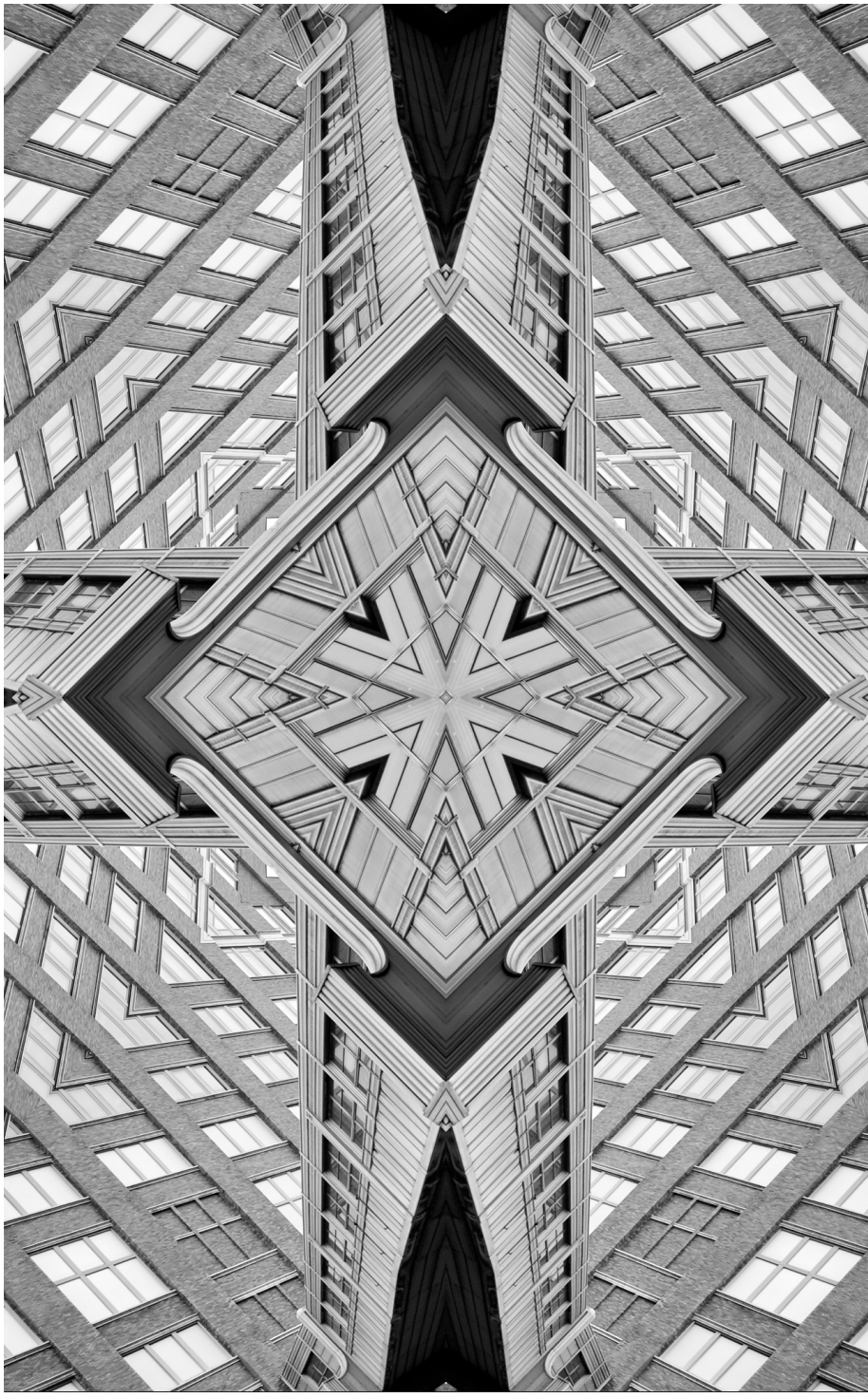
Issue Brief

ISSUE NO. 573
AUGUST 2022

ORF OBSERVER RESEARCH FOUNDATION



The Long(er) Ukraine War: Lessons for the Indo-Pacific

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Abstract

The Russia-Ukraine war has confounded observers, as much as it did the Russians themselves. Since erupting in late February, the war has not shown signs of abating any time soon. This brief argues that by its very nature, the war has lessons not just for the adversaries, but also the NATO alliance that is backing Ukraine, and even geographically distant China and India. For one, the war has both elements of the old eras—such as the massive use of artillery and the battle of attrition in the eastern front—and modern tools such as cyber weapons, drones, and electronic warfare. Compounding the challenge is the threat of nuclear weapons use. The brief outlines the implications of a longer war for any military service in the world that could find itself preparing for a conflict.

