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समाचार पत्रों से चयित अंश
Newspapers Clippings

डीआरडीओ समुदाय को डीआरडीओ प्रौद्योगिकियों, रक्षा प्रौद्योगिकियों, रक्षा नीतियों, अंतर्राष्ट्रीय संबंधों और विज्ञान एवं प्रौद्योगिकी की नूतन जानकारी से अवगत कराने हेतु दैनिक सेवा

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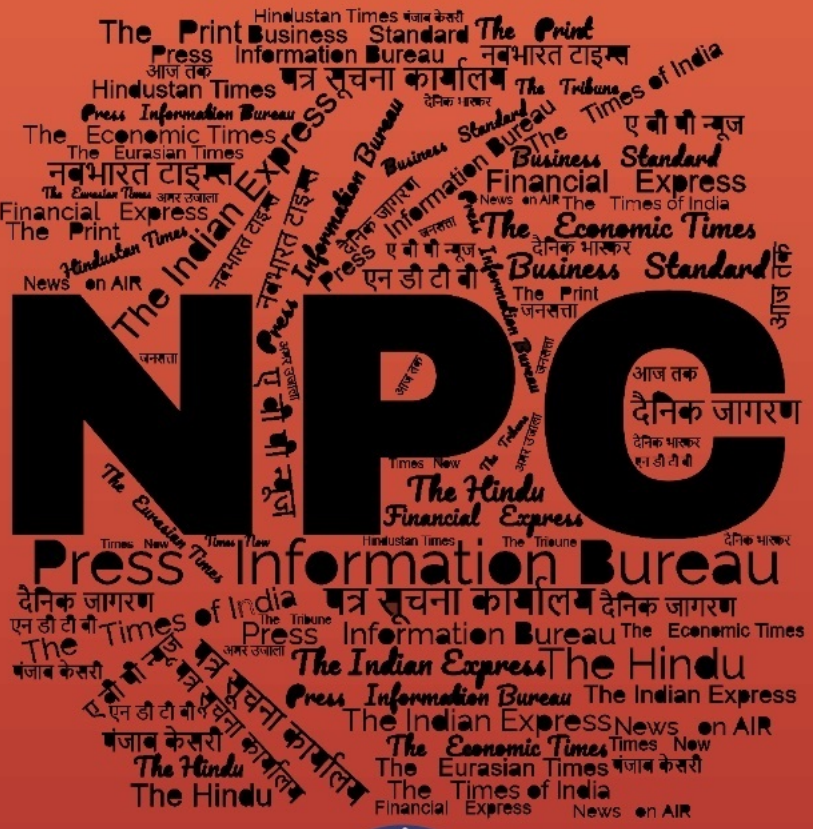

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अमर उजाला

Wed, 15 May 2024

चीनी सीमा के पास 14500 फुट की ऊंचाई पर भारत ने स्थापित किया टैंक मरम्मत केंद्र, यह अपने आप में रिकॉर्ड

भारतीय सेना ने दुनिया के सबसे ऊंचे युद्ध क्षेत्र में दो बख्तरबंद टैंक मरम्मत सुविधाएं स्थापित की हैं। यह अपने आप में एक तरह का रिकॉर्ड है। भारतीय सेना ने पूर्वी लद्दाख में एलएसी पर 500 से अधिक टैंकों और पैदल सेना के लड़ाकू वाहनों को तैनात किया हुआ है।

भारतीय सेना ने चीनी सीमा के पास न्योमा में और डीबीओ सेक्टर में 14,500 फीट से अधिक की ऊंचाई पर दो बख्तरबंद वाहन रखरखाव और मरम्मत सुविधाएं स्थापित की है। ये इलाका दुनिया में टैंक और सेना के लड़ाकू वाहनों के लिए सबसे ऊंचा युद्धक्षेत्र है। अप्रैल-मई में चीन सैनिकों की हिमाकत के चलते उत्पन्न गतिरोध के बाद पूर्वी लद्दाख में बड़ी संख्या में टैंक और बीएमपी लड़ाकू वाहनों के साथ-साथ क्विक रिएक्शन फाइटिंग व्हीकल जैसे भारतीय निर्मित बख्तरबंद वाहनों को तैनात किया गया।

सेना के अधिकारियों ने बताया कि टैंकों और लड़ाकू वाहनों को इन अत्यधिक ऊंचाई वाले क्षेत्रों में तैनात किया गया है। यहां रखरखाव और मरम्मत के लिए इन वाहनों को वापस ले जाना बहुत मुश्किल काम है। बख्तरबंद वाहनों के संचालन को बनाए रखने के लिए हमने न्योमा और डीबीओ सेक्टर में डीएस-डीबीओ रोड पर केएम-148 के पास मध्यम रखरखाव (रीसेट) सुविधाएं स्थापित की हैं। ये दो मुख्य क्षेत्र हैं जहां पूर्वी लद्दाख सेक्टर में टैंक और आईसीवी संचालन पर ध्यान केंद्रित किया गया है।

https://www.amarujala.com/india-news/india-established-a-tank-repair-centre-at-a-height-of-14500-feet-near-chinese-border-2024-05-15

THE ECONOMIC TIMES

Wed, 15 May 2024

Indian Army sets up one of World's Highest Tank Repair Facilities near China Border

With over 500 of its tanks and infantry combat vehicles deployed in Eastern Ladakh, the Indian Army has created a record of sorts by setting up two of world's highest tank repair facilities in that area to support its operations there.

