

LESSONS FOR AIR POWER FROM LADAKH

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INTRODUCTION

The Ladakh stand-off now appears to be receding after almost nine months of tension. As per the Northern Army Commander, Lt Gen YK Joshi, the occupation of Rezang La and Rechin La on the Kailash Ridge turned the tables. He stated in an interview, “A quid pro quo action was executed by us on the night of 29/30 August by which we occupied the most dominating features of Rechin La-Rezang La complex on the Kailash Range, thus dominating up to Moldo garrison and areas well in depth. In a simultaneous action, we also occupied the heights dominating PLA positions along Finger 4. We were able to place tanks at Rechin La and Rezang La which was unthinkable before. This turned the tables on the PLA and brought them on the negotiating tables.”¹

General Joshi further added, “When their armour was moving up and we had our red lines absolutely clearly drawn, that is the moment movement was

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1. Nirupama Subramanian, “Northern Army Commander Lt General Y K Joshi interview: ‘Tanks at Rechin La, Rezang La turned tables on PLA, brought them to talks’”, <https://indianexpress.com/article/india/general-y-k-joshi-interview-indian-army-pla-in-eastern-ladakh-india-china-disengagement-7193282/>. Accessed on February 18, 2021.

The disengagement to be followed by de-escalation and de-induction will be a long-drawn-out tedious process. While troops may pull back from their current stand-off positions, their return to permanent bases is still miles away. Hence, pressure and determination will remain key to Indian strategy, in addition to a display of offensive spirit.

really tense. Balloon could have gone up anytime.”² The situation was undoubtedly tense and Indian forces were prepared for an escalation. The Chinese had applied pressure in every flag meeting and expected India to withdraw from these heights. They never anticipated India would continue remaining deployed through the harsh winters. Indian determination compelled them to come to the negotiating table. Disengagement is currently in progress and post its success in the Pangong Tso region, it is now being discussed for extension to other sectors.

The disengagement to be followed by de-escalation and de-induction will be a long-drawn-out tedious process. While troops may pull back from their current stand-off positions, their return to permanent bases is still miles away. Hence, pressure and determination will remain key to Indian strategy, in addition to a display of offensive spirit. Simultaneously, a similar misadventure by the Chinese in another sector cannot be ruled out, thus ensuring that forces remain permanently on guard.

FACTORS LEADING TO CHINESE PULLBACK

The occupation of Kailash Ridge, as stated by the army commander, was alone not responsible for pushing the Chinese to accept status quo.

It was a combination of multiple steps, diplomatic, economic and military, with the occupation of the Kailash Ridge being the turning point. The foremost was stalling the Chinese in their tracks, thus sending a message

2. “Lt Gen YK Joshi recalls most tense moment during India-China standoff in Ladakh”, *India Today*, February 17, 2021, at <https://www.indiatoday.in/india/story/lt-gen-yk-joshi-recalls-most-tense-moment-in-india-china-standoff-in-ladakh-exclusive-1770274-2021-02-17>. Accessed on February 17, 2021.

that any further move would be costly in terms of casualties and Indian forces are prepared for escalation. This was further authenticated by the rapid deployment of reserve forces. The valour displayed at Galwan indicated that the Indian soldier is capable of standing ground and would not relent.

Galwan broke what little trust existed between the nations, opening doors for confrontation. It also set at rest the ghost of the 1962 conflict and brought to fore the vulnerability of the Chinese soldier. China may have hidden its casualty figures from its population; however, its hierarchy realised that Indian forces are neither a pushover nor would they cede territory to any occupier. The occupation of Rezang La and Rechin La features alongside heights on the North Bank of the Pangong Tso conveyed that India is in no rush to talk peace and would match each action of the Chinese in a similar manner. The speed of occupation was indicative that India possesses multiple options to counter any Chinese misadventures.

Pushing the Chinese to remain in Ladakh through the winters was another success story. A report in the *Taiwan Times* mentions that China faced daily casualties due to weather conditions in the winters. An article of November 26 in the *Taiwan Times* stated, "casualty evacuation of PLA troops through helicopters and stretchers has been observed on a daily basis, with an average of one PLA soldier succumbing to altitude and temperature-related ailments every day. Morale and motivation at the posts have also dipped below the freezing point."³ Total Chinese casualties, when considering both Galwan and weather, if announced, would be staggering.

