



Delhi Policy Group

Advancing India's Rise as a Leading Power



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Informationised Warfare with Boots on Ground: A Concept for the Defence of India in the Continental Domain

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Indian Army troops patrolling along AGPL. Source: Cloudfront.net

Soldiers celebrating victory after the Kargil War. Source: Indian Express

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A Concept for the Defence of India in the Continental Domain**

by

Anil Ahuja and Arun Sahgal

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Introduction

In early May 2020, China surprised India by transgressing the LAC at several locations in Eastern Ladakh and occupying areas on the Indian side of the LAC. As this military standoff continues in its fourth month, only a modest disengagement of troops has taken place. The PLA continues to hold positions it has occupied on Indian side of the LAC in Pangong Tso and in the Depsang plains. A forward build up and deployment of artillery, mechanised forces and air defence continues in depth areas. As per estimates, some 40,000 Chinese troops are deployed in Eastern Ladakh, marking the largest PLA deployment since 1962.

The reality of the situation was brought home by Defence Minister Rajnath Singh during his visit to Ladakh on July 17-18, when he remarked that “talks are underway to resolve the border dispute but to what extent it can be resolved I cannot guarantee...”¹ It is evident that this is likely to be a prolonged standoff.

What is even more disconcerting is China’s offensive military intent. The PLA’s Western Theatre Command has mobilised nearly two divisions (20,000 troops), with another division (10,000-12,000 troops) positioned in reserve in Northern Xinjiang which is deployable within approximately 48 hours². This deployment far exceeds the level of troops involved during the Sumdorong Chu (Wangdung) incident of 1986 in the Kameng (Tawang) Sector of Arunachal Pradesh. The PLA then had deployed nearly two divisions, along with heavy weapons including artillery, to which India had responded by deploying three divisions³. However, no shooting or loss of life took place, though Wangdung is now under Chinese occupation.

Importantly, the current Chinese aggression is not merely Ladakh centric; reports based on Satcom (satellite communication) intercepts suggest Chinese preparations for possible transgressions in Shipki La in Himachal Pradesh and

¹ “India not a weak country; no force can take away an inch of our land: Rajnath Singh in Ladakh”, [Times Now](#), July 17, 2020.

² “China deploys 20,000 troops along LAC; India wary of division in Xinjiang”, [Business Standard](#), July 1, 2020.

³ Mandip Singh, “Lessons from Somdurong Chu Incident”, [IDSA Comment](#), April 26, 2013.

Barahoti in Uttarakhand in the Central Sector⁴. A face-off at Naku La in Sikkim in early May, 2020 was also an attempt to enlarge the frontage of border intrusions. Further, China has, for the first time, staked a new territorial claim in the area of the Sakteng Sanctuary in Eastern Bhutan⁵. This area lies West of the Tawang Sector of Arunachal Pradesh (an area of operations during the 1962 Sino-Indian Conflict and the Wangdung incident of 1986). This claim can be assumed to portend "manufactured boundary dispute" in the future.



India-Tibet-Bhutan tri-junction in Western Arunachal Pradesh

Similarly, it is no coincidence that Nepal has recently passed the Second Constitution Amendment Bill claiming Lipulekh, Kalapani and Limpiyadhura, parts of Indian territory in Pithoragarh District, as its territories⁶. Nepal's actions could well be tacitly supported by China, which is attempting to promote "Trans-Himalayan Multidimensional Connectivity" that includes the China-Pakistan Economic Corridor (CPEC) with a proposed extension to Afghanistan and Nepal, and in future through linking the China-Myanmar Economic Corridor (CMEC) to Myanmar and Bangladesh.

⁴ "Chinese Troopers Spotted in Uttarakhand and Himachal Pradesh", [The Kashmiriyat](#), July 03, 2020.

⁵ Suhasini Haidar, "China doubles down on claims on eastern Bhutan boundary", [The Hindu](#), July 6, 2020.

⁶ Geeta Mohan, "Nepal Parliament passes new map including disputed Indian territory", [India Today](#), June 13, 2020.



On the Western flank, there are reports that Pakistan has deployed approximately 20,000 additional troops in Gilgit and Baltistan under the pretext of ensuring law and order during impending elections. There are also reports of talks being held with the terrorist outfit Al Badr to incite violence in Jammu and Kashmir (J&K)⁷. PLAAF transport aircraft have reportedly been seen landing at the Skardu forward air base. These are clear indicators of the possibility of heightened Sino- Pakistan collusion as the border standoff with India in Ladakh extends or escalates.

Contextualising China's Border Violations

The ongoing Indo-China standoff clearly spells out that the power asymmetry between India and China has widened in political, economic, technology and military domains and that China has, "done biding its time to end its foreign policy restraint".⁸ Through a large-scale territorial aggression and show of force along India's borders, China is signalling its geopolitical intent to restrain and intimidate India by forcible alterations to the LAC. China perceives India's belated development of border infrastructure as a challenge to its territorial interests and transit lines to both the CPEC and Xinjiang. This has also been the catalyst for scaling up the Sino-Pakistan collusion to include intelligence sharing, military sales and development of key dual use infrastructure, both on land and along the Arabian Sea coast.