The Indian Army has set up two armoured vehicle maintenance and repair facilities near the China border in Nyoma and the DBO Sector in that region to at altitudes of over 14,500 feet in the area, which is the world's highest battlefield for tanks and infantry combat vehicles along the LAC in Eastern Ladakh.

A large number of tanks and BMP combat vehicles, along with Indian-made armoured vehicles like the Quick Reaction Fighting Vehicles, have been deployed in Eastern Ladakh after the stand-off between India and China started in April-May 2020, post-Chinese aggression there.

The tanks and infantry combat vehicles have been deployed in these superhigh-altitude areas, where it is very difficult even to get them back for maintenance and repair," Indian Army officials told ANI. "To help sustain the armoured vehicle operations in the region, we have set up these Medium Maintenance (Reset) Facilities at Nyoma and near KM-148 on the DS-DBO Road in the DBO sector. These are the two main areas where tank and ICV operations are focussed in the eastern Ladakh sector," they added.

The Indian Army has been creating infrastructure in a big way for housing its tanks, including the T-90 and T-72, the BMPs and the K-9Vajra self-propelled Howitzers, in the high-altitude areas where temperatures are extremely low in winter. Recently, Army Chief General Manoj Pande visited the Medium Maintenance (Reset) Facility for Armoured Fighting Vehicles (AFVs), where he saw the unique maintenance facility. Army officials said the new facilities promote enhanced serviceability and mission reliability of tanks and infantry combat vehicles.

The facilities also keep the combat fleet operationally ready even in rugged terrain and challenging weather with temperatures dipping down to minus 40 degrees, the officials said. Staging forward of specialist technical support infrastructure for the AFVs has resulted in higher standards of operational efficiency and battle readiness. India and China have been engaged in a standoff in the eastern Ladakh region for the past four years and have deployed around 50,000 troops each near the borders in the region.

At the time of aggression, China had brought in a large number of infantry, combat vehicles and tanks to unilaterally change the status along the line of actual control there. The Indian Army responded in a very swift manner and within no time, heavy armoured elements were brought in from the deserts and planes in C-17 transport aircraft to counter the adversary.

https://economictimes.indiatimes.com/news/defence/indian-army-sets-up-one-of-worlds-highest-tank-repair-facilities-near-china-border/articleshow/110154104.cms

THE HINDU

Wed, 15 May 2024

Army set to receive Igla-S Air Defence Systems partly assembled in India

The Army is all set to begin receiving another set of Russian Igla-S very short range air defence systems (VSHORAD) by the end of May or early next month, filling a critical void in the its air defence requirements which has been repeatedly delayed.

In another development, multiple sources confirmed that the payments issue between India and Russia that has held up critical payments for defence deals as well as payments has been resolved. The Army is also set to receive the first of two Israeli Hermes-900 Medium Altitude Long Endurance Unmanned Aerial Vehicles (UAV) assembled by ADSTL in Hyderabad next month.

The Igla-S systems were contracted last year under the fourth tranche of Emergency Procurements (EP) and are being assembled by Adani Defence Systems And Technologies Limited (ADSTL) in India under technology transfer from Rosoboronexport, multiple official sources confirmed. Under this, the Army contracted 48 Igla-S launchers, 100 missiles, 48 night sights and one missile testing station under a ₹260 crore contract and deliveries are set to begin by end-May 2024, an official source said. The order was placed to ADSTL, officials stated.

The missile will be imported and some parts like sights, launcher, and battery will be assembled/manufactured here by Adani defence, another source in the know said.

Payments for major deals

As reported earlier, since the beginning of the war in Ukraine and Russia's ouster from the international payment system, payments for major deals, especially defence, have been held up delaying important deals including the S-400 air defence systems.

Efforts to pursue payments in national currencies through Rupee-Ruble trade have not eased the situation. However, that has now been resolved by the use of national currencies and widening Russian utilisation of Indian Rupees that have accumulated, two official sources independently confirmed.

As reported by *The Hindu* earlier, under EP-4, between September 2022 to September 2023, the Army concluded over 70 schemes worth nearly ₹11,000 crore. Similarly, the Indian Air Force (IAF) has concluded 64 contracts under EP-4 worth around ₹8,137 crore.

In 2021, the Army had inducted 24 launchers, 216 missiles and testing equipment under a contract signed in December 2020 also through EP. The EP route for procurement through the Vice Chiefs emergency financial powers was given to the Services for the first time after 2016 Uri terror attack.

Under this, Services can procure weapon systems, including entirely new ones, up to ₹300 crores on an urgent basis without any further clearances. Under EP, deliveries should begin six months from contract signing and completed in a year.