The decision to bypass the Shanghai Cooperation exercises, which China views as its own creation, conveyed Indian displeasure at their aggression. India ignored Chinese suggestions that border, trade and diplomatic relations should be considered in isolation. The Indian public supported the government by boycotting Chinese products.

3. "Chinese Troops Struggle With Low Quality Winter Clothing On Indian Border", *The Taiwan Times*, November 20, 2020, at <https://thetaitimes.com/chinese-troops-struggle-with-low-quality-winter-clothing-on-indian-border/>. Accessed on November 20, 2021.

From the moment the Chinese were stalemated, the government gained confidence that the armed forces possess the potential to stare down the Dragon and prevent them from expanding the conflict. It could thus adopt additional measures, including scaling down Chinese investments, blocking their mobile applications and reducing diplomatic engagement.

The decision to bypass the Shanghai Cooperation exercises, which China views as its own creation, conveyed Indian displeasure at their aggression. India ignored Chinese suggestions that border, trade and diplomatic relations should be considered in isolation. The Indian public supported the government by boycotting Chinese products. However, throughout, India kept doors open for dialogue, both civil and military. Backchannel diplomacy continued unhindered.

China has always been wary of the Quadrilateral Security Dialogue (Quad), currently comprising India, the US, Japan and Australia. Till 2017, it was India which avoided adding teeth to the Quad. India considered it as a grouping of like-minded nations, rather than as a military alliance which could become a challenge to China. The change in Indian approach commenced post-Doklam, when it was realised that China would continue to enhance tensions along the LAC. India accepted the US request of reinducting Australia into the Quad and enhancing its level to that of foreign ministers. Currently, the Quad continues to be a grouping of nations, which the US is seeking to convert into an alliance. Converting the Quad into a military alliance would add to China's challenges and enhance tensions with India. China is aware that it is India which is holding back. In case tensions continue to rise, India may have been left with no choice but to raise the Quad grouping to that of an alliance.

India, throughout the crisis, maintained its One-China policy, leaving doors open for a resolution. China is aware that India holds multiple keys to enhance Chinese concerns, the primary being the Tibet card. Providing additional freedom to the Dalai Lama and the Tibetan government in exile could open doors for increased unrest in Tibet. India sent forth a small message by employing the Special Frontier Force, comprising wards of Tibetan refugees, to occupy heights on the Kailash Ridge.

In addition, ignoring the one-China policy by enhancing ties with Taiwan would hurt Chinese sentiments. China faced a dose of growing Indian national public demand for increasing proximity to Taiwan when posters congratulating Taiwan on its foundation day dotted the Delhi landscape and were followed in multiple newspaper editorials.

It irked the Chinese to the level that the Chinese spokesperson in New Delhi, Ji Rong, issued an open letter to the Indian press. The letter stated, "Regarding the so-called forthcoming 'National Day of Taiwan', the Chinese Embassy in India would like to remind our media friends that there is only one China in the world, and the Government of the People's Republic of China is the sole legitimate government representing the whole of China. Taiwan is an inalienable part of China's territory."⁴ The Indian MEA responded by stating that India has a free press, and it will not be curbed.

However, one major factor which has not been given its requisite importance in compelling the Chinese to reconsider any further offensive designs which they may have had, was the role of the Indian Air Force. The air force shone throughout the crisis and proved that it could be a major support factor in an emergency and would have been a battle winning factor, had the Chinese considered escalating. The army never had to look back for air support.

The Chief of Air Staff, Air Chief Marshal Bhadauria, emphasised the role of his force while addressing an online seminar organised by the National Defence College in November 2020. He stated, "Over the past few months, the proactive deployment of our offensive capabilities in response to developments in eastern Ladakh, both in terms of deployment of air assets as well as rapid airlifting of army combat elements, demonstrated the IAF's operational readiness today."⁵

4. Geeta Mohan, "Indian media is free, MEA tells China after embassy objects to 'National Day of Taiwan' reportage", *India Today*, October 9, 2020, at <https://www.indiatoday.in/india/story/indian-media-free-mea-tells-china-after-beijing-embassy-objects-national-day-of-taiwan-reportage-1729794-2020-10-09>. Accessed on October 18, 2021.