India is now directly at the receiving end of Chinese expansionism and its current approach is of outright domination, not accommodation or co-existence^{9,10}. This new reality of escalating geopolitical competition and China's propensity to use force in pursuit of its unilateral "core interests" are important strategic developments that need to be factored into India's future defence planning.

Indian security planners must not mistake the current standoff as a continuation of the past pattern of intrusions at Raki Nala (2008), Depsang (2013), Chumar (2014) and Doklam (2017). This incident foreshadows a new reality: the emergence of an aggressive China which is willing to leverage nationalism and military might in pursuit of its core national interests in

⁷ Manu Pubby, "Pakistan moves 20,000 soldiers to Gilgit-Baltistan LoC", [The Economic Times](#), July 02, 2020.

⁸ Kurt M. Campbell and Mira Rapp-Hooper, "China Is Done Biding Its Time. The End of Beijing's Foreign Policy Restraint?", [Foreign Affairs](#), July 15, 2020.

⁹ Hemant Krishan Singh and Arun Sahgal, "A Moment of Reckoning", DPG Policy Brief, Vol. V, Issue 24, [Delhi Policy Group](#), June 21, 2020.

¹⁰ Antara Ghoshal Singh, "China-India border standoff and China's 'India' dilemma", DPG Policy Brief, Vol. V, Issue 26, [Delhi Policy Group](#), July 3, 2020.

disregard of international law and bilateral agreements. China has begun to perceive India as a strategic rival and a key strategic partner of the United States that needs to be contained and perhaps taught a lesson, before the India-US relationship develops into a major challenge. These developments rule out the likelihood of an early border settlement and suggest prospects of continued tensions.



Disputed areas along the India-China Border. Source: Google Maps

An important strategic corollary of the PLA intrusions in Ladakh is that it has created predictions for greater physical proximity and possibility of operational complementarity between the PLA and Pakistan in this remote but strategically important salient. According to the former Pakistan Army Chief, General Mirza Aslam Beg, their erstwhile Prime Minister Zulfikar Ali Bhutto had established this "Strategic Linkage" by opening the Karakoram Highway across the Khunjerab Pass. With the development of CEPC, this has become a driver of collusion, which Pakistan considers as the "Strategic Pivot of Defence Forces (sic)"¹¹. With China now claiming to be a party to the "Kashmir dispute", by alleging that its territory of Aksai Chin is included in the Indian Union Territory

¹¹ "Iran embraces BRI", *Pakistan Observer*, July 25, 2020.



of Ladakh, the Sub Sector North (SSN) emerges as a potential long term hot-spot, which requires to be addressed by Indian military counter measures.

A Review of India's Existing Perspective on Defence

The developments along India's Northern borders have highlighted some salient lessons in relation to the commonly held beliefs of Indian security planners and have exposed some myths about the role of the armed forces, in particular the Army, that have been in the making for some time. These are discussed in the succeeding paragraphs.

Reality of a Two Front War. Operational planning of the Indian armed forces over the last decade has sought to benchmark capabilities and operational requirements for a "two and a half front war". This entails preparing simultaneously to fight two adversaries, China to the North and Pakistan to the West, singly or acting in collusion, while continuing to battle externally sponsored terrorism ("proxy war"). In recent years, with terrorist activities largely being brought under control both in Jammu and Kashmir and in the Northeast, and relative peace prevailing along the LAC, a belief had set-in that this is a "hallowed threat" that is being projected by the armed forces for seeking greater resources. As a result, very little has actually been done to prepare for such an eventuality with any degree of seriousness, both doctrinally and in terms of capability enhancement. Budgetary allocations have remained routine to meet bare minimum force modernisation and accretion needs; in fact, there has been a declining trend.

The current standoff in Ladakh has finally debunked this myth and brought home the reality of a two - front threat. The possibility of this standoff getting extended beyond the Ladakh Sector to the Northeast, as well as into the maritime domain, and further manifesting itself through the territories of smaller neighbours, is very real indeed. If this scenario is not catered for, it will greatly compromise national security. A spill over in the form of an intensified "proxy war" or renewed support to insurgent groups cannot be ruled out.

Shedding the "half-front" Drag. While the mitigation of a "two-front" threat is not solely within India's control, at least the "half-front" needs to be taken out of the purview of the armed forces. Shedding this, with accountability, to the State Police force, CAPFs (Central Armed Police Forces) or the PMFs (Para Military Forces) has become essential to release the Indian armed forces to focus on their principal role of multi-domain conventional warfare in the two-front scenario.



“Grudging” the Size of the Armed Forces. Over the years, concerns have been raised in civil-bureaucratic circles regarding the strength and structure of India’s armed forces. There is a “grudging” narrative about the “bloated” levels of the standing Army, which is seen to be causing heavy revenue expenditure resulting in the non-availability of funds for capability development and major acquisitions¹². These concerns, only some of which are justified, are being raised, even by military commanders themselves¹³, without conducting any detailed analysis of “troops to task” (military terminology for a meticulous bean count). The current standoff has brought home the urgent need to define the wide spectrum of contemporary threats facing the country and evolving an optimum force structure of military, paramilitary and CAPFs to combat these threats, both along India’s borders and in the hinterland. Once this is done, the requisite budgetary support must be provided “ungrudgingly”, accepting it as a national commitment. In fact, quite like the Indian Air Force, which has put forth a requirement of 42 Squadrons for handling a two-front war, even the Indian Army needs to work out an optimum force level for such a contingency based on a credible war fighting doctrine.