A VSHORAD is the soldier's last line of defence against enemy combat aircraft, helicopters and UAVs in the multilayered air defence network.

The VSHORAD deal is a much larger deal that the Army has been attempting to upgrade its shoulder fired air defence systems of its infantry. It began in 2010 and saw several rounds of trials and re-trials over the years but eventually got stuck. The Request for Proposal was issued in October 2010 for over 5000 missiles, 258 single launchers and 258 multi-launchers. The larger requirement will be met through indigenous and joint development routes being pursued.

An infrared based man-portable system is under development by the Defence Research and Development Organisation (DRDO) which has already been tested several times.

Under this DRDO developing a mounted version which has been tested, which will be further miniaturised, one of the sources cited above said. This will eventually meet the requirement of 300 launchers and 1800 missiles including that of Navy and IAF estimated to cost over ₹1,900 core.

Another proposal to procure Laser beam riding man-portable air defence systems got project sanction order given last year under the Make-2 procurement of the defence acquisition procedure for 200 launchers, 1,200 missiles valued at around ₹4,800 crore. The prototype testing is expected by end 2024, officials said.

Under the original VSHORAD deal, three contenders eventually made it to the trials - MBDA of France, Rosoboronexport of Russia and SAAB of Sweden. Eventually all three companies were declared technically complaint in 2017 and Igla-S was declared the lowest bidder in November 2018 though the deal was never signed. The deal also saw several allegations of deviations in procedures with some of the vendors sending protest letters.

Air Defence functions in three levels – gun/missile system, medium range and high range. Within this the Air Defence guns are of two types, AD Gun Missile system, AD self propelled guns. The Army is looking for AD guns in both the categories. In the medium segment it has the indigenous Akash SAM while Medium Range Surface to Air Missile System falls in the high range.

Hermes-900 UAV

Last year, all three services placed orders for two MALE UAVs each under EP. While the Army and Navy contracted the Hermes 900 manufactured by Elbit Systems, the IAF has procured the Heron Mk2 from Israel Aerospace Industries (IAI). In 2021, the Army had contracted four Heron-Mk2 UAVs which have since been inducted and deployed in the Eastern sector.

The ADSTL in partnership with Elbit Systems manufactures the complete carbon composite aerostructures for Hermes 900 and Hermes 450 in Hyderabad. The Navy received its first Hermes-900 UAV few months back.

https://www.thehindu.com/news/national/army-set-to-receive-igla-s-air-defence-systems-partly-assembled-in-india/article68179544.ece

The Tribune

Wed, 15 May 2024

MoD asks HAL to deliver 18 Tejas Mark-1A jets by next year

As the Indian Air Force (IAF) continues to operate with fewer fighter jet squadrons than mandated, the Ministry of Defence (MoD) has asked Hindustan Aeronautics Limited (HAL) to meet the delivery schedule of supplying 18 Tejas Mark-1A jets by March 2025.

In all, 180 Tejas Mark-1A jets are to be made by the HAL in two tranches over the next 10 years. These are to bridge the prevailing shortage and muster numbers due to phasing out of older jets from the IAF inventory.

The HAL — a Bengaluru headquartered company in which the MoD owns a majority stake — is yet to deliver even one jet of the first tranche of 83 ordered in February 2021 under a Rs 48,000-crore order. Deliveries were to commence three years after signing the contract, or by March this year.

In April, the MoD asked the HAL to submit its commercial bid for producing 97 Tejas Mark-1A jets in addition to the 83 already ordered, taking the number to 180.

In March, Tejas Mark-1A carried out its first flight. “It was a successful sortie with a flying time of 18 minutes,” the HAL had then said.

The MoD, after a review meeting, has asked the HAL to meet the delivery deadline of 18 jets by March 2025. Sources say the HAL is banking on getting its new production line at Nashik on track by November to shore up the numbers.

The HAL has faced some supply chain disruption which is being sorted. The production of parts and assemblies for the jets has been outsourced to suppliers. Sources say the MoD and HAL are serious about meeting the contract target of 18 jets by March 2025.

The criticality of adding more fighter jets stems from the fact that the IAF presently has 31 squadrons (16-18 planes each) of fighter jets against the mandated number of 42 to handle a collusive two-front threat from Pakistan and China.

Over the next one year, all (two) squadrons of the Soviet-era MiG 21 fighter jets will retire. The Jaguar, MiG-29 and Mirage 2000 jet fleets — all inducted in phases during the 1980s — are slated to retire in batches beyond 2029-30. These four types of jets are about 250 in number and are presently operating on an extended life cycle.

As per plan, for the next 14-15 years (till 2038-39) starting this financial year, India needs to indigenously produce some 390 fighter jets for the IAF.

