DEFENCE PRIMER

An Indian Military in Transformation?

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COMBAT POTENTIAL AND MILITARY CAPABILITIES VIS – A – VIS CHINA

BRIG. ARUN SAHGAL (RETD.)

A discernible bellicosity in the Chinese attitude towards India has resulted in increased tensions and aggravated boundary disputes. Since 2015, there have been three major Chinese intrusions, two in the Ladakh Sector (Depsang and Chumar) and the latest in the form of a 74-day standoff at Doklam on the India-Bhutan-China un-demarcated tri-junction. Muscle flexing, assertive border posture and, incursions across the Line of Actual Control (LAC)—including into settled or undisputed areas—have become standard coercive tactics by China to keep tensions alive and New Delhi on the defensive. Attempts at perpetuating border tensions is largely on accounts of perceived military asymmetry and an upgraded Chinese military posture in Tibet.

Apart from the military asymmetry, belligerence can also be attributed to India's steady economic rise, enhanced global standing following a major foreign policy push by the Narendra Modi government, and more importantly the India-US-Japan strategic convergence which China

looks upon as a containment strategy to restrain her rise. Resultantly, China has hardened its stand against India on almost all bilateral and multilateral issues, severely constraining areas of convergence in bilateral relations. This was particularly visible in China vetoing India's membership of the Nuclear Supplier Group (NSG) and its inflexible stand on terrorism, notably in the declaration of Jaish-e-Mohammad Chief Masood Azhar as a United Nations sanctioned terrorist.

Another source of bilateral tensions is the increasing Sino-Pakistan collusion and the massive Chinese investments in Pakistan under the China-Pakistan Economic Corridor (CPEC), a major infrastructure boosting initiative involving approximately $64 billion. To appease China, Pakistan has ceded large tracts of land in the disputed Jammu & Kashmir territory for upgradation of Karakoram Highway connecting the disturbed Xinjiang-Uyghur Autonomous Region with the warm waters of the Indian Ocean at the newly developed port city of Gwadar. What is of concern is the bourgeoning

military relationship that transcends military sales and technologies, sharing of nuclear know how and even access to the restricted Chinese geo-navigation system BeiDou that has significantly enhanced the accuracy of Pakistan's nuclear delivery capability[1].

Although Beijing has traditionally underplayed threat from India, it has off late begun to look at India as a part of strategic collusion of forces arrayed against it, principally acting in concert with the US-led alliance system. Thus, it perceives India as a "near peer competitor", which if not contained could pose a challenge to China's regional and global aspirations in the long run.

Scope

Within the backdrop of a growing military challenge from China, the paper looks at the nature of threat posed by the People's Liberation Army (PLA) in terms of its force capabilities, doctrines and infrastructure in Tibet. It also tries to analyse India's doctrinal and capability enhancement required to meet the Chinese challenge in the medium-term perspective (2030).

PLA in Chinese Revitalisation Strategy

The 19th Party Congress has resulted in consolidation of power under President Xi Jinping, which has, apart from other things, put PLA at centre stage in the Chinese political hierarchy. The focus of President Xi's political report was to achieve "great rejuvenation of the Chinese nation" and restore China to its rightful great power status by 2049. What is

of interest is that the time period of proposed national rejuvenation coincides with the PLA modernisation, and its evolution into "a world-class army by 2050". Even more importantly, the absolute leadership of the Party over the PLA further underscores the role of the military power in achieving Chinese revitalisation goals. There should be little doubt that China will not be shy to leverage military power both for dispute resolution or regional assertiveness to achieve its political goals.

PLA Military Reforms and their Relevance for India

The thrust of the PLA modernisation is to make the 2.25 million-strong force leaner and more efficient through doctrinal changes, structural reforms and manpower rationalisation. The overall approach of restructuring and modernisation is to achieve revolution in military affairs (RMA) with Chinese characteristics by 2020; and evolve as a fully informationised force, capable of winning information age warfare, by 2049. These twin aims are central to the realisation of the `Chinese dream' and its 'rejuvenation' as a great nation.

Objective of Reforms

The two basic objectives of reforms are to centralise the PLA's decision making in the hands of the Central Military Commission (CMC) and to transform the historically land-dominated military into an integrated force. The thrust of the reforms therefore revolves around:

■ Revamping structures and systems at political, strategic and operational levels. A three-tier system has been established with

CMC at the apex, Functional Theater/Battle Zone Commands at the second, and the administrative system running from the CMC to the services at the third place

■ Centralising all political-military decision making in the CMC that was hitherto enjoyed by the PLA (Army)[2]

■ The erstwhile seven Military Area Commands (MACs)/Military Regions (MRs) have been reorganised into *five* `Theater Commands' (Northern, Central, Eastern, Southern and Western) to put in place joint structures to align China's strategic directions with command of troops [See maps]

Erstwhile and Restructured Military Regions

■ A major troop rationalisation proposal is to reduce 300,000 troops, primarily from the Army, from other than the Western, Southern and Eastern Theater Commands, given the significance of borders with India, Vietnam and Taiwan. PLAN and PLAAF are being accorded priority for modernisation.

