

समाचार पत्रों से चयित अंश Newspapers Clippings

दैनिक सामयिक अभिज्ञता सेवा
A Daily Current Awareness Service

Vol. 45 No. 48 06 March 2020



रक्षा विज्ञान पुस्तकालय
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IAF has two-pronged strategy to deal with shortage of fighter jets: Govt

The IAF is in the process of acquiring additional 83 LCA Mk1A aircrafts for which contract negotiations are in progress. Delivery of LCA Mk1A aircraft would commence 3 yrs from the date of signing of contract. Request For Proposal for 83 LCA Mk1A was issued to December, 2017. A Request For Information for procurement of 114 MRFA was issued in April 2018

New Delhi: To address the shortage of fighter aircraft in the Indian Air Force, the government has adopted a two-pronged strategy of midlife upgradation of existing jets and induction of new ones in the fleet, Minister of State for Defence Shripad Naik said on Thursday.

In a written response to a question in the Lok Sabha, Naik said the IAF has already contracted for 40 Light Combat Aircraft Mk1 with Hindustan Aeronautics Limited (HAL) of which 16 aircraft have been delivered.

"To overcome the shortage of fighter aircrafts in the IAF, a two-pronged approach has been adopted. That is, midlife upgradation of legacy aircraft to retain their operational relevance and induction of new aircraft," Naik said.

The IAF is in the process of acquiring additional 83 LCA Mk1A aircraft for which contract negotiations are in progress.

Delivery of LCA Mk1A aircraft would commence three years from the date of signing of contract, Naik said. Request For Proposal for 83 LCA Mk1A was issued to HAL in December, 2017.

A Request For Information for procurement of 114 Multi Role Fighter Aircraft (MRFA) was issued in April 2018, the minister added.

The MiG-27 fleet was decommissioned on December 31, 2019 due to obsolescence and completion of Total Technical Life, he added.

Replying to another question on whether the Defence Research Development Organisation (DRDO) has partnered with Indian or foreign companies to develop technology to prevent drone attacks, Naik said the information is "strategic in nature and its disclosure is not in the interest of national security".

In response to a separate query on whether there are any plans to privatise any defence public sector undertaking, Naik said the government has given an in-principle approval for strategic disinvestment of Bharat Earth Movers Ltd (BEML) by reducing its shareholding of 54.03 per cent to 28.03 per cent, he said.

<https://economictimes.indiatimes.com/news/defence/iaf-has-two-pronged-strategy-to-deal-with-shortage-of-fighter-jets-govt/articleshow/74497729.cms>

Rationalise foreign travel: CDS to forces

By Ajay Banarjee

India's first Chief of Defence Staff, General Bipin Rawat, recently argued that India's military is poised at the "cusp of a transformation". He is absolutely right on this, and Prime Minister Narendra Modi deserves credit for unleashing the beast of reform within the military. India's strategic community was pleasantly surprised when he unexpectedly announced the decision to create the post of Chief of Defence Staff on 15 August 2019.

In a decision to curtail expenses, the Department of Military Affairs, headed by General Bipin Rawat, has cut down foreign travel of officers of the armed forces. General Rawat, who is also the Chief of Defence Staff (CDS), has asked for rationalising 'foreign travel' of officers.

Curtailing expenses

- The three forces have been asked to rationalise visits to foreign countries and avoid diplomatic visits by separate services to same country in a bid to curtail expenses
- Foreign trips of military officers are for training, joint exercises, trying out equipment or to liaise with other countries for visits of top military brass

Visits are now being cleared on selective case-to-case basis. Sources within the ministry confirmed the directions had originated from the office of the Department of Military Affairs.

Before the Chief of Defence Staff was appointed on January 1, each service moved its case of foreign visit by its officers through the 'Establishment Section' of the Department of Defence. In the previous arrangement too, all cases of foreign visit were not okayed.

General Rawat has asked the three forces to rationalise all visits to foreign countries and try and avoid diplomatic visits by separate services to same country.