The IAF already has 40 Tejas Mark1 jets. Tejas Mark-1A is the improved version of the aircraft.

https://www.tribuneindia.com/news/india/mod-asks-hal-to-deliver-18-tejas-mark-1a-jets-by-next-year-621598

Business Standard

Wed, 15 May 2024

Indian Military Theaterisation Plans gather pace, but China has 8-year lead

Theaterisation of the Indian armed forces is gathering pace almost a decade after China did the same, with the incumbent Narendra Modi-led government reportedly setting a target for commencing the reorganisation process for the long-pending unified theatre commands by the time the new government that will be sworn in next month completes one year.

Once rolled out, theaterisation will be the biggest military reform India has ever seen. It will see the creation of unified theatre commands within the Indian armed forces, instead of the individual ones that exist at present.

What is theaterisation?

In essence, these theatre commands will overhaul the country's existing defence deployment structure by integrating the army, air force and navy into one architecture, ensuring tri-services synergy and jointness. Each of these geographically integrated theatre commands will contain elements of all the three services, enabling cohesive and effective operations.

Each of the theatre commands will look after the security challenges in a specified geographical territory under an operational commander.

Theaterisation could reportedly see the establishment of two integrated theatre commands to counter Pakistan and China, along with a third maritime theatre command. As previously reported by *Business Standard*, one influential school of thought within the armed forces has been arguing for three such theatre commands, one with each service, for some time now.

Such a reorganisation could see the setting up of a Pakistan land theatre with an air force commander, a China land theatre with an army commander, and a maritime theatre commanded by the navy.

Another option could be that while the China and Pakistan commands will see rotational appointments from the army and the air force, the maritime command will be headed by a naval officer. However, the final contours of the theaterisation process are not known yet.

At present, the 1.7-million-strong Indian armed forces have 17 individual commands. However, two tri-service commands -- the Andaman and Nicobar Command and the Strategic Forces Command -- are also operational.

Theaterisation picks up pace

Theaterisation roll-out will commence one year from the swearing-in of the new government next month, the incumbent government has told the defence and security establishment, according to a report by *ThePrint* on Tuesday.

With its sights set on rolling out theaterisation, the government has told the armed forces to come up with a structure for the same within the set time frame, said the report, citing sources.

With the Bharatiya Janata Party having made a commitment to theaterisation in its election manifesto, the report said that the government has already set its priorities for a possible new term, with sources saying that the Chief of Defence Staff, service chiefs and other officials have already been working on increased jointness and integration, leading to eventual theaterisation.

Actual theaterisation will take more time, but the government expects that structured jointness initiatives, including structures for joint training, administration, and logistics, will be rolled out by the end of 2024, said the report.

However, the report pointed out that no specific hierarchy or structures have been finalised for the new system yet because the government's focus is on integration first, instead of outright theaterisation. The government has adopted a "bottom-up" approach to theaterisation, instead of a "top-down" one, added the report, citing sources.

'Consensus is emerging'

There are other indications that the defence reform initiative is witnessing forward movement.

On May 4, Defence Minister Rajnath Singh said that the theaterisation process was making progress with consensus emerging among the three services regarding the ambitious initiative.

In an interview with a news agency, Singh said the armed forces were committed to theaterisation because it would ensure better utilisation of resources.

The defence minister said, "The theaterisation process has started. There has been progress on it." He added, "Consensus is emerging on it among the three services as it will ensure better utilisation of resources and enhance the military's overall capabilities."

The theatre commands were supposed to be ready by 2023, according to earlier estimates. However, strong differences had reportedly emerged within the armed forces regarding the basic structure of the commands, delaying the process.

In June 2021, the Department of Military Affairs, headed by then Chief of Defence Staff, General Bipin Rawat, had asked all three services to conduct independent studies on theaterisation for its rollout. But, General Rawat's death in December 2021 in a helicopter crash slowed down the process.

During the interview, Singh declined to provide a timeline for theaterisation, but he cautioned that certain countries had taken close to 20 years to implement similar plans. "We are working on it," Singh added.

The Indian Air Force reportedly had some reservations about theaterisation, but its concerns have been addressed.

Chief of Defence Staff leading the charge

Chief of Defence Staff General Anil Chauhan is working on implementing the theaterisation plan and has held a series of deliberations with the top brass of the three services in the past few months to take the process forward, said the same news agency.

As a precursor to the setting up of theatre commands, military planners reportedly intend to first establish an integrated logistics management system.

The defence ministry is also expected to roll out a number of concrete initiatives over the coming months as part of its theatre commands plan.

Focus on 'jointness'

On May 10, the Ministry of Defence (MoD) took an important step towards uniform implementation of military justice across the joint-service organisations being created by merging army, navy and air force elements into Inter-Services Organisations (ISOs).

"The Inter-Services Organisations (Command, Control and Discipline) Act has been notified through a Gazette Notification to be enforced with effect from May 10, 2024," an MoD notification said.

"The Act empowers Commanders-in-Chief and Officers-in-Command of ISOs to exercise control over Service personnel, serving under them, for effective maintenance of discipline and administration, without disturbing the unique service conditions of each individual Service," the MoD statement said, explaining the implications of this step.

"The Act will empower the Heads of ISOs and pave the way for expeditious disposal of cases, avoid multiple proceedings and will be a step towards greater integration and jointness among the armed forces personnel," the statement added.