■ A Ground Forces Command (Army Leading Organ - Army HQ equivalent) has been created to segregate PLA component from the General Staff Department, where it was traditionally embedded into the CMC and participated in policy formulation, even for the other services.

■ The erstwhile Second Artillery Corps has been elevated to the level of an independent service (at par with the Army, the Navy and the Air Force) and designated as the PLA Rocket Force. It controls all intercontinental ballistic missiles, medium range and short-range ballistic missiles. This force will have separate wings for nuclear and conventional missiles. Its mission is to develop credible and reliable `nuclear deterrence and counter strike capabilities'.

■ A significant development is the creation of a new Strategic Support Force (SSF). The service, when fully operationalised, would serve as the core of information warfare force and control all aspects of asymmetric warfare, including electronic warfare and

China's military regions

- space & cyber capabilities, thus creating substantial force multiplier effect.
- Along India's borders, the erstwhile Chengdu Military Region and the Lanzhou Military Region have been amalgamated to form a Joint Services Western Theater Command, with its headquarters at Chengdu.
- Tibet Military Command (TMC), though located geographically within the Western Theater Command, has been placed directly under the PLA Ground Forces Commander (along with Xinjiang Military Command). This enhances the significance of the TMC, which is largely India centric.
- A Joint Logistic Support Force of the CMC, with five logistic support centres, has been created to cater for the common logistic requirements of all the services.
- After the Deng era curtailment of Chinese defence expenditure (1979-89), despite high economic growth, higher defence allocations (in real terms) have resumed post 1989, with double digit increase in defence expenditure.
- Regarding modernisation of PLAN, the Eastern and Southern fleets now form part of Eastern and Southern Theater Commands. The doctrinal shift is from `coastal defence & inshore defence' to `offshore defence and open sea defence'. The area of operations has expanded to the Western Pacific and, importantly. the Indian Ocean. By 2020, PLAN will have four aircraft carriers along with mix of nuclear submarines with JL-2 ICBMs with resultant implications of power projection, including in the Indian Ocean.
- The PLA Air Force (PLAAF) plans to technologically upgrade its current 2,000 combat aircraft fleet to have approximately 70 percent fourth-generation fighter aircraft. It also is developing its indigenous fifth-generation aircraft, J-20. Its frontline J-10 aircraft have been modified for operations in high-altitude areas. China has developed advanced three-tier air defence system based on ground-based sensors and airborne electronic warfare aircraft for early warning. It has also designed and deployed radar systems that are reportedly optimised to detect stealth aircraft, including passive surveillance systems. The radars are integrated in an '*air intelligence radar network',* covering the entire country.

PLA Ground Forces Reorganisation and Modernisation

PLA ground forces comprise Group Armies (GA) akin to the Indian Army Corps. These forces constitute the main offensive elements of the PLA and are employed for the strategic missions as dictated in the active defence doctrine that includes launching of pre-emptive operations.

Next are the 'Local Forces' or ground holding units akin to Indian defensive formations, employed for the territorial defence of the geographical area of their responsibility. In addition, there are Rapid Reaction Forces and Special Forces. People's Armed Police is militia responsible for maintaining law and order in border areas and equivalent to the Indian Para Military Forces.

There are a total of 18 Group Armies, located in the five Theater commands. An important

element of operational modernisation is the emphasis on developing "new type of combat forces" by laying more emphasis on army aviation, mechanised units, special operations and cyber/electronic warfare units.

Group Armies do not have any standardised organisational structure. They are mostly task oriented, which could include mechanised/motorised, mountain or normal infantry divisions or brigades supported by task-based armoured brigades or divisions. As an example, the 13 Group Army that is part of the Western Theater Command (responsible for operations in the Ladakh sector of India) has two armoured brigades on its ORBAT, comprising nearly two dozen plus mechanised units, including armoured regiments and mechanised battalions.

Rapid Reaction Forces (RRF) have been created to cater for quick reaction to major operational contingencies (internal or external) anywhere in the country. There are a total of four Group Armies—13, 38, 39 and 54—designated as the RRF forces. The rapid reaction status essentially means that these formations together with their combat support elements can be deployed in any part of China within two weeks.