Attribution: Manoj Joshi, "The Long(er) Ukraine War: Lessons for the Indo-Pacific," *ORF Issue Brief No. 573*, August 2022, Observer Research Foundation.

Introduction

The Russia-Ukraine war has upended many paradigms, among them the belief that a modern-day war will be sharp and swift. That it has carried on, at the time of writing this brief, for six months and shows no signs of ending, needs to be examined by all militaries of the world.

After a first phase that ended the possibility of the conflict being a quick affair, it has devolved into a grinding war of attrition that is playing out primarily on land.[1] It is difficult to predict its course or character, and expert verdicts given over the past couple of months have proved inadequate.[2] What is certain is that the war has led to significant geopolitical turmoil and realignments. This brief focuses on the military lessons it offers for China, India, and the United States, all three of which, in different circumstances, could find themselves involved in a military conflict.

The war is fairly unique in that the two adversaries have roughly similar levels of technological capability. Ukraine may be far smaller than Russia in population and economic capacity, but from the military point of view, it has a similar profile, often using the same kind of equipment. Yet, Ukraine's estrangement from Russia beginning in 2014 has also provided it with an important injection of Western equipment and military training.[3]

A crucial feature of modern war revealed by the Ukraine-Russia conflict has been the massive availability of open-source intelligence based on social media posts, smartphone photos, commercial drone videos, and satellite imagery, all reporting on the battles almost in real-time. Combined with the more sophisticated equipment available to the militaries, it suggests that the battlefield has become dangerously transparent, making it easier to target forces and disrupt logistics. However, there remain issues with the quality of communications equipment and its vulnerability to interception and hacking.[4]

In the early months of the war, there were several instances of Russia threatening to use nuclear weapons if third parties got involved. While it would later temper its nuclear rhetoric, perhaps a bottom-line lesson for many countries will be about the importance of nuclear weapons in deterring the aggression of larger and stronger powers. In 1994, Ukraine became one of three former Soviet republics (other than Kazakhstan and Belarus) that gave up nuclear weapons in exchange for a commitment that it would get immediate assistance from the United Nations Security Council (UNSC) in the event of aggression. The problem is that one of the signatories of the memorandum was Russia, which is also a permanent member of the UNSC.[5]

The Two Phases of the War

The war has so far had two broad phases. Phase I began when the Russian military invaded four main fronts in Ukraine on 24 February 2022—two of them towards Kyiv, one towards Kharkiv, and a southern front from Crimea towards Odessa. The Russian military failed in its campaign to swiftly decapitate the Ukrainian leadership by a strike on the first day through Hostomel's Antonov airport, 10 km north-west of Kyiv.[6] The airport was swiftly captured by Russian Special Forces. Forces from Belarus in the north reached it on 25 February and tried to move towards Kyiv. Then began the contest, with teams of Ukrainian forces using their familiarity with the land and employing American Javelin and NLAWS missiles, as well as a combination of drones and artillery, and employing hit-and-run tactics. The Russians dug in, but their forces, backed up in a 60-km-long convoy, were unable to take their artillery and other support equipment forward. (In spring and summer the terrain in that part of the world becomes muddy, preventing the off-road movement of vehicles and even tanks.) A month later, the Russians were forced to retreat and focus their effort in south-east Ukraine, employing different tactics.

In this phase, the inability of the Russians to establish air superiority also became obvious. They could not cope with the Ukrainian response using Stinger man-portable missiles and S-300 SAM systems. Neither could they counter the Ukrainian use of drones for surveillance, electronic jamming, and attacks.[7] Russia responded with cruise and ballistic missile strikes. Though these strikes were resorted to following its inability to achieve air superiority, they have been highly effective and destructive. The Russians have used missiles such as the Kaliber, Kh59 and KH 101, the ground-based Tochka and the Iskander short-range missiles, and even the Kinzhal hypersonic missile.[8] As the war stretched, the Russians found themselves running short of some of these systems. A further burden for them has been the difficulty in acquiring many key components used in these missiles, because of Western sanctions.[9]