5. "IAF's strong posturing helped ward off threat from China: Air Chief Marshal RKS Bhadauria", *Economic Times*, November 6, 2020, at https://economictimes.indiatimes.com/news/defence/iafs-strong-posturing-helped-ward-off-threat-from-china-air-chief-marshal-rks-bhadauria/articleshow/79082545.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst. Accessed on February 20, 2021.

ROLE OF AIR POWER IN LADAKH

The use of the air force's strategic lift capability, including C-17 Globe Masters, Il 76s, C-130 Super Hercules and AN-32s as also Chinook and Mi-17 helicopters ensured timely induction of forces to counter the Chinese, surprising them. Troops of reserve formations, armour, guns and stores essential to support forces in contact, were airlifted from peacetime locations and deployed in Ladakh. Three divisions were inducted in almost no time. Their speed of induction displayed Indian resolve.

Critical ammunition and construction material were collected from their places of manufacture and moved to Ladakh. Air power continued to support ground troops by moving supplies and essential commodities to enable forces to sustain operational preparedness even in peak winters. Aerial reconnaissance, including air force and navy assets as also employment of drones, was a major source of intelligence throughout these testing months.

Strategic airlift supplemented normal supplies being moved by road. Roadblocks due to inclement weather conditions were offset by strategic airlift. In winters, it is always the air force which provides the forces deployed in the region with basic necessities once passes close. It lived up to expectations thus offsetting road connectivity adversely impacted by weather.

The deployment of Apache helicopters in Ladakh placed Chinese armoured formations in the open at high risk. Armed with fire-and-forget Hellfire missiles, an Apache can track up to 128 targets a minute and prioritise threats. The missiles equip these gunships with capabilities which were a major threat to Chinese mechanised forces.

Simultaneously, the induction of the Rafale, its early forays into the region displaying its battle-worthiness and repositioning of other air power resources, to challenge the Chinese PLAAF, added to creating necessary counteroffensive capability, in case the Chinese crossed Indian redlines. The continued operationalisation of Daulat Beg Oldi airfield ensured deployment of strategic assets as also maintenance of forces in the region. The air force

provided the army with the confidence that it was present to support any offensive actions undertaken to counter Chinese attempts to enhance the spectrum of conflict.

The Indian army would never have been so confident of thwarting the Chinese advance had it not been for the support of the air force.

Addressing the pre-Air Force day press conference, the air chief stated that the Chinese air force cannot get the better of the Indian Air Force in any conflict scenario in eastern Ladakh, asserting that India is 'very well positioned' to meet any threat from China. The air chief added, 'swift and rapid' deployments were made along the LAC in view of the ground situation, specifically mentioning that Ladakh was just one of the areas where IAF's assets were stationed.⁶

It is well known that the Indian fourth-generation aircraft, which form the backbone of its air fleet, are far superior to the Chinese J series. In addition, India enjoys benefits of lower altitudes of take-off. The initial period of the crisis, involved large numbers of aircraft, flying hundreds of sorties, without a single incident, displaying the professionalism of the Indian Air Force, which could have added to Chinese concerns. This was a vast change from army-air force cooperation during the days of Kargil.

The superiority of air power and its operating in complete cohesion with ground forces led to a scenario where the Chinese realised that enhancing the scope of the conflict could lead to disaster. It boosted the confidence of the political leadership, leading to a determination of not backing down.

THE FUTURE DEMANDS ALERTNESS

While the current stand-off is moving slowly towards resolution, it does not signify that peace would reign across the entire LAC. Incursion attempts may not happen in Ladakh as strong force levels remain but could reoccur anywhere. Reports of Chinese force movements and construction of

6. Ananya Verma, "IAF Chief Talks Rafale, Tejas & '2-front War' In Pre-Air Force Day Annual Press Conference", October 5, 2020, at <https://www.republicworld.com/india-news/law-and-order/iaf-chief-discusses-rafale-possibilities-of-indo-china-war-says-we.html>. Accessed on February 21, 2021.

The focus during the Ladakh crisis was on the army as it was the force in direct contact with the enemy and the battle was for territory in Ladakh. However, no operation can be successful, in the current environment, without adequate air support. Air power will be a game changer in any future conflict.

border villages continue to flow regularly. The current disengagement, possible de-escalation and final de-induction should be considered as a pause in Indo-China relations since the LAC is unlikely to be converted into an IB anytime soon.

