Transformation of the Indian Army: Preparing to Fight and Win on Future Battlefields

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The Indian Army, the most battle hardened Army is the world, must gradually shake off its defensive orientation and transform itself into a 'light, lethal and wired' force that is ready to act proactively to overcome the threats and challenges of the second quarter of the 21st century. However, two spoilers need to be overcome. Firstly, while the threats and challenges, as well as the vulnerabilities, are steadily increasing and becoming more complex and diverse, many of the weapons and equipment in service with the Army are either obsolete or bordering on obsolescence. Secondly, the current state of defence preparedness leaves much to be desired, particularly large-scale shortages in the stocking levels of tank and gun ammunition.

Besides modernising the force in consonance with developments in weapons technology (including offensive cyber warfare, artificial intelligence and killer robots—unmanned or autonomous combat vehicles), the Army's preparation for the future is influenced by the changes in the strategic environment. In this era of strategic uncertainty, the character of conflict is constantly changing and evolving. From state versus state conventional conflict—mainly for territorial gains—the pendulum is gradually swinging towards sub-conventional conflict between states and disaffected non-state actors.

Blurring the distinction between the states of war and peace, non-military means are being increasingly employed to achieve political and strategic goals in the "hybrid" conflicts of the 21st century. Consequently, the force transformation trend-line among modern Armies is to move from threat-based forces that were designed to meet known threats to capability-based forces that provide a set of capabilities to deal with a range of unexpected situations; for example, a rapid reaction division with air assault and amphibious capabilities. Similarly, the Army's war-fighting doctrine needs to be reviewed and the training regimes re-configured to train officers and other ranks for certainty (predictable threats) and to educate them to face uncertainty (unforeseen challenges).

Future Threats and Challenges

The Indian Army is arguably the most battle hardened Army is the world as it has been engaged in conflict of one type or another ever since the country's independence. India has long-standing territorial and boundary disputes with both China and Pakistan and has fought four wars with these two neighbours besides the 50-day Kargil conflict of 1999. Even in peace-time, the Indian Army has been managing long portions of India's borders against Pakistan (Line of Control, since 1947-48) and China (Line of Actual Control, since 1962). In addition to its traditional of territorial defence, the Army has been engaged for over half a century in internal security duties. It has been conducting counter-insurgency and counter-terrorism operations in the northeastern states (since the mid-1950s) and has been fighting Pakistan-sponsored insurgency in Jammu and Kashmir (since 1989-90). It had participated in anti-Naxal operations in West Bengal in the late 1960s and in anti-Khalistan operations in Punjab in the 1980s. The Army was on the verge of being called out for anti-Maoist operations in the first United Progressive Alliance (UPA) regime in 2004-08.

Though the India-China relationship is stable at the strategic level, it is politically, diplomatically and militarily unstable at the tactical level. The unresolved territorial disputes with China and Pakistan are likely to remain the primary source of future conflict. Given the collusion between China and Pakistan in the nuclear warhead, ballistic missile and military hardware fields and their "all-weather" strategic partnership, India has to remain prepared to fight a two-front war. In fact, the China-Pakistan strategic partnership is a de facto military alliance. As long as the territorial and boundary disputes with China and Pakistan are not resolved, the possibility of conflict cannot be ruled

out, even though the probability is low. And, if there is conflict with either one of them, given their deep nexus, both may be expected to come to each other's aid, though in varying degrees.

Future war is likely to be limited in terms of area, time and application of force.

Internal security threats include a long-drawn low level insurgency in Jammu and Kashmir (J&K) due to the government's inability to fully integrate all parts of the state with the national mainstream; militancy bordering of insurgency in several of India's northeastern states over many decades due to political and economic neglect, poor governance and, consequently, inadequate socio-economic development; and, continuing Left Wing Extremism (LWE) or Maoist/Naxalite terrorism that has engulfed large parts of Central India.

Even as India grapples with diverse external and internal threats to its security, many new challenges are emerging on the national security horizon to which the Army may be called upon to respond. The more prominent non-traditional ones include cyber and information warfare threats to critical infrastructure and military command and control systems; the threat of mass migrations from neighbouring countries due to extreme poverty, natural disasters and political instability; the dangers inherent in the proliferation of small arms (light weapons); and, the security of the Indian Diaspora, especially in the Gulf region.

As in the past, a future war in which the Indian Army may be called upon to participate is likely to be a limited war in terms of the total area of conflict, the time duration and the application of forces. Large-scale conventional conflict is relatively less likely. Since war is likely to spin out of the ongoing conflicts on land, it will comprise predominantly land battles. Gaining, occupying and holding territory and evicting the enemy from any Indian territory occupied by him will remain important military objectives. It is well recognised that it will not be possible to conduct a successful land campaign without overwhelming and sustained support from the Indian Air Force (IAF) by way of air-to-ground strikes by Fighter Ground Attack (FGA) aircraft in the contact, immediate depth and deep strike battles. Only a joint Air Land campaign can possibly achieve the military objectives of a limited war in the Indian context.