In addition, there is a major strategic intervention force, the 15 Airborne Corps, also designated as the RRF, though technically it is a PLAAF formation. It comprises three airborne divisions, each division with three regiments. The 14 Air Transport Division has IL-76, while Y-7 and Y-8 is the integral formation responsible for the air lift. As per available information, China has the potential to airlift one division

ex 15 Airborne Corps in a period of 24 hours. Additional commercial airlift capability will be required to mobilise more forces for major strategic/operational contingencies[3].

In terms of equipment, PLA is being equipped with state-of-the-art indigenous weapons and technologies that enhance their combat capabilities, attuning them to function in net centric environment under the rubric of informationisation. Some of the specific aspects include lighter and more effective personal equipment, mortars and artillery with longer ranges, and laser-guided targeting.

Western Theater Command

The Western Theater Command (WTC) is the most significant development of the PLA reorganisation for India. It creates a single Battle Zone, headquartered in Chengdu, responsible for the land borders with India. Its responsibilities include the 4,057-km boundary-cum-Line of Actual Control (LAC) with India. This long stretch, due to terrain peculiarities and lines of communications, is fragmented. The same command is also responsible for the border with Afghanistan, Pakistan Occupied Kashmir (POK), Nepal, Myanmar, as well as well as the relatively quiet borders with the Central Asian Republics, Russia and Mongolia. The sensitive areas of Xinjiang and Tibet, with active terrorism and potential situations of unrest, are also its operational responsibilities. This vast expanse of territorial control, with peculiar terrain features, would pose a peculiar set of challenges for the smooth orchestrating of forces by a single commander during any conflict contingency.

Prior to the re-zoning, this responsibility was divided between the Xinjiang Military Region (headquartered in Lanzhou) and the Chengdu Military Region (headquartered in Chengdu). This command comprises three Group Armies—the 13th, 47th and 21st. Added to above are 10 divisions/brigades of the Tibet and Xinjiang Military Districts.

To enhance the force capability in the Tibet region, the troops from the erstwhile Jinan Military Region (now divided between the Northern and Central Theater Commands) and erstwhile Guangzhou Military Region (now Southern Theater Command) used to exercise in Tibet. Now, there is a possibility that other than the Southern Theater Command, formations from the strategic reserve and heaviest Central Theater Command (with five Group Armies) could be made available to the Western Theater Command for operations. These formations are better equipped and require minimum preparation for mobilisation and, thus, best suited for reinforcement tasks.

With the resources of the PLAA and PLAAF as well as the conventional missiles of the Rocket Force under command, the WTC will be to orchestrate joint and synergised operations against . The other impacts of the creation of the WTC in an operational scenario could be as follows:

- Qinghai region which was earlier part of the Lanzhou Military Region in the new West Zone will enable more flexibility in the induction of acclimatised and trained troops into Tibet
- Availability of reserve formations from other

Theaters, which are better equipped and integrated, will enhance operational potential

- Strategic mobility thru mobilisation of civil aviation resources would put China in a position to mobilise 10 to 14 divisions in a period of two weeks, significantly enhancing the nature of threat
- With additional mechanised forces available and a terrain favouring the deployment, nature of mechanised threat has significantly increased. According to estimates by military sources, China has the potential of employing nearly three armoured brigades in Ladakh, comprising 12 to 16 armoured regiments supported by mechanised battalions
- With additional responsibility for the security and the success of $56 billion CPEC (China-Pakistan Economic Corridor), China will remain sensitive to infrastructural and force upgradation by India. Obverse, with high economic and strategic stakes being built into the project collusive threat from China, Pakistan should now be deemed to be a reality.

Infrastructure and other Developments in Tibet

In addition to both force build up and modernisation, China is also involved in a massive India-centric infrastructure buildup in the Tibet Autonomous Region (TAR) to include rail, road, airfield and telecommunication infrastructure. This includes capacity augmentation of the Golmud-Lhasa rail line with the capacity to mobilise upto 12 PLA divisions over a two to three week period in the sector of choice. Similarly, rail links from Lanzhou to Kashi and onto Lhasa facilitate easy switching

of reserves and logistics resources between the Chengdu and Lanzhou regions of the Western Theater bordering India. Additionally, China has developed a 58,000-km road network and constructed five operational airfields at Gongar, Pangta, Linchi, Hoping and Gar Gunsa[4]. China's massive programme to upgrade its airfields, including development of advance landing grounds, greatly enhances the Chinese Air Force's overall offensive potential in Tibet, including substantial strategic airlift capabilities, allowing rapid buildup of forces and shortening the warning period for India.