Perhaps more important in this phase was the cyber war between Russia and Ukraine. At the outset, the Russians hacked the commercial US Viasat satellite used by Ukraine for its communications. In response, Western countries rallied behind Ukraine, and in a systematic action involving intelligence agencies and private players, have been supporting Ukraine in maintaining its military communications and degrading the Russian ones, while boosting Ukraine's ability to project its side of the conflict to the world. The US's Space X *Starlink* system played a significant role: it quickly provided Ukraine with resilient and reliable means of communication.[10]

The Two Phases of the War

Phase II of the war has been different. The Russians regrouped in the Donetsk and Luhansk fronts (the Donbas region) and launched a slow and systematic campaign using superior artillery-based firepower to make incremental advances.[11] The Russians also made effective use of drones and electronic warfare. They had already seized territory in the south in the opening days of the war; yet they learnt another series of lessons in urban warfare that saw them take three months to capture Mariupol. Thereafter redeploying their forces, they advanced through sheer attrition to capture the cities of Sievierodonetsk and Lysychansk in early July, suffering heavy losses, but imposing similar costs on the Ukrainians, too. The pace of advance was excruciatingly slow, more akin to the First World War. This was mainly an army battle with air forces being reluctant to fly low to provide support because both sides had strong air defences over their respective fronts. Once again, it is not clear why the larger Russian air force was not able to dominate.

What the closing stage of the Donbas battle revealed was the importance of long-range precision firing artillery. US and European equipment like the HIMARS multiple rocket system and the M777 155 mm howitzer and Caesar 155mm artillery systems, though available to Ukraine only in limited numbers, were able to make a mark on the battlefield. They compelled the Russians to alter their tactics. By mid-August 2022, the war appeared to have reached a stalemate, with both sides entrenching themselves in World War I-style defences in the eastern and southern parts of the country. There is sporadic heavy fighting in the east. In the south, there has been talk of a Ukrainian offensive, but nothing has happened so far.

What is notable is the possible rise of partisans aided by Ukrainian Special Forces in the south. There had been earlier reports of partisan attacks in the Kherson region, but more significant developments have occurred in the Crimean peninsula that the Russians seized from Ukraine in 2014. One of the attacks devastated the Saki Russian airbase, a large ammunition depot in Maiske, and another airfield. These have given Ukrainians a psychological boost.[12]

Lessons for the US

There are many lessons that the US could learn from the war. First of all, it needs to reflect on whether it can fight a war of attrition with a near-peer adversary.[13] In recent times, American war tactics have involved high-tech capabilities—wielded by a highly trained professional force—to undertake quick and decisive campaigns, defeating the adversary with minimum casualties. It has fought long wars in Iraq and Afghanistan, but after their initial phase, those were low-intensity conflicts with poorly armed adversaries.

From the military point of view, the Ukraine war has reinforced for the US the importance of long-range precision fires—which go back to its first Gulf war in 1990. Today it is readying the next generation of the precision-strike missiles, the extended range cannon artillery system and the mid-range capability MRC missile to maintain its advantage in taking out enemy targets from standoff distances. The US Army Futures Command is focusing on six lines of modernisation: long-range precision fires, next-gen combat vehicles, future vertical lift, network air and missile defence, and soldier lethality.[14]

The Ukraine war is also helping the US to refine its decade-old Mission Command Concept aimed at decentralising command and control by having all levels of its army involved in coordinating and executing decision-making in combat situations. Along with an emphasis on better logistics and total networking, this will lead to dispersed command and control which will yet have the ability to exercise unified combat power.[15] This is closely linked to the cyber capabilities of the forces at all levels. The US is supplementing this with lessons from Ukraine, such as the use of drones in combination with electronic warfare to track frontline troops of adversaries, and conversely, reducing the electronic footprint of its own forces.[16]

This process of change had begun earlier with the US seeing the need to evolve technologies and tactics to overcome the Chinese A2/AD challenge in the western Pacific region. The Ukraine war has provided further lessons. The US is not unaware that in a potential conflict with China over Taiwan or the South China Sea, it will confront a different order of challenges as compared to those China will face.[17]

Lessons for the US

Back in 2018, within months of the onset of the US-China tariff war, then President Donald Trump had ordered an assessment of US defence manufacturing and industrial base resiliency. The study found serious deterioration of US capabilities and a "surprising level of foreign dependence on competitor nations." Many sectors continued to move critical capabilities offshore to obtain competitive pricing and access to foreign markets. Even at that time, the US had noted the "re-emergence of long term strategic competition" from Russia and China.[18]

Many of the trends initiated by the trade war and the subsequent COVID-19 pandemic have underlined the importance of resiliency in supply chains and of near-shoring and friend-shoring critical materials and components.