Preparing for “Informationised War with Boots on Ground”. The violent clashes that took place on June 15, 2020 in the Galwan River Valley at an altitude of nearly 17000 feet, where 20 Indian soldiers were martyred in a primitive physical hand-to-hand combat, only goes to highlight the challenges that India faces along its nearly 3500 Km border with China and 900 Km Line of Control (LOC) and Actual Ground Position Line (AGPL) with Pakistan. The operational environment calls for preparing to fight through the entire spectrum of warfare, from contact to high technology, over land, sea, air, space and cyber domains, through what could be termed as **“Fighting informationised (high technology) war, with boots on ground”**. This has to be India specific, with no templated solutions. It calls for costs in inducting high technology as well as retaining substantial manpower to deploy adequate boots on ground in a terrain that can challenge any technology available globally. This is an extraordinary challenge imposed on India by a troubled neighbourhood and exacerbated by unresolved boundary disputes. India has no option but to meet the challenge.

¹² Dinesh Narayanan, “How pay, pensions and sloth eat up India's defence funds”, [The Economic Times](#), July 11, 2018.

Also see, Laxman Kumar Behera, “India’s Defence Budget 2020- 21”, [Manohar Parrikar Institute of Defence Analysis and Studies](#), February 4, 2020.

¹³ Rahul Singh, “Indian Army to cut 150,000 jobs as force plans to go ‘lean and mean’”, [Hindustan Times](#), September 10, 2018.



Indian Army troops patrolling along AGPL. Source: Cloudfront.net

Trust vs. checks and balances. The Group of Ministers Report on Reforming the National Security System (2001) had recommended Border Management to be re-fashioned on a one-border-one-force principle so as to obviate problems of conflict in command and control and lack of accountability arising from a multiplicity of forces deployed on the same border. It had also stressed the need for an institutionalised arrangement for sharing and co-ordination of intelligence at various levels, particularly at the operational and field level.

While border functions have been assigned to respective forces, the responsibility of management of disputed borders, along the LOC/AGPL with Pakistan and LAC with China, continues to remain with the Army. Despite repeated recommendations, both Army and ITBP continue to man the LAC and operate near independently under the control of the Ministry of Defence and the Ministry of Home Affairs respectively. A similar situation prevails in the functioning of military and civil intelligence agencies. This arrangement provides independent inputs to Delhi along two separate channels – in a system of “checks and balances”. On the ground, however, this has resulted in a lack of trust and coordination with disastrous consequences, in Kargil in 1999 and now in Ladakh in 2020. The entire gamut of intelligence management and



flow needs re-examination, taking cognisance of existing weaknesses in interpretation, analysis and the ability to provide coherent assessments¹⁴.

Efficacy of Joint Structures. The current Ladakh standoff, playing out in multiple domains, is the first “border conflict” since the appointment of the Chief of Defence Staff (CDS) and the creation of the Department of Military Affairs (DMA). The three services have been operationally mobilised to meet the challenge. It is also reasonable to assume that parallel actions are being taken in cyber, space and perception management domains. Separately, at the national level, diplomatic engagement as well as counter measures are being undertaken in the fields of economy and trade, such as the banning of Chinese Apps, restrictions on award of contracts for infrastructure and on investments from China. To deal with multiple challenges (and initiate required counter measures) in the military domain, consideration should be given to the creation of a “National Command Post (NCP)” under the CDS to serve as the nerve centre of an “all of military” approach.

The reality, however, is that despite the harsh lessons from Kargil, we have not created any credible politico-military joint structures for conducting a national level threat analysis and initiating counter measures. As in the past, the NSA and his NSCS have become the de-facto national security decision-making hub. There are no apparent signs of any joint structures created at the level of the CDS for the integrated management of the crisis, not only in terms of force deployment but also for capability enhancement and emergency procurements. It would appear that the vast span of administrative responsibilities assigned to the CDS as Secretary of the DMA have impinged on his ability to assume this overarching operational responsibility for providing an integrated approach in managing the national war effort in a crisis scenario.

Shedding Comfort of Ambiguity and Prioritising Capability Development. That the Indian security structures and the armed forces have functioned without a formal directive, is merely to reiterate the well-known non-existence of a formal National Security Strategy (NSS) and a National Defence Strategy (NDS). While China has been publishing Defence White Papers since 1998, India is yet to embark on this venture. The absence of such formal documents has allowed the Indian armed forces to operate in the realm of ambiguity, without an integrated doctrine and keeping the line ministries bereft of specific roles in a crisis.

¹⁴ Abhijnan Rej, “Ladakh: The Anatomy of Surprise”, *The Diplomat*, August 2020.