China is also preparing for asymmetric warfare by upgrading its net-centric warfare capability in the TAR. To support its command and control structures, China has installed very small aperture terminal satellite stations and has rapidly spread its fiber-optic communications network, covering all 55 counties of the TAR.[5] Secure communications and broadband connectivity allow fielding of battlefield command systems, which could tilt the cyber warfare balance in the favour of PLA.

Nonetheless, the vagaries of nature and the complexities of high-altitude terrain preclude the rapid and massed application of forces, calling into question PLA's ability to rapidly deploy regular and special forces for a preemptive offensive. To address this issue, the PLA is reportedly constructing hyperbaric chambers and oxygen-enriched troop barracks for speedy acclimatisation of troops.

Further to fine-tune its force application, the PLA has amplified both the level and the frequency of exercises in Tibet. The scope of these exercises is becoming increasingly sophisticated, and showcases Chinese capacities not only in net-centric warfare but in fielding integrated command platforms and providing real-time information and battlefield assessments. The PLA has reportedly been rehearsing capture of mountain passes in Tibet at heights over 5000m with the help of armoured vehicles and airborne troops in live military exercises. Some of these exercises also involve massed rocket and artillery fire that include vertically launched rocket and missile system for precision attacks equipped with terminal guidance sensors. During recent Doklam standoff, PLA conducted exercises at the lower plateaus of River Yarlung Zangbo (Brahmaputra in India), in which PLA mountain brigades participated to asses their operational readiness to undertake joint operations, entailing use of light tanks and missiles among other weapons[6]. The PLAAF also took part in these exercises, employing multirole air superiority J-10 fighters in ground-attack configuration using conventional and laser-guided bombs. These exercises are a critical pointer towards the Western Theater Command's preparations for joint and integrated operations.

China is also building conventional and strategic missile capabilities in Tibet as part of strategic deterrence against India. The proximity of the heavily populated provinces of Uttar Pradesh, Bihar as well as other eastern states in India, is a major strategic vulnerability for India. However, this equation is set to change, with India successfully inducting 3,500-km-range Agni 4 and 5,500-km-range Agni 5 medium-

range ballistic missile (MRBM) that would bring the entire Chinese coastal heartland in its range. Yet the strategic power differential between India and China will remain until these and other missile variants, including submarine-launched intermediate-range ballistic missiles (IRBM), are inducted in adequate numbers.

Prognosis of Chinese Threat

Developments in Tibet and Chinese behaviour during the Doklam standoff strengthens perceptions within the Indian national security establishment that China is consciously aiming to alter South Asia's strategic balance through military activism in Tibet and across India's neighbourhood, including active military and nuclear collusion with Pakistan. What has particularly alarmed India's political leadership is that despite years of tortuous boundary negotiations, nothing tangible has been achieved so far.

The manner in which the India-China matrix plays out over the next few decades will be dictated by perceptions of relative power and the geopolitics and balance of power. Having unveiled an agenda for creating China-centric global order backed by undisguised military power, it is apparent that China in pursuit of its rejuvenation and regional dominance agenda will brook no competition that attempts to undermine its rise. This is worrisome for India. Within the above construct, India, which is increasingly seen as the "Western linchpin" of US-led Indo-Pacific rebalance strategy, will face increasing Chinese pressure aimed at restraining its strategic choices. This could take the form of coercion along the disputed boundary or

through proxies such as Pakistan. The scenario could get exacerbated if India under the present political leadership, equally interested in safeguarding its core interests, is perceived as posing a challenge or at best attempting to undermine Chinese interests.

Broader question, therefore, is that under what circumstances could India-China relations become competitive or even confrontational. China is neither a status quo nor a geographically satiated power, and will doubtlessly react politically and militarily should it feel threatened by inimical strategic shifts across Asia, such as India's economic and military rise or perceived changes in the balance of power as a consequence of growing strategic partnership with the US, Japan and Southeast Asian countries. India, on the other hand, is an equally proud civilisational power with an umbilical attachment to Tibet, besides being home to the Dalai Lama and 150,000–200,000 Tibetans in exiles. Therefore, it is not easy for India to fully concur with China over its sovereignty claims over Tibet, even though New Delhi has politically accepted Tibet as Chinese territory.

The geographical importance of Tibet to both countries seen in the backdrop of recent tensions over Doklam and vicious Chinese propaganda and pugnaciousness highlight that the undercurrents of tensions will prevail over the short to medium term. These are likely to get aggravated by growing India-US-Japan and possibly Australia strategic partnerships, and substantial upgradation of Indian military capabilities, including infrastructure in the border areas.