Lessons for China

There is no doubt that Beijing will be studying the Ukraine war closely, especially in the context of what is known as the "Taiwan contingency".[19] There is an argument that politically, the Ukraine invasion could be tempting China to make a similar move towards Taiwan. Following Ukraine's robust response, however, the cautious Chinese must also be realising the hazards of such an undertaking.

Despite its experience of combat in diverse areas such as Chechnya, Syria, Ukraine (in 2014, when it captured Crimea), and Georgia, in the last two decades, the Russian military has faltered in Ukraine in 2022. China's People's Liberation Army (PLA) is inexperienced and a high-intensity resistance by Taiwan could lead to failure, especially as Beijing will have a far more difficult task than Russia, since it will be launching an operation across a 180-km-wide strait. A military failure would be politically disastrous for the Communist Party of China.

Even so, Beijing may attribute the Russian failure to take Kyiv by a blitzkrieg to hubris: It could convince itself that the real failure was in the Kremlin's political assessment that the Ukrainians would collapse at the first sign of approach of the Russian military. By the same measure, it may underestimate the determination and the capacity of Taiwan to impose huge costs on the PLA if it tried to land on the island, and then resist it in the forests and mountains of the country. If China has its attack plans, so does Taiwan have for its defence.[20]

An important Chinese imperative will be to prevent any Western re-supply to Taiwan in the event of war. However, this would inevitably draw it into direct conflict with the US and, possibly, Japan. Like Ukraine, Taiwan is not a treaty ally of the US. Taiwan is a more valuable component of the global economy than Ukraine, and has greater strategic importance to the US and its allies in East Asia. There is sufficient ambiguity about a possible US response to warrant caution on China's part.

Finally, there is an important difference between the Taiwan and Ukraine situations. In the case of the latter, the Russians have successfully "othered" the Ukrainians as "neo-Nazis" and have had no hesitation in destroying cities and causing considerable civilian casualties. Whether the Chinese would be able to do the same with people they claim are their own, mainly Han Chinese, is an important consideration.

The Ukraine war has important lessons for India as well in relation to its two potential adversaries—China and Pakistan. India's military seems to be well aware of this. The Indian Army has already conducted an exercise, called Skylight, to apply the lessons learnt from its detailed study of the cyber and electromagnetic aspects of the Ukraine war.[21]

India has used its Special Forces in previous wars to conduct special operations, often behind enemy lines. What needs further study is the manner in which Ukraine used its special forces in the first phase of the war in hunter-killer teams, aided by drones and portable anti-tank missiles, to knock out Russian armour. No doubt such an effort depends on the terrain and the circumstances; it would be worth examining if India could employ similar tactics in specific areas. Another issue is that the larger conduct of a modern large-scale combined arms operation requires highly skilled and motivated personnel—whether as cyber warriors, operators of sophisticated sensors and communication equipment, or even as ordinary soldiers operating tactically in urban warfare. This is obviously not something that the Agniveer kind of military recruit can handle.[22]

In the context of a possible future war in the Himalaya, the Indian military is in the process of shifting its doctrinal perspective. The operational directive of the 1980s called for "dissuasive defence" in relation to China, which meant adopting a strong defensive posture for deterrence. Lately, however, the Army has allotted two strike corps to its holdings along the Line of Actual Control (LAC). It suggests that the doctrine has changed and the Army is now preparing for the possibility of launching offensive operations across the LAC, if required.[23]

In China's doctrinal perspective, tactical and operational offence is an intrinsic feature of its "strategic defence". As its 2015 White Paper on military strategy notes, "integrated combat forces will be employed to prevail in system-vs-system operations featuring information dominance, precision strikes and joint operations."[24]

All this has implications for how India should prepare for any conflict with China—a conflict whose geographic space can be Tibet or part of Xinjiang on the Chinese side, and eastern and northern India on the Indian. The last war India fought with China ended when the latter achieved its military objectives, ceased fire, and returned to its starting points, except in Ladakh. Being a permanent member of the UNSC, China has the power to veto any UN-sponsored move to mandate a ceasefire.

What a Longer War Could Mean

In a panel discussion in July,[25] Prof. Stephen Rosen of Harvard University speculated on the consequences of a Ukraine-like scenario involving China and India where the former's effort at a quick victory stalemates into a longer war of attrition. This would require a larger stockpile of consumable military supplies, ranging from ammunition to fuel and food. It would also call for more capacity to train additional forces.