Vast operational experience of wars with Pakistan and China, regular manning of live borders, the Kargil conflict as well as the Uri (2016) and Balakot (2019) strikes have provided the Indian armed forces adequate operational experience to conceptualise the critical framework of India's strategic options and the likely nature of operations in various contingencies. With these inputs, it should be possible to evolve an India-specific doctrine, strategy and tactics, and to determine the steps on the ladder of escalation across domains. Such an exercise can in turn provide a sound base for formulation of long-term Perspective and Acquisition plans. The reality, however, is that we are doctrinally and operationally stymied. Over the last three decades the central focus of operational thought has been on managing borders and undertaking Pakistan-centric counter terrorist operations. We also seem to be caught up in past paradigms of capturing territory in depth, to impose punitive costs and to create bargaining leverage (using Strike Corps), and to impose ex-post facto punitive costs if our territory is captured (Kargil and Galwan Valley), rather than deterring and pre-empting hostile action. This has resulted in the perpetuation of "reactive defensive thinking" at the tactical and operational levels, rather than proactive operational constructs attuned to a contemporary two-front threat.

The reality thus is that in the current scheme of things, the capability development of the services is neither driven by contemporary operational scenarios nor supported by assured budgets. The spectacle of mid-crisis urgent military acquisitions¹⁵ by the Defence Acquisitions Council (DAC), from assault rifles to fighter jets, or lobbying for an Aircraft Carrier for the Navy or Light Tanks for the Army, further indicate our ill-preparedness and tendency towards fire fighting in the face of a crisis. Ironically, a similar spectacle played out during the Kargil conflict as well over 20 years ago. We simply have learnt no lessons. The haze of ambiguity needs to be cleared and inter and intra service prioritisation of acquisitions needs to be carried out in relation to updated war fighting doctrines and specific threat mitigation and deterrence objectives.

Strategic Partnerships. From current developments in India's immediate neighbourhood, it is evident that the level of threats across our borders is increasing exponentially. Our aim of achieving "punitive deterrence" against Pakistan and "dissuasion/dissuasive deterrence" against China is unlikely even in the medium term (2030-35). Under these circumstances, "going it alone" seems a challenge which our existing economic and military power can ill afford. Therefore, strategic partnerships and issue-based alliances, in both bilateral and plurilateral contexts, have become critical to counter China's,

¹⁵ Rahul Singh, "Military gets special powers to expedite weapon purchases of up to Rs300 cr", [Hindustan Times](#), July 16, 2020.



“containment and dominance” strategy. A pragmatic analysis needs to be carried out of our defence and strategic relationships with friendly countries with which we share convergences, and priority fields of cooperation identified for each. Evaluation of the pay-offs that India is deriving, during the current standoff, from robust defence cooperation with the US, maintaining our legacy relationship with Russia, and from continued engagement with Israel and France, would help us evolve a well considered roadmap for developing these partnerships. Cooperation with key neighbours, including sharing our vital national security concerns, needs to be reinforced. At the level of the services, protocols for interoperability, intercommunication, intelligence exchange and logistics support need to be worked out to get the best benefit from these arrangements. This also is the time to evaluate the efficacy of concluding and exploiting “enabling agreements” like LEMOA/ACSA, COMCASA or BECA with friendly partners. More regular training and interoperability exercises in identified areas also require consideration.



India-US Joint Exercise, Yudh Abhyas, September 16, 2019. Source: Flickr

Developing a Multi-domain Continental Warfare Doctrine

India faces the unenviable challenge of being located in a hostile neighbourhood amidst two nuclear armed adversaries, with whom legacy disputes persist even after seventy years of India's independent existence. Inherited unsettled borders, marked by major ideological differences, have