Tensions between the two sides could be aggravated (by design) through continuing Chinese intrusions and aggression, such as pushing for new claim lines or asserting old claims with greater stridency. These could be further boosted if China were to enhance its military activities in Pakistan-occupied Kashmir, upgrade military and nuclear relations with Pakistan, or attempt to make Nepal a third pressure point against India by building wider road and rail infrastructure and providing material military assistance. A further cause and proverbial red line will be if the Chinese were to succeed in undermining Bhutan's relationship with India. Yet another cause for tensions could be events following the death of the Dalai Lama and attempts by Beijing to foster its own nominee, eliciting wide spread protests from Tibetan émigrés in India and across the world.

Nature of Conflict

The operating environment along the India-China border is defined by two fundamental parameters, the terrain and the relative force balance. Vagaries of nature and high-altitude environment largely define the obtaining terrain environment. The terrain on the Chinese side is defined by Tibetan plateau and relatively low mountain ranges. This together with major infrastructural developments, that include road and rail communications as well as forward logistic installations, allow the Chinese Army to rapidly build up their forces and, even more importantly, maintain relatively limited deployment along the LAC (essentially border guards). Development of credible ISR infrastructure, fibre optics connectivity and forward deployment of battle field management

systems and the availability of satellite connectivity in terms of C4ISR further allow greater synergy in force application. Integrated Western Theater Command, as highlighted earlier, ensures credible synergy both at operational and tactical levels. This is in contrast to three each army and air commands of India responsible for the China theater. Lastly, over the years, China has built forward deployed logistic supply chain and pre-positioning of logistic supply chain that can support offensive formations. This, coupled with enhanced strategic mobility provided by the Chinese civil aviation fleet, allows for rapid buildup of reserve formations from Central and other theaters from the mainland.

In contrast, India faces mountainous high-altitude terrain, with limited communications and impaired strategic mobility. Till about early 1990's, concerned about the Chinese buildup, road communications infrastructure along the Line of Actual Control (LAC) was purposely kept in an underdeveloped state as part of a "scorched earth" policy to prevent the rapid intrusion of the PLA into the plains of Assam in the northeast, much like in 1962. This has meant that India, unlike China, was and continues to maintain forward defensive deployment of forces in close proximity of the LAC. In contrast to the PLA, which holds back its Group Armies essentially for offensive tasks, Indian Army formations on the Western Sector (Ladakh), Central Sector (Uttarakhand) and Eastern Sector (Assam, Sikkim, Arunachal Pradesh) are essentially for ground holding to prevent intrusions and to maintain the sanctity and integrity of the LAC. This factor is one of

the major rationales behind India raising separate mountain strike corps and additional mountain formations to create a credible offensive capability.

Things however are beginning to change. Massive efforts have been made to upgrade communication infrastructure such as roads, rail connectivity and digital connectivity, for enhanced offensive options.

To enhance its ISR capabilities, India has deployed indigenous satellite-based global-positioning capability called the GPS-aided Geo-Augmented Navigation (GAGAN) system backed by autonomous regional navigation system called the Indian Regional Navigational Satellite System (IRNSS). These technologies provide India's military high positional accuracy for its weapon systems. To further increase its ISR capacity, the army is also inducting additional troops of Heron unmanned aerial vehicles (UAV) apart from the satellite-based information systems. Similarly, to ensure a high degree of communication security and connectivity, the military is planning a dedicated satellite-based defence network for the armed forces.

In addition, IAF is also developing a layered, hardened and in-depth air-defence command, control and communications network, titled the Integrated Air Command, Control, and Communications System (IACCCS). The IACCCS is a robust, survivable network-centric infrastructure that will receive real-time feeds directly from existing space-based overhead reconnaissance satellites, ground-based and aerostat-mounted ballistic missile early-warning radars and high-altitude-long-endurance unmanned aerial vehicles, and manned airborne early warning & control (AEW&C) platforms.

These developments and ability of rapid mobilisation of forces were largely responsible for effectively dealing with Doklam. The Indian Army was able to pick up Chinese moves, order timely reinforcements and undertake deployments that largely upstaged Chinese designs. It is important to note that even as conventional asymmetry prevails, it is being largely undermined by Indian strides in infrastructural build up, force modernisation and new raisings. One major disadvantage India faces is how to react to early signs of Chinese buildup which is both provocative and escalatory. A possible strategy to deal with this situation is discussed further in this paper.