During a two-day conclave of senior military officers that concluded on May 10, Chief of Defence Staff Gen Anil Chauhan underlined the need for expediting the process of "jointness" among the army, navy and air force to create a multi-domain response mechanism.

Army Chief Gen Manoj Pande, Air Chief Marshal VR Chaudhary, Navy Chief Admiral Dinesh K Tripathi and other senior military officials also attended the 'Parivartan Chintan II' conclave on "jointness and integration" in the armed forces.

"There was active deliberation on the vital reforms critical towards the fruition of the goals envisioned to achieve the desired 'joint and integrated' end state towards transformation," the MoD said in a statement. Updates on the progress towards jointness and integration were also provided.

China almost a decade ahead

While steps have been taken recently to expedite theaterisation, China has already re-organised its 2-million strong People's Liberation Army (PLA) into five theatre commands.

PLA's 2016 re-organisation was aimed at improving offensive capabilities and command and control. For example, while four Indian Army and three Indian Air Force commands protect India's northern borders with China, the PLA's Western Theatre Command is responsible for the entire 3,488-kilometre Line of Actual Control.

https://www.business-standard.com/external-affairs-defence-security/news/indian-military-theaterisation-plans-gather-pace-but-china-has-8-year-lead-124051501339_1.html

#SWARAJYA

Wed, 15 May 2024

Countering China: India to Build Five to Six More Aircraft Carriers in Future — Defence Minister Rajnath Singh

The Defence Minister Rajnath Singh yesterday revealed India's plans to build five to six more aircraft carriers.

Moreover, he also said that India will soon start building the third aircraft carrier, a 45,000-tonne sister ship of INS Vikrant. He said, "India has one more carrier — INS Vikramaditya — sourced from Russia in 2013. We will not stop at that (three carriers). We will make five, six more."

If these plans to build five to six more aircraft carriers materialise, it will go a long way in giving the Indian Navy quantitative parity, if not an advantage, against China.

China has revealed plans to have five to six aircraft carriers by the 2030s.

It currently has two aircraft carriers, the Soviet ex-Varyag, Liaoning, and the Shandong, with its third and the newest 80,000-85,000 tonne aircraft carrier, Fujian, just completing trials.

It is expected that the Chinese will permanently station one of its CBGs in the Indian Ocean, supported by its various bases in Djibouti (on the western edge of the Indian Ocean), Ream in Cambodia (on the eastern edge of the Indian Ocean), and Gwadar in Pakistan, Hambantota in Sri Lanka, and Kyaukpyu in Myanmar.

The three aircraft carriers will help India deter China.

The remaining new aircraft carriers, which Rajnath Singh announced, will allow the Indian Navy to project power far beyond the Indian Ocean, potentially even in the South China Sea (SCS).

The first two Chinese aircraft carriers, the Liaoning and the Shandong, use the Short Take-Off But Arrested Recovery (STOBAR) method to launch and land aircraft, while the Fujian is a flat-top carrier that uses the Catapult Assisted Take-Off But Arrested Recovery (CATOBAR) method. The catapult system it uses is a newer generation Electromagnetic Aircraft Launching System (EMALS) instead of the older steam-based catapults.

The carriers using the STOBAR method have some limitations, particularly in the maximum payload with which an aircraft can take off and land from the aircraft carrier.

The CATOBAR-based aircraft carrier, like the Fujian, suffers no such limitations. This will also allow the launching of KJ-600 airborne early warning and control systems (AWACS) from Fujian, which increases the situational awareness of the carrier battle group (CBG) manifold.

No Indian aircraft carrier uses the CATOBAR method, instead using the cheaper and simpler STOBAR method.

To learn more about why sea-based AWACS are important, read this.

The Indian Navy from the beginning wanted a large aircraft carrier of the 65,000-tonne class with CATOBAR. However, this plan was shelved due to a lack of budget. Instead, the Navy will now get a smaller INS Vikrant-sized aircraft carrier weighing just 45,000 tonnes.

Having three aircraft carriers has been a longstanding demand of the Navy. The Navy says that having three aircraft carriers will allow simultaneous operation of two aircraft carriers on either seaboard, one in the Bay of Bengal and the other in the Arabian Sea, while the third one remains in maintenance and overhaul.

The five to six aircraft carriers will also require a large number of supporting ships and infrastructure.

A CBG will have a submarine, multiple frigates, destroyers, corvettes, and a tanker ship all protecting the aircraft carrier, apart from the large aviation component.

All this requires significant monetary investments.

To make this a reality, the government needs to do a lot more in increasing the defence budget, particularly the capital head of the budget.

https://swarajyamag.com/defence/countering-chinas-expansion-india-to-build-five-to-six-more-aircraft-carriers-in-future-defence-minister-rajnath-singh

The Indian EXPRESS

Wed, 15 May 2024

Has the Chief of Defence Staff post improved India's Combat Efficiency?