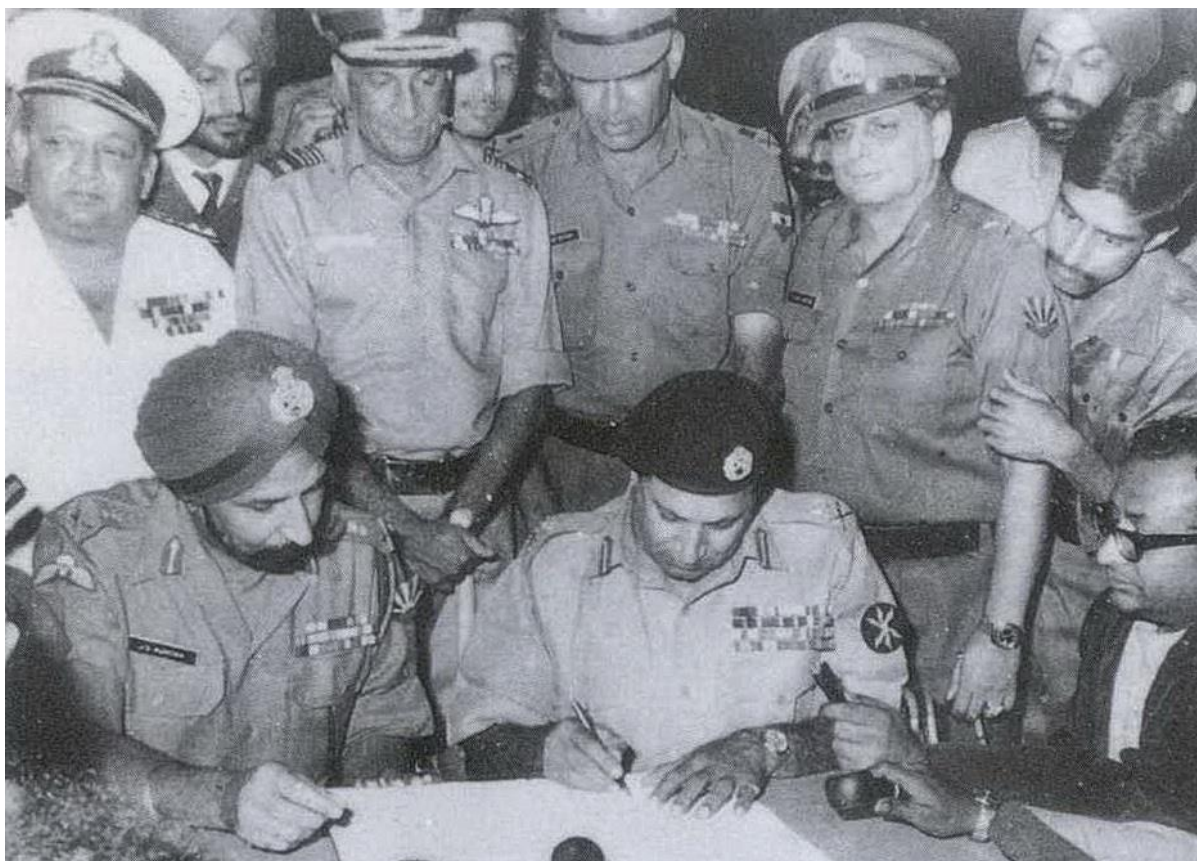
perpetuated a hostile security environment, necessitating the maintenance of large standing armed forces at a heavy cost. The hitherto “thinner” deployment along the LAC with China had been made possible by mutual peace and tranquillity agreements and reasonably effective CBMs. These have been rendered redundant as a result of China’s deception, advancements in military technology and border infrastructure development, creating room for surprise and non-contact manifestation of threats, which the CBMs were designed to prevent. The new reality is that the borders are marked on the ground not by any mutually accepted lines but by physical occupation. Neither the clarification of the LAC nor a boundary settlement appear to be in the offing. While debates continue over transforming the armed forces (particularly the Army) from “manpower” to “technology intensive lean forces”, the reality is that at the high altitudes in Ladakh and elsewhere along the Eastern border, where weather and terrain challenge even the most advanced military technologies, there is urgent need for evolving India-specific war fighting doctrine and force structuring. The requirement is to develop full-spectrum (trench to space) warfare capabilities, along two fronts, and in multiple domains. This is a medium-term reality (2035) that military and national planners have to realise, notwithstanding financial constraints, lack of defence technology and associated manufacturing capability.

India has long suffered from the absence of integrated planning between the services and neglect of contemporary and emerging domains of warfare. We have yet to synergise deterrence and war fighting capability across both conventional and strategic domains. Any future war fighting doctrine needs to overcome these drawbacks. Of course, the inter-se weightage to be accorded to each domain would be a function of India’s unique operational environment and threat assessment. In the absence of any other empirical study in this domain, the Delhi Policy Group carried out sample survey amongst experienced defence professionals in May 2020, according to which the percentage of resources required to be assigned to each domain were as follows: Army (25%), Air Force (17%), Navy (19%), situational awareness domain (ISR, MDA, Space) (10%), asymmetric warfare domain (cyber, information and legal warfare) (11%), strategic domain (CBRN capability) (8%), R&D and technology development (10%). These results are at best broadly indicative for future defence planning norms and require further study.

Specific aspects related to evolving a suitable doctrine for dealing with our two primary adversaries are discussed in the succeeding paragraphs.



Pakistan



Pakistani forces signing the Instrument of Surrender in Dhaka on December 16, 1971.

Source: Twitter/@AkashvaniAIR

India shares a 2545 Km long delineated and demarcated International Boundary (IB) with Pakistan, extending from Gujarat to Jammu, across deserts and plains. Being a settled boundary, it is fenced and manned by the Border Security Force (BSF - a Para military force). To its North is a 778 Km Line of Control (LOC) in Jammu and Kashmir and a 110 Km Actual Ground Position Line (AGPL) in area of the Siachen Glacier in Ladakh. The LOC and AGPL are disputed and in the event of loss of territory, the "taker is the keeper". The LOC is fenced, which is designed to be an Anti-Infiltration Obstacle System (AIOS).