There are potentially four theaters for conflict: Ladakh in Northern India, the Central Theater in Uttar Pradesh and Uttarakhand provinces, Sikkim, and finally along the McMahon Line in India's northeast. An all-out conflict, over territorial claims although possible, appears highly improbable because it could spiral into nuclear confrontation, upsetting the prevailing harmonious development model adopted by both sides. It is more likely that a conflict would be marked by a calibrated use of force and careful escalation management.

The use of force and nature of escalation would be driven largely by relative conventional and strategic balance and the Chinese leadership's perception of a "quick victory," besides the

political and military payoffs. Large perceived asymmetry could tend to enhance the motivation of unilateral assertion. A possible trajectory of escalation could be as follows:

- **Coercive muscle flexing and intimidation without resorting to the application of major force.** *This may entail mobilisation in local areas of conflict, creating favourable force ratios, targeted cyber attacks, support to groups engaged in asymmetric warfare, increased presence of the PLAN in the Indian Ocean and conduct of high intensity information warfare, as experienced during Doklam stand-off.*

- **Intermediate-Level Conflict: A limited war of high Intensity.** This scenario may entail coercive muscle flexing by launching limited attacks confined to areas of interest. These could be planned to be limited in duration and amenable to negotiated termination. Alternatively, it may entail surprise occupation of areas of strategic interest to drive a partial victory bargain. These actions would have the potential of escalating a limited conflict into a broader one, beyond the immediate theater (Eastern, Central or Western).

- **High Intensity limited War under `informationised conditions'.** Escalation to this level would be a deliberate decision with considerations of regional and global ramifications. Though unlikely, the option would need to be considered by the security planners conceptualising the transformation of Indian armed forces.

India's Response to the Chinese Challenge
India faces a unique security scenario involving two nuclear-armed neighbours with whom it has not only been to war but who together pose a collusive threat, creating a two-front war scenario.[7] Such preparation is easier said than done, given that this entails maintaining two-front credible capability. This poses a serious economic challenge in terms of the cost of conventional deterrence for a developing country such as India that depends largely on imported weapon systems.

This perspective has forced India's national security establishment and successive administrations to respond politically and diplomatically to the challenges posed by China. Nuclear weapons factored into the policy discourse of mutually assured destruction also help keep the conventional threat within manageable limits. The present Indian administration is however coming to the view that India cannot continuously live in the shadow of Chinese threat which could escalate to threatening levels if not managed adequately.

The current reasoning also underscores the necessity to develop credible "dissuasive" capability against China that has remained largely a dream, inadequately addressed by successive national security establishments. Concern is that military asymmetry could become too pronounced to be manageable if not addressed adequately and on time. The predictable time window is the next 10 to 15 years i.e., before the PLA becomes a fully integrated net-centric force together with development of connectivity corridors on India's Western (CEPC) and Eastern flanks (Nepal, Bangladesh, Myanmar).

Proposed Strategy against China

India's current doctrinal thinking vis-a-vis China is based on a strategy of credible defensive posture, which is essentially a defensive and limited offensive strategy based on large physical ground holding deployments backed by limited offensive capability created through raising a mountain strike corps. It encompasses a quid pro quo strategy by which any intrusion into the Indian territory would be answered with similar limited offensive operations in preselected areas. Such a capability encompasses intra-theater force rationalisation to create a quick response capability and include redeployment of forces presently deployed against Pakistan to the Chinese border. To execute this strategy, the infrastructure to perpetuate rapid mobility required is being created.

Unfortunately such a strategy is inadequate in the backdrop of increasing military asymmetry, China's ability of rapid force mobilisation and enhanced ISR capabilities and precision strike capability. Chinese strategy of subduing competitor without fighting and coercion is an extension of the concept of 'unrestricted warfare'. It works on leveraging ever widening asymmetry in comprehensive national power. India's approach in dealing with recalcitrant China must be the ability to target each instrument of China's national power. Toward this, India has to evolve its own doctrines, taking cognisance of relative asymmetry both in comprehensive national power, modernisation and technology. It is only through credible dissuasive posture through the heightened certainty of successful response that China will feel compelled to traverse the collaborative path.

Doctrine of Credible Response

Indian response must therefore focus on creating an effect to slow down Chinese theater deployments and preventing their rapid buildup by forcing them to operate from extended deployment lines. India's military strategy therefore needs to shift from entirely territorial defence to one based on developing capabilities and capacities that prevent adversaries' military buildup, thereby denying the PLA the ability to project power. To achieve this, it requires raising the cost of military intervention through the use or threat of use of means that are asymmetrical in form and disruptive in nature. The first impulse of the strategy is "area denial" akin to China's own AA/AD strategy.