The Indian military paradigm, based on the 2009 Operational Directive, was to be sufficiently prepared "to fight on both fronts simultaneously a war at 30 days (intense) and 60 days (normal) rates." This essentially meant the stocking of 'war wastage reserves' (WWR) of ammunition and spares for this period.[26] Soon after, this was modified to stock for 20 days of intense fighting and in reality is down to just 10 days. Comptroller and Auditor General (C&AG) reports in 2015 and 2017 were sharply critical of the Ministry of Defence's procurement and storage of ammunition for the armed forces. The 2017 report noted that while there had been some improvement, ammunition for tanks and artillery were "under critical level". A stock of 61 types of ammunition out of a total of 152 types was available for just 10 days.[27]

After 2017, the C&AG stopped making its defence reports public. However, a media report in December 2020 said that the Indian Army would now stock ammunition for 15 days of intense fighting instead of 10. Since stocks have dwindled it will take time to reach the appropriate level.[28]

Since 2019, China has been increasing its forces in Tibet and Xinjiang, both with relevance to India. It is sharply improving its air defence posture by positioning new SAM systems, as well as building billets to position its forces closer to the LAC. It is building heliports and augmenting its facilities in existing air fields. This is in addition to the upgrade of the PLA's logistics capabilities to enable "a more rapid movement of troops, weaponry and equipment."[29]

India has strong defences across the Himalaya with troops well dug in and supported by artillery, including the American M777. Any attacker will face a formidable challenge. However, the mountain terrain on the Indian side imposes its own difficulties. Roads, already prone to landslides, are easy to disrupt, and mobile artillery will not easily be able to 'shoot and scoot' that easily. The Indian military will also have to consider the Chinese ability to strike fixed infrastructure targets such as ammunition depots and railway and road bridges, as well as its capacity to disable fragile mountain communications

using precision-guided cruise and ballistic missiles. It will need to conceal and diversify logistics routes, as well as storage of missiles, variable time fuses and sensitive ammunition that require air conditioning. It must also ensure that ammunition factories can surge their production in quick time. India may need to make substantive investments in helicopters for logistics, as well as lateral movement of forces in the mountain areas.[30]

The issue of long-range precision strikes by missiles is important since India's principal cities such as New Delhi are a mere 400 km from Tibet, while mainland Chinese cities like Beijing or Shanghai are 3,000-4,000 km away. China has a vast arsenal of highly accurate medium- and short-range missiles.[31] Table 1 gives an estimate of the development of Chinese land-based conventional missiles. In terms of sheer numbers, the Chinese force has "reshaped the security landscape in the Indo-Pacific region."[32]

It was therefore no surprise that Japan has announced that not only would it sharply increase its military spending, but that it would acquire 1,000 long-range land, air and sea-based missiles that would be deployed in the Nansei islands and Kyushu. Currently, Japan has no long-range missiles. The issue has gained salience since China launched ballistic missiles into waters near Okinawa as a fallout of the visit of the US House Speaker Nancy Pelosi to Taiwan.[33]

Table 1: Estimated Number of Launchers in China's Land-based Missile Forces

Missile Type	Range (km)	DoD 2010 Estimate	IISS 2010 Estimate	DoD 2020 Estimate	IISS 2020 Estimate
IRBM	3,000-5,500	0	0	200	72
MRBM*	1,000-3,000	75-85	36	150	94
SRBM	300-1,000	210-250	204	250	189
GLCM	>1,500	40-55	54	100	70

Source: https://chinapower.csis.org/conventional-missiles/

**IISS does not count the nuclear DF-21AE while DoD estimates are not disaggregated*

What a Longer War Could Mean

Equally important for India are lessons from the Ukraine-Russia conflict relating to information warfare. Ukraine was able to respond quickly to the Russian cyber-warfare challenge and prevent any large-scale disruption of its communications or electricity grids. It could not have achieved what it did without the assistance of the US and its IT giants such as Apple, Microsoft, Amazon, and Space X, as well as its Western Europe allies with whom it has been associating closely since 2014.[34] India has a large IT sector but needs to plan in advance for a coordinated response to any Chinese challenge. It will need an army of hackers and cyber defenders. This is a battle that begins even before the guns begin to fire. Producing some 1.5 million software engineers every year, India has no lack of IT workers, but nurturing and effectively employing specialised talent is not easy.[35]

A prolonged conventional war takes much greater effort to fight and requires a sustained, unified approach. As of today, India's levels of WWR are not known, but clearly would be inadequate for a Ukraine-like scenario, especially if war unfolds across two fronts. Indeed, ground experience has shown that in wartime, munitions tend to get used up at even faster rates than projected. Besides meeting its own WWR targets, the government would be advised to devise a protocol for its munitions-producing plants, which could enable a quick ramp up of production if needed.