Deterrence can only be achieved by developing the capability to launch offensive operations deep into the adversary's territory. As India's territorial disputes are mainly in the high Himalayan mountains where deep manoeuvre is not possible, the Army must upgrade its firepower capabilities very substantially

if the stipulated military aims are to be achieved. Similarly, the ability to launch vertical envelopment operations will be a major asset in the mountains. India's increasing responsibilities as a net provider of security in the Indo-Pacific region will require the creation of tri-Service capabilities for military intervention, singly or in conjunction with its strategic partners.

Capacity Building for the Future

As stated earlier, there is a very high probability that the next major land conflict on the Indian subcontinent will again break out in the mountains because that is where the unresolved territorial disputes lie. As it is not in India's interest to enlarge a conflict with Pakistan to the plains sector south of the Ravi river due to the possibility of escalation to a nuclear exchange, there is a fairly high probability that the next conflict, having broken out in the mountains, will remain confined to the mountainous terrain. While the three strike corps are necessary for conventional deterrence and have served their purpose well, the Army must enhance its capability to launch offensive operations to deter and, if necessary, fight and win future wars in the mountains.

A strategic defensive posture runs the risk of losing some territory to the adversary if the capabilities to be able to launch a deep ingress into the adversary's territory to stabilise the situation do not exist. The first requirement is to upgrade India's military strategy of dissuasion against China to that of genuine conventional and nuclear deterrence and proactive border management during peace-time. Genuine deterrence can come only from the ability to take the fight deep into the adversary's territory through the launching of major offensive operations. To achieve this objective, it is necessary to raise and position one additional mountain strike corps in J&K for offensive operations against both China and Pakistan, besides 17 Corps that has been raised for operations in the northeast against China. In addition, as a strike corps can be employed only in one particular sector and cannot be easily redeployed in the mountains, it is necessary to give the defensive (holding) corps limited capability to launch offensive operations with integral resources.

As deep manoeuvre is not possible in the mountainous terrain and due to the risk of escalation to a nuclear exchange in the plains against Pakistan, it is necessary to substantially upgrade the capability of the Army to inflict punishment and; indeed, achieve victory through the orchestration of overwhelming firepower.

Unless firepower capabilities are upgraded by an order of magnitude, India will have to be content with a stalemate.

The firepower capabilities that must be enhanced include conventionally-armed Short Range Ballistic Missiles (SRBMs) to attack high value targets in depth. Air-to-ground and helicopter-to-ground attack capabilities need to be modernised, particularly those enabling deep ground penetration and accurate night strikes. Artillery rockets, guns and mortars must also be modernised. Lighter and more mobile equipment is required so that it can be rapidly moved and deployed in neighbouring sectors. India's holdings of Precision-Guided Munitions (PGMs) continue to be low. In recent conflicts like the war in Iraq in 2003 and the ongoing Afghan conflict, PGMs have formed almost 80 percent of the total ammunition used. Indian PGM holdings must go up progressively to at least 20 to 30 percent in order to achieve high levels of operational efficiencies. India's defence planners must recognise that it is firepower asymmetries that will help to achieve military decisions and ultimately break the adversary's will to fight.

Present capabilities for heliborne assault, vertical envelopment and amphibious operations are inadequate for both conventional conflict and dealing effectively with contingencies that might arise while discharging India's emerging regional responsibilities. Two rapid reaction-cum-air assault divisions (with an amphibious brigade each) need to be raised for employment during conventional operations as well as for military intervention if India's vital national interests in the Indo-Pacific are threatened. The expenditure on these divisions will be highly capital intensive and it will be difficult to find funds if the defence budget continues to be pegged at 1.60 percent of the Gross Domestic Product (GDP) as it at present.

Command, Control, Communications, Computers, Intelligence Surveillance, Reconnaissance (C4I2SR) capabilities are still rudimentary in nature and must be substantially modernised to exploit the synergies that can be achieved by a network centric force, even the capability to launch what the Americans call 'effects-based' operations. A seamless intelligence-cum-targeting network must be established to fully synergise the strike capabilities of air and ground forces in real time. A good early warning network will enable the Army to reduce the number of troops that are permanently deployed for border management and will add to the reserves available for offensive operations. Infrastructural developments along the northern borders have failed to keep pace with the Army's ability to fight forward and must be speeded up.

Army modernisation plans require a substantially higher budgetary support.