Hence, alertness, monitoring and display of offensive spirit will remain the key. This also demands that the government must continue with its current policy of enhancing defence capabilities and developing infrastructure along the northern and eastern borders. India must close the capability gap with China and create conditions where similar misadventures would result in high costs to China.

India is probably the only country in the world which faces two nuclear-powered adversaries working independently or in collusion to grab its territory. Hence, Indian armed forces would need to permanently cater to misadventures seeking to exploit any gap or weakness. Pakistan has faced the wrath of the Indian Air Force when it was struck at Balakot two years ago. It covered its losses from its public, closed down the camp and its airspace for two months and sought to display all was normal. Employing air power sent forth the message that India was willing to escalate in case Pak crosses Indian redlines and put at rest Pakistan's nuclear bogey, once and for all. Pakistan, though aware of the weakness of its economy and forces, would continue to exploit India's internal faultlines, employing terrorist groups and sympathisers.

Currently there is a ceasefire in place with Pakistan. As with China, a serious trust deficit exists. Whether this ceasefire would remain for a reasonable duration to enable talks to commence is a moot question. There is always a doubt that some rogue elements in Pakistan would attempt to break this ceasefire due to their sympathies with terrorist groups. The threat of a retaliatory strike must remain on the Pak hierarchy. This

will ensure that they reconsider any action which could cross Indian redlines.

TAKEAWAYS FROM THE LADAKH CRISIS

The focus during the Ladakh crisis was on the army as it was the force in direct contact with the enemy and the battle was for territory in Ladakh. However, no operation can be successful, in the current environment, without adequate air support. Air power will be a game changer in any future conflict. The air force, as a deterrent, deployed adequate fighter resources in the region, while backing the army in enhancing its staying power, employing its strategic airlift capabilities. It played a crucial role in pushing the Chinese to reconsider their future plans.

The Indian Air Force's performance throughout the Ladakh crisis was flawless. It operated in close coordination with the army-backed forces on the ground as also projected an offensive spirit. The army-air force coordination worked to ensure that China was stalled in its tracks, options reduced and compelled to discuss restoration of status quo. For India, victory was in ensuring status quo. However, a few takeaways which emerged from the crisis must be considered, especially as the armed forces restructure into theatre commands.

Theatre commands are currently under study and raising. As per inputs there would be two land-based commands, one each for China and Pakistan. Apart from them, there would be a peninsula command, maritime command and an air defence command. Resources from the three services would be allocated to these commands.

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MAINTAINING STRATEGIC AIRLIFT UNDER CENTRAL CONTROL

Air force has the capability of launching its aircraft from bases in the east, engaging targets in the west and landing in the south, employing air-to-air refuelling. Air power resources like those of other services are expected to be allocated to theatre commands as per tasking and possible operational scenarios. Their employment would then be the responsibility of respective theatre commanders. It would be incumbent on theatre commanders to amalgamate allocated resources into their overall offensive and defensive plans. While there would be flexibility in moving resources from one command to the other, it would impact the planning of theatre commands.

Resources of strategic airlift, both aircraft and helicopters, should preferably not be permanently allocated to theatre commands. They should be kept under central control to enable rapid redeployment and support to ground forces, wherever essential, across the country. During natural calamities and disasters, they would also be employed to support the civil administration. Their positioning, training, tasking and employment must remain the responsibility of air HQ. However, considering multiple scenarios they could be located within theatre commands for early deployment and employment.

C-17 Globe Masters, Il-76s and Chinooks are for load transportation, whereas the C-130s are normally earmarked for special operations; however, they can also be employed for load and troop transportation in case essential. Keeping these resources centrally will enhance flexibility. In case allocated to theatre commands, there would be issues of dual control and would add to additional channels for repositioning and tasking. Their concept of employment should be similar to the US Air Mobility Command, which as a support command, is available for major force movement when needed.

ENHANCING AIR POWER CAPABILITY

The second takeaway from Ladakh is that strong air power capability is a major deterrent. The air chief stated during the Air Force Day parade in

October last year, “the rapid deployment of air force assets to forward areas in the ongoing stand-off in eastern Ladakh and support to the army clearly demonstrated the resolve, operational capability and the will to effectively engage the adversary.”⁷ Hence, air-power capabilities must continue being upgraded, especially when threats from both adversaries simultaneously are possible.