Media reports suggest ('Armed Forces' integrated commands structure plan looks at Vice CDS, Dy CDS with clear roles', IE, May 13) that the complex and contentious policy issue of rewiring the Indian military into integrated theatre commands (ITC) is gaining traction and that the armed forces are looking at the appointment of a Vice Chief of Defence Staff and a Deputy Chief of Defence Staff. This is to be cautiously welcomed and while an official announcement would provide more detail, a review of the post of a CDS in India's higher defence management matrix is merited.

Lack of an appropriate degree of jointness among the three armed forces has long been identified as a structural constraint that needed redress and to his credit, Prime Minister Narendra Modi picked up the gauntlet. In the first few months of his second term (Modi 2.0), namely August 19, the post of the CDS (Chief of Defence Staff) was announced with fanfare. This was seen as a bold and welcome initiative.

The CDS's many hats

The CDS was accorded a daunting and anomalous institutional profile but this was deemed necessary when the post was conceived. Wearing three hats, the CDS is the first among equals along with the other three service chiefs as a four-star general. Concurrently, he is Secretary to the Gov-

ernment of India in the Ministry of Defence and Principal Adviser to the Defence Minister on inter-service issues. This is a demanding combination of roles, wherein professional military expertise has to be harmonised with bureaucratic acumen and a delicate political advisory role.

A chequered trajectory

General Bipin Rawat, who retired as the army chief in December 2019, was appointed as the first CDS in January 2020 but the trajectory of this post has been tragic and chequered. General Rawat died in an unfortunate air accident in December 2021 and consequently, many of the policies initiated by him remained suspended. In retrospect, some of them were impulsive and less than sagacious.

For reasons that remain inexplicable, the Modi government took nine months to appoint a new CDS and in October 2022, Lt Gen Anil Chauhan (retd) was appointed the second CDS. Eyebrows were raised at the time, for this decision to recall a retired officer and appoint him in a higher rank was unprecedented and in my view, avoidable.

Since then, there has been considerable internal deliberation about organisational changes but towards the end of Modi 2.0, there has been little tangible movement on the operational front. In summary, if India was to face a war now, the existing command and control structures with the three service chiefs at the apex would have to deal with the exigency.

Why the new posts?

Against this backdrop, it is instructive to note that new posts at the higher level are being envisaged to enable the CDS to realise the larger objective of enhancing jointness (the sharing of domain expertise and assets) and improving composite combat capability.

However, the major takeaways from the report appear perplexing and await clarification. The first pertains to the post of a Vice CDS in four-star rank. Rank hierarchy is central to the military and if implemented, the office of the CDS would be tenanted by two four-star rank officers and at a later stage — complemented by three theatre commanders presumably of four-star rank. Concurrently, the three service chiefs who are the original four-star rank officers would have a different profile that would be devoid of the command responsibility.

This is a major restructuring of the Indian military and Defence Minister Rajnath Singh has cautioned that the creation of theatre commands has taken up to 20 years in bigger countries, adding that while the process is on, it is time-consuming. He also added that many points of view have been taken on board (the Air Force, for example, has strong views on the subject) and that policy steps would be initiated only when consensus has been arrived at. Can this consensus be nudged in a positive manner?

One had opined in the past that the existing set of responsibilities for the CDS is a case of avoidable overload and that the role of functioning as a Secretary to the government be reviewed. In the new posts being mooted, it would be desirable if the bureaucratic role could be hived off to the four-star VCDS thereby allowing the CDS to focus on his primary roles.

The reference in the report that the Maritime Theatre Command (MTC) is likely to have its base in Coimbatore is perplexing. Karwar had been earlier identified and there was a certain logic to choosing this venue for the MTC. Why Coimbatore and not a location along the coast that will

maximise existing infrastructure and assets for the MTC is intriguing. Perhaps the official announcement will provide some answers.

With a two-front operational tasking along the land borders (China and Pakistan) and tangled, unresolved territorial disputes that have been festering for over seven decades and compounded by the scourge of state-sponsored terrorism — the challenges to national security and sovereignty remain abiding and tenacious. Kargil 1999, Mumbai 2008 and Galwan 2020 are illustrative of threats and (military) capacity.

The creation of the CDS in 2019 was to enable an enhancement in overall combat efficiency across the board and prepare for new exigencies that will be shaped by the techno-strategic churn that is now taking place. The wars in Ukraine and Palestine and the spillover into the Arabian Sea are cases in point.

The distance (not) covered since 2019

An objective review would suggest that the needle of India's overall combat efficiency — the ultimate litmus test — has not moved significantly since 2019 and the announcement of the post of a CDS.