The concept of defence in the IB Sector is based on "Pivot Corps" with ground holding Infantry elements and adequate mechanised reserves to provide "offensive defence" capability. The "pivot corps" follow different deployment patterns depending on the terrain configuration. These formations take over the operational responsibility from the border guarding Para Military Force (BSF) on mobilisation. The deterrence value is provided by the three "Strike Corps", based on all arms mechanised formations that are tasked to strike at the value targets in depth, and in so doing, cause substantial destruction of war waging potential and capture territory for subsequent bargaining. At the



strategic level, the availability of this strong mechanised “punch” (offensive component) is significant to turn the flanks, and pose credible threat to its heartland should Pakistan choose to opt for a J&K centric offensive option.



Indian Mechanised Forces exercising in the Rajasthan desert. Source: Gadgets360

Considerations of terrain, weather and the operational imperatives suggest that this theatre can be made “technology intensive” (Informationised warfare enabled) and the bias of manpower can be optimally shifted to the Northern borders (mountains). Due to well-developed infrastructure, lighter infantry formations with integral mechanised reserves and tactical air mobility can be deployed over larger frontages, by appropriately augmenting their capability. Organisation of Integrated Battle Groups (IBG’s) for launching quick punitive offensive operations is a step in the right direction. IBG’s operating in a well-established ISR grid, strengthened Air Defence capability with integrated C&R (Control and Reporting) System, heavy artillery, long-range vectors and precision munitions, unmanned aerial systems (armed and un armed UAVs / drones), ground robots, AI based battlefield management system (BMS) etc. can be formidable offensive defence capability. The tasks of capturing / destroying objectives in depth, assigned hither to, to the strike Corps could now be assigned to land based conventional missiles and MBRLs and to Air force with standoff capability. Deep attack drone clusters and UAVs conducting swarm operations can also play a significant role. The doctrine would thus be of, **“Technology intensive, Light Positional Defence with Augmented Offensive Capability”**.



This concept conforms to the changed battlefield realities of: short and swift multiple domain operations, a blend of non-contact and contact - battle, creating redundancy of the concept of capturing territory in depth areas for subsequent negotiations and optimising manpower resources. Best results would however be achieved by blending this with deterrence in the strategic domain.



Soldiers celebrating victory after the Kargil War. Source: Indian Express

Along the LC, with Pakistan, in the mountainous terrain of the Union Territory of J&K, our permanent positional defensive posture is for safeguarding the territorial integrity against Pakistan claims and for countering Pakistan sponsored infiltration to conduct proxy war in the hinterland. These tasks are inherently manpower intensive, though some marginal reductions have been possible due to creation of "fence", as an obstacle against infiltration (since 2003-2005) and due to limited induction of technology. Credible offensive capability is available with adequate uncommitted reserves. While our proposed future operational doctrine also requires the continued deployment of troops, some thinning can be carried out by enhancing all weather ISR and intelligence capabilities, greater mobility including by tactical heli-lift and by utilising AI for smart management of the counter-Infiltration grid. Augmentation of fire power, employment of long-range vectors and precision munitions (to the extent permissible by terrain), extensive employment of weapon locating radars, use of UAVs and air power against identified routes and defiles will immensely strengthen conventional deterrence along the LOC.



The requirement also exists of maintaining strong reserves, with a high component of Special Forces and Himalayan ski troops (Alpine forces) to carry the offensive across the LOC whenever required. A greater synergy is required to be developed between the Army and the Air Force for the conduct of special operations in depth, induction and de-induction, designation of targets and delivery of fire power.

Thus, the doctrine for this sector would be **“Strong Positional Defence Augmented with Technology and Fire Power”**.



155mm FH 77B Gun Deployed along the Line of Actual Control.

Source: Twitter/@adgpi

It is also imperative to relieve Army troops from counter-terrorism operations in the hinterland. The elements of State Police, CAPFs and PMFs deployed for these tasks could best be placed under the operational control of the Army, to ensure synergy between formations involved in the counter-infiltration and counter-terrorism operations as they are deployed in successive tiers. This requires a major change of mindset in the functional relationship between the MOD and the MHA.



Along the AGPL in Siachen, there is no alternative but to continue dominating the vital heights by physical presence in order to prevent seizing of territory by Pakistan. Here, the ISR capability needs to be enhanced substantially. China-Pakistan military collusion extending to areas North and Northeast of Ladakh, the Karakoram Range and the Shaksgam valley, partly due to increased CPEC-related activity, the scenario is likely to become even more critical. In addition to undertaking strategic infrastructural development on India's part, this will require deploying appropriate long-range vectors and suitably positioning reserves, including super-high altitude centric special forces. High altitude warfare, being India's core competence, must be exploited to the maximum against these collusive adversaries.

Experience of recurring conflicts with Pakistan, suggests that the escalation ladder straddles (and shifts) across the conventional and the strategic domains. Although Pakistan has not officially declared its nuclear doctrine, it essentially envisages a two-tier response. In the first tier, at the operational level it links a low yield nuclear response with conventional war fighting strategy, using the bogey of an "existential threat". To that extent, the tactical (battlefield) nuclear weapons are part of Pakistan's conventional response strategy. At the second tier, it visualises using nuclear weapons against counter force and counter value targets in response to India's nuclear retaliation (in conformity with India's own doctrine of No First Use (NFU) and massive retaliation). This policy of Pakistan is aimed at curtailing the space for conventional escalation under a "nuclear overhang", a space within which its military planners perceive they can contain any Indian response to terrorism-oriented retaliation and the resultant escalation.