The government too realised its shortcoming when in the midst of the crisis it fast-tracked a deal with Russia for the supply of 33 fighter aircraft, including 21 MIG-29s and 12 Su-30 MKI fighters. The low allocation of funds for modernisation, over the years, and tedious processes of procurements had pushed modernisation behind. The Ladakh crisis led to the government allocating an additional Rs. 20,000 crore to the forces to make up their shortfalls.

Funds would remain an issue and hence, planning for enhancing air power needs consideration. The air chief had highlighted this during an interaction with the Vivekanand Foundation in January this year, “While we have our needs, we have factored in the current constraints and we are aware that it will take a while for the economy to get back and for us to have the kind of budget we had earlier ... We can’t expect we will have some unlimited budget even with the security scenario in the north.”⁸

With a CDS firmly in place, joint planning being the norm, the current concept of service specific budgets being announced by the Finance Minister, as part of the annual budget, must end. The Department of Military Affairs (DMA) should take on the responsibility of allocating funds based on a common procurement plan from a central allocated budget. This would give a boost to procurement plans based on enhancing requisite capabilities.

Atmanirbhar Bharat is the order of the day. Hence, the air force would largely need to base their future plans on indigenous production. The

7. “IAF chief Bhadauria commends Air Force for ‘prompt response’ on Ladakh stand-off”, October 8, 2020, at <https://theprint.in/defence/iaf-chief-bhadauria-commends-air-force-for-prompt-response-on-ladakh-stand-off/519254/>. Accessed on February 24, 2021.

8. Rahul Singh, “Chinese air force heavily deployed in Ladakh theatre in support of PLA: IAF chief”, *Hindustan Times*, December 29, 2020, at <https://www.hindustantimes.com/india-news/chinese-air-force-heavily-deployed-in-ladakh-theatre-in-support-of-pla-iaf-chief/story-duR2XbF4hNKlfGAgI9RwhN.html>. Accessed on February 24, 2021.

Tejas, would in time, become the backbone of the air force; 83 Tejas Mk 1A have been cleared for induction. These are in addition to 40 Tejas Mk 1 already ordered in 2016. There is a need for strict monitoring of the Tejas production line and its quality control. Delays in production and weak quality checks, the hallmark of the HAL, cannot be permitted to remain. Its hierarchy may need to be revamped with the air force playing a major role.

The air force's demand for induction of 114 multirole fighters must be considered on priority if India is to maintain a credible deterrent against a two-front conflict. The air chief had stated in his press conference prior to air force day, "Around 400-450 indigenous aircraft of various types are to be inducted in the IAF in the next 10-15 years. By the end of the decade, the target is to have around 37-39 squadrons."⁹ By then, China is expected to possess around 50 squadrons of fourth-generation fighters, though all may not be employed along the LAC. However, India has an advantage when operating in Tibet due to its multiple bases in the north and east. The capability gap must reduce over time and not increase.

Outer space and drones are the future and must form part of futuristic defence planning. The Indian armed forces have raised a tri-service Defence Space Agency, coordinated by the air force. It conducted its first exercise termed as the IndSpaceEx in July 2019. US, China and Russia are already major space powers. As per Air Marshal Anil Chopra, a space power seeks to, "dominate space and have space-based systems that allow the destruction of enemy targets in space and on earth and deny the enemy full access to space including preventing the enemy from launching satellites and destroying or degrading enemy satellites in space."¹⁰ India demonstrated its space capability when it destroyed a live satellite in low orbit in July 2019.

9. Huma Siddiqui, "Air Force to add more fire power! IAF to induct 450 different aircraft in the next decade, says Air Chief", October 7, 2020, at <https://www.msn.com/en-in/news/other/air-force-to-add-more-fire-power-iaf-to-induct-450-different-aircraft-in-the-next-decade-says-air-chief/ar-BB19MxiG>. Accessed on February 26, 2021.

10. Anil Chopra, "Militarisation of Space: Imperatives for India", Issue Vol. 34.4 October-December 2019, October 15, 2020, at <http://www.indiandefencereview.com/news/militarisation-of-space-imperatives-for-india/>. Accessed on March 5, 2021.

India currently possesses the ability to neutralise hostile satellites; however, it needs to develop directed energy weapons and plan for establishing a permanent space station, if it wishes to remain relevant in this realm.