A new government will assume office in June and whether Modi 3.0 or otherwise, the evolution of the CDS as an institution should be resolute and objective and guided by abiding national security considerations. Sage counsel from former naval chief Admiral Arun Prakash when the first CDS was appointed merits recall: "The military ethos requires that he (CDS) retains his professional independence and upholds his oath of allegiance to the Constitution."

https://indianexpress.com/article/opinion/columns/chief-defence-staff-post-improved-india-combative-efficiency-9330574/

The Tribune

Wed, 15 May 2024

Lessons in Jointness & Integration from 1999 triumph

- **By Maj Gen Ashok Kumar (Retd)**

The Kargil conflict revealed important aspects of warfare between two nuclear-armed nations. Even at the height of the Cold War, the US and the USSR did not have a direct confrontation; they preferred to take a swipe at each other through their proxies. The Kargil War, therefore, became a test case for a limited conflict under the nuclear umbrella or overhang. Paradoxically, on one hand, it showed that there were windows of opportunity for the use of calibrated violence — that nuclear-armed countries could still wage wars against each other in the conventional sense. On the other hand, the application of this violence was constrained in space and time. The conflict also demonstrated significant coordination among the three Services on a number of issues, with a fair number of discordant notes.

The 1999 war was a result of then Pakistan army chief Gen Pervez Musharraf's wish to change the status quo along the Line of Control (LoC) between India and Pakistan. The plan was to occupy winter-vacated heights along a large swathe of territory in the Kargil-Dras-Batalik sectors in Ladakh and force the closure of NH 1A, the lifeline of Indian troops deployed in the strategic Siachen sector. Musharraf wanted to kill two birds with one stone. With this tactical surprise, he wanted to weaken Indian deployment in Siachen — he was still hurting from India's pre-emptive occupation of the Saltoro Ridge in 1984 — and use the occupation of the heights in Kargil to claim that area as part of Pakistani territory. The plan, which was audacious in its conception and execution, achieved complete tactical and strategic surprise during the initial phases. However, one of the underlying assumptions of Pakistan's gamble was the unwillingness of the Indian forces to undertake major land operations for wresting back the control of the heights. The use of air power was not even envisaged. These assumptions were proven wrong.

India mobilised five divisions, as many independent infantry brigades and close to 44 battalions from Kashmir to Kargil and launched Operation Vijay, a joint counteroffensive to evict the intruders from the occupied heights and restore the status quo at the LoC.

Though Operation Vijay was successful in achieving its aim, and by July 26, 1999, the majority of combat operations were over, the nature of Army-IAF interface at the stages of initial planning and staff work had a greater scope of coordination. Once the intrusions were detected on May 3, the IAF deployed its reconnaissance aircraft as early as May 10, but the information flow between the Army's 15 Corps and Air Officer Commanding (AOC), J&K, needed much more integrated coordination. The Army insisted at the start of the operations that it could manage Kargil on its own and would only need the support of armed helicopters. However, closer to the date of the launch of Operation Vijay on May 26, it was realised that the quantum of Pakistani troops and the nature of their entrenchment necessitated the use of IAF's fixed-wing aircraft.

There was limited joint planning, briefing or staffing at the initial stages; it was worsened by a lack of knowledge regarding the strengths and challenges of each other's platforms and requirements. While the Army could not appreciate the vulnerabilities of slow-moving helicopters in mountainous terrain against surface-to-air missiles, the IAF insisted repeatedly on obtaining political clearance for the use of airpower by leaning on the trope of airpower likely to expand the theatre and scope of the conflict. Another issue, once these challenges were sorted out and political clearance was obtained for the use of airpower with a caveat of not crossing the LoC, was the shortage of precision munitions in the IAF's inventory and a lack of acclimatisation of IAF pilots to night-time targeting. Due to this, there were multiple instances where preparatory air strikes preceded Army operations but were unable to impact the progress of the land operations in the expected manner. By this time, however, a working coordination had been achieved between the AOC, J&K, and Headquarters, 15 Corps.

Operation Vijay and the IAF's contribution to it, Operation Safed Sagar, functioned like clockwork once the rhythm was stabilised and the tempo of operations increased. The IAF adjusted to the lack of precision munitions very quickly to mount the Litening electro-optical targeting pods and Paveway II laser-guided bombs on their Mirage 2000s. The total destruction of the Muntho Dhalo supply camp and the command and control centre of the Northern Light Infantry (also serving as the fire direction centre for Pakistani artillery batteries in the area) on the top of Tiger Hill in single

passes weakened the enemy's morale and jeopardised and eliminated its supply chain, leading to the comparatively quick capture of the post.

The war highlighted the strengths of the Indian armed forces in undertaking operations in difficult terrain and the innovative nature of their coordination, where order and stability emerged but took some time. This is not the case anymore in contemporary conflict. Today, the launch of operations and their conduct will be undertaken through the use of assets and technologies, which will strain our understanding of the separation of domains and involve a form of mosaic warfare, where platforms and technologies will need to control cross-domain assets. The lessons from Kargil in the domain of jointness and integration underscore the need for a ground-up and foundational level of joint structures in physical, organisational and conceptual forms. Joint understanding of a common threat, followed by joint planning and execution, will lead to the application of the strengths of the respective Services. Tailored theatre commands, which look at particular areas and adversaries with the strengths of the three Services as well as additional domains, are the way ahead, and this is what we must take away from the 25-year-old war.

https://www.tribuneindia.com/news/comment/lessons-in-jointness-integration-from-1999-triumph-621565

THE ECONOMIC TIMES

Wed, 15 May 2024

Japan, US sign agreement to develop Hypersonic Missile Interceptor

Japan and the United States are planning to develop interceptors to shoot down hypersonic missiles by the 2030s under a contract signed by the two countries on Wednesday. The plan, which will reportedly cost more than $3 billion, was first announced in August when the nations' leaders met at a summit with South Korea in Camp David outside Washington.