India's strong and credible punitive conventional deterrence is adequate to deal with both Pakistan's conventional challenges and attempts at leveraging its tactical nuclear weapons. India's limited tactical retaliation to Pulwama through a cross-border air attack on terrorist infrastructure created space for a limited and calibrated response, while the subsequent Pakistani reaction of air retaliation created an escalatory scenario. The dilemma for India is how much escalation and the manner of such an escalation should be, whether it should comprise non-contact or include limited offence. Doctrinally, India with its superior conventional capability and improved Ballistic Missile Defence (BMD) can counter any missile or air campaign by Pakistan. Even if ground offensives are envisaged, these can be calibrated for a punitive response. However, it has to be borne in mind that escalation will be inevitable.

This brings into play the role of Theatre Nuclear Weapons (TNWs). Towards this threat, the Indian position is very clear: use of any nuclear weapons at any place



against our forces will result in a massive retaliation. This position must be seen by Pakistan as a credible deterrent. Notwithstanding the above, calling off the Pakistani bluff and enhancing space for conventional operations requires: the enhancement of India's standoff capabilities, credible and integrated situational awareness platforms and continuous technological upgrades of our nuclear forces for rapid response through measures like canisterised missile systems. In addition, NFU must not be allowed to become a millstone around our neck and should be open to continuous review based on changing circumstances. This requires evolving a composite conventional and strategic warfighting doctrine across multiple domains, together with structures to coordinate these elements seamlessly. This will need to be created at the level of the Joint Staff under the CDS.

China

India's 3488 Km unsettled borders with China are based on the Line of Actual Control (LAC), extending from Ladakh to Arunachal Pradesh and comprising mountainous, high-altitude and under-developed terrain. On the Chinese side, the Tibetan Plateau with its less rugged terrain and well-developed infrastructure, enables the PLA to maintain a light deployment posture with border guards. Surveillance, terrain and mobility provide China the first mover advantage as well as the luxury of manning the LAC lightly. Additional troops from depth areas can be mobilised rapidly over well-developed communication networks.

Maintaining a credible defensive and surveillance posture requires India to deploy defensive formations with a **multi-layered ISR system to cover operational and strategic depths that can detect moves of centralised reserves, rocket forces and strategic assets coming** from the Chinese main land, along extended lines of communication. The surveillance system, to be dependable, must be based on satellite imagery, UAVs and aerial surveillance platforms, complemented by radars and tactical electro-optical surveillance integrated into both tactical C3I and C4ISR systems. In terms of relevance and to be current, all intelligence will need to be collated and analysed in forward locations and disseminated in real time, for which the requirement of technical analysts and language interpreters stands out. This is a criticality which has not been addressed adequately in the past and must receive the highest attention to prevent our military from being repeatedly surprised.



Indigenous Swathi Weapon Locating Radar deployed along the LAC.
Source: Indian Dream

The primary tasks of the Indian Army along the LAC are to maintain India's territorial integrity and check transgressions by PLA. Constraints of mobility, limited surveillance (ISR) and human intelligence (HUMINT) compel India to maintain fairly large in-situ troop deployments. The level of deployment so far was less intense than along the LOC Sector with Pakistan, on account of border CBMs and peace and tranquillity agreements negotiated with China since 1993. This scenario is now set to change with the Ladakh standoff.

In planning our future doctrine for defence along the Northern borders, the prevailing terrain, altitude and extreme cold climatic conditions preclude use of many a high technology weapon systems and munitions and restrict the use of air power for operations and mobility. Non-availability of high classification roads restricts movement of long-range vectors, including guns and missiles, a factor which is even more pronounced in the Eastern Sector than in Ladakh. River valleys and passes present well identified avenues of approach which need to be defended. Due to restricted inter-valley movement, areas become compartmentalised, with limited complementarity of operations across different valleys. Formidable terrain and weather factors thus necessitate a forward deployed operational posture.

Our current force structures continue to be infantry biased with limited mobility and fire power, which is a limitation that needs to be overcome by suitable changes in the existing defensive posture. The deployments along identified avenues of approach need to be self-contained, in the form of tailor-made Integrated Battle Groups (IBGs) which are agile and equipped with integral air defence, fire power, mechanised forces (tanks and Infantry Combat



Vehicles equipped with missiles). Where required, Forward Air Controllers for directing air support, combat Engineers and support elements for operational logistics need to be factored in. Also, as against the prevalent practice of fighting a battle of attrition at the point of contact, these agile formations should be able to provide a capability of manoeuvre and of launching counter offensive/quid pro quo (QPQ)/riposte operations by rapidly shifting the point of engagement.