State of Defence Preparedness

The current state of Indian's defence preparedness leaves much to be desired, particularly shortages in the stocking levels of ammunition. Deficiencies in ammunition have an adverse impact on the ability to sustain military operations over a period of time when necessary. The Kargil conflict in 1999 had lasted 50 days and a future border conflict may also be prolonged. During the Kargil conflict, 50,000 rounds of 155 mm artillery ammunition had to be imported from South Africa. The occurrence of such a critical situation during a time of crisis must be avoided through a prudent replenishment and stocking policy.

In July 2017, the Comptroller and Auditor General (CAG) had released an explosive report about the continuing ammunition shortages. According to the CAG, in March 2013, 50 percent of the different categories of weapons (including tanks and artillery guns) had stocks for less than ten days of fighting. Since then, there has been some improvement, but for 40 percent of its weapons, the Army is reportedly still holding ammunition stocks for less than ten days of conflict.

There are large-scale deficiencies in other important items of military equipment as well. When he was the Chief of the Army Staff (COAS), Gen VK Singh had written to the Prime Minister about the dangers of these shortages. He had used the term "critical hollowness" to describe the state of defence preparedness. Since then, several new field formations, including 17 Corps (a strike corps for employment in the mountains), and 56 and 71 Infantry Divisions have been raised by transferring weapons and equipment from existing field formations rather than by acquiring the required number afresh. This has led to further aggravation of the deficiencies. The inadequacies in the state of defence preparedness need urgent attention. The funds must be found to make up the deficiencies in a short timeframe.

Slow Pace of Modernisation

After a decade of neglect under the two UPA regimes, military modernisation is gradually picking up pace under the National Defence Alliance (NDA) government. Gen Bikram Singh, former COAS (2012-14), had laid emphasis on the early acquisition of modern assault rifles, howitzers, bullet-proof jackets, tank and artillery ammunition and missiles. His successor, Gen Dalbir Singh Suhag (2014-16), had identified towed artillery, surveillance and reconnaissance,

helicopters, third-generation missiles, air defence weapons systems, mechanised forces and assault rifles as the key areas requiring immediate attention. Under the NDA government, the Defence Acquisition Council (DAC) has accorded AoN (Acceptance of Necessity) approval to modernisation projects worth almost Rs 200,000 crore. In keeping with Prime Minister Narendra Modi's policy to 'make in India', most of the newly approved weapons systems and equipment will be procured with Transfer of Technology (ToT) and manufactured in India or, where feasible, completely indigenously designed, that is, they fall under the category to 'buy and Make in India' or 'Make in India'.

Among the fighting arms of the Army, the tanks and Infantry Combat Vehicles (ICVs) of the mechanised forces in the plains are still partly night blind and many old T-55s are still in service. In the absence of light tanks in sufficient numbers, the capability to launch offensive operations in the mountains continues to remain inadequate to deter future conflict. Development of the Future Infantry Combat Vehicle (FICV) has made little headway, Artillery firepower, which will pave the way for the infantry to win future battles, needs to be upgraded by an order of magnitude—particularly in the mountains, if military aims are to be achieved during a future conflict. Thirty years after the 155 mm Bofors howitzer was acquired, new 155 mm guns have begun to be inducted (M-777 and K-9 Vajra). The capacity to launch precision strikes on hard targets with ground-based firepower delivery means is much short of the volumes that will be required. Air defence capabilities are grossly inadequate as the weapons systems are mostly obsolete. Army aviation squadrons continue to be equipped with obsolete light helicopters—the Chetak and Cheetah.

The modernisation plans of India's cutting edge infantry battalions, which are aimed at enhancing their capability for surveillance and target acquisition at night and boosting their firepower for precise retaliation in both conventional conflict and against infiltrating columns and terrorists holed up in built-up areas, are stuck in a bureaucratic quagmire. The Army also needs to upgrade its rudimentary C4I2SR system and graduate quickly to network-centricity to synergise the employment of its combat potential. Similarly, the weapons systems and the equipment in service with the Engineers and Signals are in no better shape. If at all their modernisation plans are moving forward, it is at a snail's pace.

To enable the Army to fight and win the nation's future wars in an era of strategic uncertainty and to manage ongoing challenges pertaining to internal security, the government must give a major boost to the Army's modernisation drive,

particularly infantry modernisation. The Army's modernisation plans require a substantially higher budgetary support than what has been forthcoming over the last decade. At 1.60 percent of the GDP, this year's defence budget is the lowest it has been since the 1962 War with China. The Vice Chief of the Army Staff (VCOAS) informed the Standing Committee on Defence in Parliament in March 2018 that the Army had not been allotted sufficient funds to pay the instalments due even for previously committed liabilities. The defence budget must be gradually raised to first 2 percent and then 2.5 percent of India's GDP. The speeding up of the weapons and equipment acquisition process is also necessary. Only then will the Indian Army be able to undertake the transformation necessary to deter future wars and, if necessary, fight and win.

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