The military and its associated organisations may be able to cope with short and quick wars, but a longer battle of attrition will invariably strain physical and human resources. Planning for longer wars also requires attention to be paid to replenishment of skilled personnel at all levels of the military and as noted earlier, the Agnipath scheme is not the way to go.[36]

Ukraine saw extensive partisan warfare when it was occupied by Germany during the Second World War. During the current conflict, there have been reports of partisan activity in some of the southern regions of the country. Any future Russian occupation of Ukrainian-speaking areas could well see such forces play a role again.

In the mid-1960s, India created the Special Services Bureau (SSB) which is now transformed into the Shastra Seema Bal. The SSB was created as a "stay behind" force which would launch partisan warfare if the PLA captured large tracts of Himalayan territory. It trained villagers in small arms and hoped to use them to bolster its activities. The force was also created to promote a sense of national belonging among residents of high mountain areas. New Delhi could consider reviving the old SSB.[37]

Unlike in the Ukraine-Russia war, where Ukraine is non-nuclear, Indo-Pacific adversaries—India-China, India-Pakistan, or China-US—are all nuclear weapons powers. The danger of a long drawn-out, attritional war in this region, featuring long-range rocket strikes, is that it can easily slide into a nuclear conflict.

Take the India-China scenario. India had separated its weapons' assembly and nuclear cores, the former being held in Defence Research and Development Organisation (DRDO) facilities, the latter by the Department of Atomic Energy. Today, however, with the undersea deterrent being shaped, and land-mobile missiles being canisterised, the clear distinction can no longer be maintained, as warheads need to be fully assembled and stored.[38]

Given the requirements of keeping nuclear weapons secure, their storage sites are relatively easy to detect. They have to be co-located in military facilities where the requisite security—far more stringent than for other weapons systems—can be provided. Their road-mobile container trucks also have to be protected, as these could be detected and taken out by Chinese surveillance satellites and drone combinations. Even in a non-nuclear, long-drawn conflict, Chinese precision-guided conventionally armed missiles aimed at Indian military and logistical facilities could inadvertently destroy a significant portion of the Indian nuclear arsenal. This could set up a "use it or lose it" dilemma for India.

In an India-Pakistan war, the scenario would be similar, with Indian conventional and missile strikes potentially threatening Pakistan's nuclear storage facilities and presenting them with a "use it or lose it" scenario. All countries possessing nuclear weapons and involved in a conventional war, need to work out ways of avoiding nuclear escalation, which could end up in destruction beyond any rational political calculation.[a]

a Neither China nor Pakistan has agreed to have any Confidence Building Measures relating to nuclear weapons with India.

Conclusion

The Ukraine war has not ended and many of the observations made in this brief are tentative. War is a harsh teacher, after all. Each war brings with it its own lessons, whereby some old principles that no longer work are quickly discarded and new ones discovered.

The job of militaries, especially in peacetime, is to study conflicts, draw lessons, and test them in exercises. Often, the lessons from a war help reinforce some ongoing plans and dispense with others. New developments sometimes occur, calling for a shift in the way the forces are organised, trained, equipped and employed.

Several tentative military lessons from the current war have been outlined—the importance of combat leadership skills in large-scale combined arms operations, the value of logistics and training, the need to disperse command and control at every echelon in the increasingly transparent battle-space.[39] The design of tanks and their self-protection suites, the role of drones in offence and defence, the rising salience of urban warfare in a world that is rapidly urbanising, the importance of modern long-range precision artillery and battlefield rocket systems—all need to be reconsidered and evaluated. Separate lessons need to be drawn from the human failures of this war, arising out of poor planning, logistics, low combat readiness and inefficient use of equipment.[40]

The key lesson, however, is that while most assumptions of modern conventional conflict scenarios spoke of short, sharp wars, the Russia-Ukraine war has shown that this need not necessarily be the case. This has enormous consequences for the war preparations that all military services make. It relates to military industrial capacity, supply chain resiliency, as well as training of soldiers, logistics, provisioning for the battlefield, and building the stamina the system needs to see through such a war.[41]

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