It would also be imperative to have appropriately positioned acclimatised reserves, medium lift helicopters (Chinooks, MI-26, MI-17V) and additional fire power resources in the form of ultra-light howitzers with specialised precision ammunition. Attack helicopters, armed UAVs (suited to operate at super high altitudes) also need to be employed to augment fire power in threatened sectors. Employment of Special Forces, Scouts and troops trained in high-altitude warfare would have a force multiplier effect in interdicting offensive forces in harsh winters and isolating them from their base. Employment of tactical, medium range missiles and MBRLs should be considered to break enemy build up as also to conduct depth battle, as part of well-conceived denial strategy. In fact, this should be the preferred option, in case more troops are required to be deployed along the LAC post the current standoff, rather than fixing them into defensive positions.



Defence Minister Rajnath Singh with special forces personnel in Ladakh, July 17, 2020. Source: The Print



The concept of military deployment along the LAC could therefore be described as **“Positional Defence by tailor made Integrated Battle Groups supported by Specialised Mobile Reserves”**.

Akin to our considerations for Pakistan, an effective deterrence can be achieved against China by integrating operations in conventional and strategic domains. Hitherto, neither India nor China have played the nuclear card directly. This, however, must change post the Ladakh experience. China, despite projecting its nuclear forces as being US-centric, has sufficient deployments in the Tibet Autonomous Region (TAR), within its Western Theatre Command. From here, it can target India's value targets in the Indo-Gangetic plains as well as the technological centres, including those in Southern India. As regards its doctrine, China professes minimum deterrence and No First Use (NFU), unless attacked, providing it a doctrinal leeway for “launch on warning” or “use under attack”. India thus has to incorporate this threat in its doctrinal thinking.

India's endeavour to achieve “dissuasive deterrence” in the short to medium term must include conventional capability enhancement as well as developing full spectrum deterrence, as has been done against Pakistan. Doctrinally, India needs to develop a two-stage response. At the outset, India must make it abundantly clear that should it be faced with serious operational and strategic challenge in the conventional domain, entailing attacks on its key VAs/VPs (Vital Areas/ Vital Points), national critical infrastructure or loss of strategic assets, it would have little option but to respond with its weapons of last resort, accepting the consequences of escalation. A resolve towards this can be demonstrated by clear definition of its thresholds of tolerance and enhancing mobility of shorter-range missile systems, through pre-emptive forward deployment of such assets as part of strategic signalling. The second stage would be operationalisation of IRBM/MRBM vectors on land and at sea, clearly indicating an all of China reach.

This requires a serious nuclear posture review. If the situation in Ladakh prolongs or aggravates, India may have little option but to resort to game of posturing and brinkmanship, backed by credible signalling.



Agni V Missile Test. Source: Tosshub/IndiaToday

Operations in Cyber and Other Domains

Cyber Warfare (defensive or offensive), though conducted in support of the operations of a Command or a Corps, would be part of integrated Cyber Operations at the national level, executed through the Cyber Agency (or Command, when raised). This organisation would be responsible for the conduct of “cyber support operations” to include cyber intelligence collection, collation, analysis and dissemination; cyber deterrence; formulation of a prioritised cyber target lists as related to the orchestration of conventional operations; and planning and execution of probing and retaliatory actions. Conduct of cyber operations would require a comprehensive politico-military directive and robust legal structure to ensure that these are conducted in accordance with the national/military strategy and that the rules of engagement comply with international and domestic laws. There should also be enough legal grounds for moving from the cyber to the physical conflict (kinetic offensive action) domain, should the necessity arise. These nuances need to be incorporated in the relevant operational directives.

Military reforms that are underway in China’s PLA include its endeavour to emerge as a fully informationised force by 2049. Strategic Support Force (SSF) is an important constituent of this reorganisation and it provides the core for the conduct of asymmetric warfare, including in the domains of cyber, space, electronic and information warfare. India has to develop a doctrine for countering the operations of this vital military structure. While some pointers to planning for cyber warfare have been provided above, the doctrine would need to be evolved for fighting in other asymmetric domains as well.



Conclusion

India faces a two-front threat in a troubled neighbourhood. Whereas military asymmetry with China has widened, with Pakistan the gap in conventional asymmetry is narrowing. By its current aggression across the LAC and territorial aggrandisement, China is signalling its geo-political intent to restrain and discredit India. There is little intent on China's part at accommodation, co-existence and border settlement with India, which is seen as a strategic challenge that must be contained or even neutralised. This reinforces the fact that India's threat perspective must shift to China, rather than remaining Pakistan-centric.

Changing this threat perspective requires the Indian Armed forces to develop an India-specific doctrine for fighting a full spectrum (trench to space) war, across multiple domains. This necessitates induction of technology but equally requires "boots on ground" along the LOC and the LAC.

In this paper, we have through examination and analysis attempted to recommend terrain specific doctrines designed to meet specific military threats. Our analysis clearly outlines the need for integrating technology and making structural changes to develop a credible dissuasive capability against China and punitive deterrence against Pakistan. While we have not paid adequate attention to the nuances of a China-Pak collusive threat and its management, this is a grey area that also needs to be addressed by joint planning and wargaming of various scenarios. It is high time to give up our traditional hesitation about using strategic deterrence as a tool in threat management. This will require a doctrinal review for integrating our conventional and strategic responses. In any such review, the CDS and the Joint Staff have a major role to play, which is sadly not yet in evidence. Meanwhile, the nation's military security remains at stake.



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