The strategic construct 'to raise the cost of military intervention' is more political than military. The pre-emptive use of force in the face of credible and provocative Chinese buildup resides in the mind of political leadership, who alone will have to take the calculated risk in concert with other instruments of national power. It needs to be noted that this is not a punitive strategy but that of conflict prevention by simply developing capacities that have both the 'reach and potential' to raise the cost of conflict. Lastly, the threat of 'use of force' must not only be credible but also the 'value exchange' in terms of losses must weigh against the power projecting force. At the heart of this strategy is credible conventional deterrence that alone would force dissuasion to both intervene and to escalate. The objectives

of strategy can therefore be summarised as follows:

- Like China, put in place formalised structures for waging **psychological, media and legal warfare** that are equally active during peace, standoff and confrontation scenarios.

- Prepare to seize initiative at the early stages of standoff. This requires devising strategies that maximise relative strengths and create opportunities to exploit adversary's weaknesses, both at operational and strategic levels.

- Develop both physical capabilities and operational thinking to deter, threaten, (and should the need arise) strike and neutralise formations attempting to deploy opposite Indian borders. Value-exchanges of the engagement must be in India's favour.

- This also requires credible surveillance cover not only over Tibet over but complete continental China, through C4ISR capacities that transcend, optical, ELINT, COMINT and the associated means.

- Ability to degrade and deny key communication means to include railway and main road transportation arteries to delay and disrupt movement of forces. Similarly, develop capabilities to interdict forward and depth air bases during the critical stages to degrade trans-regional build up of forces. These capabilities form the core of Chinese force projection capability. The platforms of choice should be BMS of both short and medium caliber, long range cruise missiles, etc.

- To disrupt and disable operational networks through ASAT and active offensive cyber actions.

The intent to raise the cost of military intervention suggests developing a strategic posture that, through signalling and force dispositions, demonstrates resolve and intent that attempts at incursion or military intervention will far outweigh benefits if any, while maintaining the primacy of 'conflict avoidance'. The most critical aspect in execution of such a strategy is the "timing" and the "enabling circumstances" that would trigger India's response mechanisms. While the short answer, with some justification, will be **'when national interests are threatened',** it does not assist planners in resolving the quandary with any clarity. Two considerations must dominate decision making. First, the initial moves must be calibrated so that they unequivocally convey thresholds are being approached and that the next rung in the escalatory ladder could lead to a 'hot' exchange. This may take the form of 'signalling' or communications through back channels. The second could be demonstrative actions or even measures instituted in some other Theater where correlation of forces would suggest Indian superiority. Pre-emptive deployment during Doklam is an example.

Building Capacities and Capabilities

India's current capacity building perspective aims to close the widening gap of asymmetry with China by strengthening overall defensive posture. Under the Indian Army's 11th five-year defence plan (2006–11), two mountain divisions and an artillery brigade totalling 1,260 officers and nearly 35,011 soldiers were raised.[8] Importantly, these increases were in addition to the army's sanctioned manpower of 1.2 million personnel, and intended for exclusive employment along

India's eastern border with China. These formations are to be equipped with ultra-light, easily transportable M777 155-mm, 39-caliber howitzers from BAE Systems.

In addition, defensive formations both in the Eastern Theater and Ladakh are being provided with built-in rapid-reaction capabilities, including mechanised forces (armour and mechanised infantry). To facilitate a quick response to local contingencies attack and heavy-lift helicopters are also being acquired. New medium and heavy-transport aircraft using upgraded airfields and advance landing grounds along the border not only sustain deployed formations but also provide rapid build up capability.

India after much deliberation decision has created an independent limited offensive capability, based on a mountain-strike corps comprising two light mountain divisions and an artillery division armed with lightweight howitzers. Once it becomes fully operational, India will be able to field adequate offensive capability in almost all sectors along the LAC.

Lastly, there is the important issue of infrastructure development. Earlier, India followed a sort of scorched-earth policy of leaving the border regions underdeveloped; this has finally begun to change. Nonetheless, the pace of infrastructural development remains slow. Out of the total 73 Indo-China Border Roads approved for construction, only 27 have been finished while the remaining are expected to be completed by December 2022. Out of these roads, 46 are being built by the Ministry of Defence and the remaining 27 by the

Ministry of Home Affairs. Delay in execution of the projects are multiple and include among others, environment clearances, hard rock stretches, limited working seasons, delay in land acquisitions, and damages due to natural disasters.[9]

The Doklam crisis has brought home the gravity of the situation. Consequently, plans are afoot to not only expedite work on these roads but to construct 17 highway tunnels (of a total distance of nearly 100 km) along the entire LAC to ensure all weather capabilities.[10] Once developed, it would significantly enhance India's mobilisation and logistic posture, and also facilitate the deployment of long-range assets such as the 90-km range Smerch multi-barrel rocket launcher (MBRL) and the indigenously produced 45-km range Pinaka MBRL systems. Deep strike capability is being further enhanced through the induction of BrahMos Block III steep-dive cruise missiles.[11] Also proposed is the induction of Prahar, the short-range battlefield missile with a 150-km range[12], which is part of the Indian Army's quest to acquire precision-guided munitions to augment its long-range lateral fire support.