The future of drones on the battlefield cannot be understated. Post the Armenia-Azerbaijan war, their relevance has increased. Targeting of weapon platforms on ground, gathering of information and guidance of precision weapons are some areas where they can be effectively employed. They are likely to play an extensive role in any future conflict. China is currently well ahead of India in this field. India needs to invest in developing drones as also in developing capabilities to counter them.

Post the attack on the AMARCO oilfield in Saudi Arabia in 2019, the air force instituted measures to counter this rising form of threat on critical installations. The IAF Chief RKS Bhadauria has acknowledged that, "The small drones are a new threat. It is a space violation issue and to deal with this, steps have been initiated."¹¹ The Chief of Army Staff recently stated, "the Indian Army is steadily inducting niche capabilities to enhance our combat proficiencies in Multi-Domain Operations." He added, hinting at China, "As we fixed our gaze on building core capacities in land, sea and air, they took the battle to the newer domains of space, cyber, and informatics."¹² The army had demonstrated multiple drone capability during the Army Day parade in January this year.

Each service is seeking its own collection of armed and surveillance drones, leading to duplicity in an age of enhanced jointness. While small drones for surveillance in the immediate vicinity may be essential at the battalion level, larger drones and UAVs need to be procured and employed based on a tri-service philosophy.

11. Huma Siddiqui, "Future warfare and drones: AI-enabled stealthy combat drones in Indian skies", *Financial Express*, October 9, 2019, at <https://www.financialexpress.com/defence/future-warfare-and-drones-ai-enabled-stealthy-combat-drones-in-indian-skies/1730955/>. Accessed on March 9, 2021..

12. Abhishek Bhalla, "Drones future of warfare to take on tanks and artillery: Indian Army chief", *India Today*, February 11, 2021, at <https://www.indiatoday.in/india/story/drones-future-of-warfare-to-take-on-tanks-and-artillery-indian-army-chief-1768343-2021-02-11>. Accessed on March 11, 2021.

The Ladakh operations were seamless and happened despite both HQ functioning under respective service chiefs. While broad directions would have been given by service HQ, daily tasking, employment and coordination was being done by the two HQ working in coordination. The dividends were visible on ground as forces were rapidly inducted and subsequently deployed with all supporting elements alongside.

Simultaneously, the air force may have to resort to alternate means including enhancing destructive capability of air power as being done by amalgamating the BrahMos and the Anti-Radiation Missile (Rudram-1) or similar armaments with the existing fleet.

CREATION OF FORWARD AIRFIELDS AND ALGS

The third takeaway is the importance of forward airfields and ALGs. While Leh, Thoise and Daulat Beg Oldi were extensively employed in Ladakh, there is a need for similar ALGs or forward airfields in the eastern and central sectors, where the Chinese pressure is now likely to be felt. A few have been constructed over the years, however, and the government must continue pushing in regions where they have yet to be created. Infrastructure development along the borders is an ongoing process, though remains time-consuming.

The fastest movement of forces, stores and equipment, in any critical scenario, remains by air. Shortfall of ALGs, especially in the remote regions, could impinge rapid deployment to counter any attempted misadventures by the Chinese. These also assist the state during natural calamities in moving supplies, resources and manpower. A strong airlift capability currently available can only be exploited if ALGs exist.

THEATRE COMMANDS AND JOINT PLANNING

Fourth is the importance of joint planning and implementation between the air force and the army. The coordination between Northern Command

and AOC J&K is a lesson which must be carried forward when theatre commands begin to see the light of day. The Ladakh operations were seamless and happened despite both HQ functioning under respective service chiefs. While broad directions would have been given by service HQ, daily tasking, employment and coordination was being done by the two HQ working in coordination. The dividends were visible on ground as forces were rapidly inducted and subsequently deployed with all supporting elements alongside. The employment of naval Poseidon P-8I aircraft added to enhancement of surveillance capabilities.