"In recent years, around Japan, missile-related technologies such as hypersonic weapons have improved dramatically," the defence ministry said in a statement about the agreement to jointly develop the so-called Glide Phase Interceptor (GPI).

"Strengthening interception capabilities against them is an urgent issue." The Japanese government has already included 75 billion yen ($480 million) in its 2024 budget for development of the interceptors. Hypersonic missiles fly at more than five times the speed of sound and have irregular trajectories, making them difficult to intercept.

The 75 billion yen is part of a record defence budget of 7.95 trillion yen approved last year, as tensions rise with China and North Korea. Prime Minister Fumio Kishida has pledged to double defence spending to the NATO standard of two percent of GDP by 2027.

Japan has a pacifist post-war constitution, which limits its military capacity to ostensibly defensive measures. But it updated key security and defence policies in 2022, explicitly outlining the challenge posed by China

https://economictimes.indiatimes.com/news/defence/japan-us-sign-agreement-to-develop-hypersonic-missile-interceptor/articleshow/110151547.cms

THE ECONOMIC TIMES

Wed, 15 May 2024

Pakistan conducts successful training launch of 'Fatah-II' Rocket System

Pakistan on Wednesday conducted a successful training launch of guided multi-launch rocket system 'Fatah-II', which is capable of engaging targets with high precision up to a range of 400 kilometres, the army said. The launch of Fatah-II Guided Rocket System was aimed at perfecting the launch drills and procedures, the army said in a statement.

"Equipped with state-of-the-art navigation system, unique trajectory and manoeuvrable features, Fatah-II is capable of engaging targets with high precision and defeating any missile defence system," it said.

Moreover, the army also announced that "Fatah -II is being inducted in Pakistan's Artillery Divisions for stand-off, precision engagement of deep targets," and its induction would significantly upgrade the reach and lethality of the army's conventional arsenal.

The flight test was witnessed by the senior army officers, scientists and engineers.

President Asif Ali Zardari, Prime Minister Shehbaz Sharif and the senior army officers congratulated the participating troops and scientists on this achievement.

https://economictimes.indiatimes.com/news/defence/pakistan-conducts-successful-training-launch-of-fatah-ii-rocket-system/articleshow/110149183.cms

THE ECONOMIC TIMES

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All aboard the moon train: NASA's futuristic transport system revealed

NASA has unveiled its plan to construct the first lunar railway system, designed to offer reliable, autonomous, and efficient payload transport on the Moon. In its official blog, NASA said that this durable, longlasting robotic transport system will be essential for the daily operations of a sustainable lunar base envisioned for the 2030s, as part of NASA's Moon to Mars initiative and mission concepts like the Robotic Lunar Surface Operations 2 (RLSO2).

"Moreover, NASA has proposed a solution for transporting regolith mined for ISRU consumables (H2O, LOX, LH2) or construction materials, as well as for moving payloads around the lunar base and to/from landing zones or other outposts," NASA added.

The agency introduced FLOAT — Flexible Levitation on a Track — to address these transportation needs. The FLOAT system utilizes unpowered magnetic robots that levitate over a 3-layer flexible film track. This track comprises a graphite layer for passive floating using diamagnetic levitation, a flex-circuit layer for generating electromagnetic thrust to propel robots along the tracks, and an optional thin-film solar panel layer for power generation when exposed to sunlight FLOAT robots, devoid of moving parts, minimize lunar dust abrasion/wear by levitating over the track, unlike lunar robots equipped with wheels, legs, or tracks.

"In Phase 2, we will continue to retire risks related to the manufacture, deployment, control, and long-term operation of meter-scale robots / kmscale tracks that support human exploration (HEO) activities on the Moon," NASA explained. Phase 2 includes designing, manufacturing, and testing a series of sub-scale robot/track prototypes, culminating with a demonstration in a lunar-analogue testbed.

The project will also investigate the impacts of environmental effects on system performance and longevity and define a technology roadmap to address technology gaps and mature manufacturing capability for critical hardware.

"NASA noted that in Phase 2, 'We will continue to retire risks related to the manufacture, deployment, control, and long-term operation of meter-scale robots / km-scale tracks that support human exploration (HEO) activities on the Moon,' by accomplishing the following key tasks:

Design, manufacture, and test a series of sub-scale robot/track prototypes, culminating with a demonstration in a lunar-analogue testbed.

Investigate the impacts of environmental effects on system performance and longevity.

Investigate/define a technology roadmap to address technology gaps and mature manufacturing capability for critical hardware."

https://economictimes.indiatimes.com/news/science/all-aboard-the-moon-train-nasas-futuristic-transport-system-revealed/articleshow/110154530.cms

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