To enhance Intelligence, Surveillance and Reconnaissance (ISR) capabilities, India has embarked on developing indigenous satellite-based global-positioning capability through an autonomous regional navigation system called the Indian Regional Navigational Satellite System (IRNSS), which is now being fielded. These collaborative technologies will provide India's military high positional accuracy for its weapon systems. To further increase its ISR

capacity, the army is also inducting additional troops of Heron unmanned aerial vehicles (UAV) apart from the satellite-based information systems. Indigenous Rustom MK I UAV's (under development) and possible induction of Predator armed UAV's will further enhance the Indian military's capability. To ensure a high degree of communication security and connectivity, the military is planning a dedicated satellite-based defence network for the armed forces. Tactical air-defence cover is also being improved with the induction of newly acquired Israeli low-level quick-reaction missiles to replace existing outdated systems.

Notwithstanding above developments, force transformational priorities need to be accorded to enhance asymmetric warfare capability with emphasis on Special Forces, cyber space, electronics and information warfare. Pace should match availability of resources and absorption capability. Doctrines, concepts and capabilities also need to be developed to counter state-sponsored terrorism and TNWs, at two ends of the hybrid warfare spectrum. Transformation needs to address the aspects of synergising conventional and strategic deterrence and war fighting to offset adverse force ratios.

In the maritime domain, force development needs to be optimised between the Navy, Coast Guard and Andaman & Nicobar Command (ANC). Primary and secondary Areas of Responsibility (AOR) of the Indian Navy (bounded by Gulf to the West and Malacca to the East OR beyond) need to be defined, for Out of Area contingencies to enable operationally oriented force structuring.

Multifaceted capability development needs to be carried out for maritime reconnaissance, naval aviation (including UAVs), coastal defence, mine counter measure capability, sub-surface and anti-submarine warfare capabilities. A significant defining feature of the Indian Navy transformation would be to determine the overall approach to effectively secure the Indian Ocean between based either on carrier-based fleet or strong anti-submarine warfare capability backed by sentinels like the Andaman & Nicobar Islands. Concurrent to the conventional capability, development of the sea leg of triad-based on IRBM also needs to be developed on priority.

Transformation in the airpower domain must aim at evolving an overall concept of sharing service-specific integral air resources with the Army and the Navy for intimate support and development of the Air Force for employment in operational and strategic domain. Capability development of the Air Force must be based on visualised tasks, comprising of multi-role and role-specific fighter aircraft, with varying ranges and capabilities (mix of twin and single engine aircraft), AWACS, high endurance long-range remotely piloted aircraft (RPAs), transport aircraft and helicopters in various lift categories, airborne special operations and inter-Theater mobilisation capability for domestic and regional commitments. Appropriate precision and beyond visual range (BVR) weapons systems, suitable to the platforms, would also need to be inducted.

Conclusion

It needs to be underscored that with the rise of Chinese aspirations to create Sino-

centric regional order and India's developing comprehensive national power (CNP), clash of interest in inherent. This will be further aggravated by growing strategic convergence between India and the US and formulations such as 'Quad' and Indo-Pacific, seen by China as part of containment strategy.

Challenge from India can get aggravated if the growth of the Indian CNP, particularly economic growth and defence modernisation, begins to impact regional balance of power. Consequent changes in the Indian military power status, seen as shifting to one striving to "protect its strategic salience" in the South Asia and the IOR or emergence as a major geo strategic player in the Indo-Pacific, could aggravate these challenges.

Perception of growing asymmetry in military power will always be open to coercion and intimidation if there is clash of strategic interests with China. Despite years of negotiations, China has not settled the boundary dispute and holds it as domicile's sword. This should leave no one in doubt that undercurrents of conflict remain. It is in this context that this paper apart from analysing Chinese capacities and capabilities against India has tried to outline Indian capability and capacity development, including outlining a doctrine for raising costs of military intervention. The primer also outlines that the time for India to build credible deterrent capabilities is limited i.e. maximum of 10-15 years, thus it requires much more constructive approach to defence preparedness than the existing process oriented.

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