The Indian armed forces have never given joint training due emphasis and importance. For decades, the forces have been discussing a bottom-up approach to integration, aware that this is never a solution. Even within the services there was a disagreement on how to implement jointness. The creation of a CDS with a clear mandate removed all doubts. This top-down push has forced the services to integrate rapidly. Even in joint training institutes like the DSSC, emphasis on jointness, tasking of other services and integrated employment are still being given lip service. Planning and control of operations currently remains service specific. It would have been ideal if the Northern Command had been converted into an ad hoc theatre command during the Ladakh crisis and the army and air force elements amalgamated into a cohesive HQ. It could then have been placed under the Chiefs of Staff Committee. However, this was never considered.

Hence, the organisation structure of future theatre commands must include lessons which flowed from the current seamless planning and execution. All major branches must have officers from both services working together. Simultaneously, emphasis on joint training must be enhanced. The CDS must lay down a time period by when officers of the armed forces are in a position to understand the concept of employment, deployment and

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limitations of the other services. Technical aspects should remain specific to respective services.

EMPLOYMENT OF DRONES/UAVS AND JOINT INTELLIGENCE CENTRES

Fifth is the need to establish a central coordinating agency for employment and tasking of drones, UAVs and other intelligence gathering sources. Since drones and UAVs currently exist with all services they should be employed under a central agency, preferably staffed by members of the forces employed in the theatre. This would optimise their effort. It would also result in better control of the airspace in case of operations. Its nature of functioning should be on lines of the current Joint Operations Centre, created at Corps and higher levels. This organisation should also be responsible for interpretation of data, which is received from multiple sources, and dissemination to all concerned.

In Ladakh the assets of all three services were employed for surveillance. With the creation of theatre commands, there is a need to reassess the requirement of all services holding a similar variety of drones and UAVs. Currently each service is bidding for its own eyes, ears and destructive power from the skies. The holding, tasking and employment of drones and UAVs would remain within a theatre, under the theatre commander, operate under his directions and plans. Each service operating its own would only clutter the airspace adding to problems as also lead to duplication in inputs and additions in expenditure. It would be ideal if their holding and employment is centralised and a single service made responsible.

THE AIR DEFENCE COMMAND

Finally, the importance of the air defence command currently under consideration. Currently, the three services maintain their own AD resources which are meant to counter specific threats perceived by each service. However, the responsibility of air defence of the nation rests with

the air force. With the induction of even more lethal weapon systems, there is an opinion within the government that all resources must be integrated. There are counter views to the same.

A potent air defence would be a major deterrent factor for any future operations, considering a similar concept adopted by the Chinese. The better the integration of resources of all services, the greater would be its effectiveness. A major problem which the air force would need to consider is that most of its current fourth-generation aircraft are multirole. Allocation of them to theatre commands would impinge on their being available for air defence. Similarly, allocating them for air defence could impact planning of air operations to support operations of the theatre commands.

A decision to be considered is the philosophy which must be adopted for national air defence, deterrence by denial or deterrence by punishment.

CONCLUSION

The Ladakh crisis was an excellent demonstration of inter-service cooperation. The army would never have achieved such success had it not been for the support and close cooperation of the air force. While credit is certainly due to the army for its tenacity and doggedness in capturing and holding onto crucial heights, the silent support provided by air power can never be ignored. The timely induction of troops, supplies, stores and ammunition provided the army with the staying power in the harsh climate of Ladakh. It offset the advantage which the Chinese possessed of better lines of communication.

The air force changed the complexity of the crisis, gave the government the confidence to not rush into talks, accept the Chinese diktat and change the LAC forever. For troops on the ground, knowing air power is close and available is in itself a major morale booster. The Indian air force must be given credit for pushing the Chinese onto the discussion table and accepting to revert to status quo ante.

The lessons learnt from this crisis need to be assessed and implemented, especially as the armed forces gravitate into theatre commands. The

organisation structure of theatre commands needs careful consideration, the more so as the forces have yet to integrate and operate jointly. Individual demands of services, including procuring UAVs and drones, to enable them to fight in isolation, need to be curbed as they would operate as a single entity under a single commander. Space is the next frontier where India has to gravitate into. It is already way behind China.

India, with nuclear powered adversaries on both borders, can never be lax in developing the capabilities it needs as a deterrence. The development of air power can and must not be curtailed. It remains the most potent force to ward off threats as also enable speedy build up to counter any misadventures. HAL must be pushed to adhere to its delivery and quality schedule. Budgets must remain realistic and enable planned development of military capabilities. With a still persistent high trust deficit on both fronts, creating capability to deter by punishment must become the national intent.