In a way, the Department of Military Affairs will rationalise as to which country is the priority. Within the Ministry of Defence, there is a foreign services officer at the Joint Secretary-level attached to give advice on a daily basis.

Foreign trips of military officers are for training, joint exercises, trying out equipment, to liaise with other countries for visits of top military brass.

The permission is given by the Ministry of Defence and sometimes, the Ministry of External Affairs wants an outreach and it coordinates. In case of the Navy, there is outreach on Africa and Asia Pacific, while in case of the Air Force and the Army, the outreach is at multiple levels in neighbouring countries.

<https://www.tribuneindia.com/news/rationalise-foreign-travel-cds-to-forces-51573>

Rail, defence procurement to soon be through GeM portal

SUBHAYAN CHAKRABORTY
New Delhi, 5 March

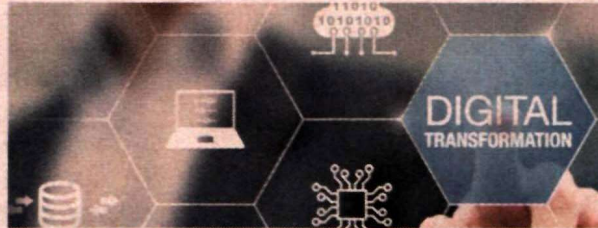
Public procurement by two of the country's largest government purchasers, the ministries of defence and railways, will soon be subsumed under the Commerce Department's Government e-Marketplace.

By September, all general use goods and services currently purchased through the Indian Railways E-Procurement Systems (IREPS), the Defence e-Procurement portal, and the Central Public Procurement Portal, will have to be made through GeM, officials said on Thursday.

IREPS publishes over 30,000 tenders every month and has an online transaction value of ₹10,600 crore as of mid-2019, according to the Centre for Railway Information Systems.

"Under the unified procurement system plan, all portals would be brought under GeM, allowing both the buyer as well as thousands of vendors more clarity and options on the tenders, such as price discovery," said Tallen Kumar, chief executive officer of GeM.

The move is part of a measures dubbed GeM 4.0, that seek to position it as the largest source of public procurement in the country, a long-term aim of the Prime Minister Narendra Modi-led government to reduce corruption, costs, and increase transparency, efficiency and scope of public purchases.



THE STORY SO FAR

Procurement through GeM (cumulative)	₹48,890cr
Number of orders made on GeM	3,606,889
Number of products and services on offer	2,091,674
Number of registered buyers	43,880
Number of registered sellers/service providers	342,455
Including MSME sellers	76,276
Women sellers	10,144
Start-up sellers	4,397

Source: Government e-Marketplace

Offline buying continues

However, government departments registered on GeM continue to make purchases outside the portal. Finance Minister Nirmala Sitharaman said the ministry was looking into ₹91,000-crore worth of purchases done by government departments and public sector undertakings (PSUs) outside the GeM system, as of October 2019. Senior officials confirmed to Business Standard that this figure has only risen since then.

GeM officials stress that the government's General Financial Rules (GFR), 2017, mandate that all public procurement be routed through the portal. "The rate at which new products and services are being added that will soon make any excuses of

products not being available on the portal, redundant," Kumar said. Official estimates by the commerce department show a target of ₹50,000 crore in 2019-20, ultimately hitting ₹1 trillion worth of procurements by 2021.

Kumar also clarified that GeM would not be opened up to private buyers anytime soon, as had been announced earlier. The move was set to bring the government in direct competition with major e-tailers, and could happen sometime later, if at all, Kumar added.

New features galore

The government will also roll out non-monetary incentives for buyers and sellers for timely payments, seller referral and catalogue corrections, among

other actions. These rewards can be used to access benefits like faster approvals and priority help desks.

Seen as a step to woo small firms, the government has started offering credit facility to MSMEs (micro, small, and medium enterprises) on GeM through the Trade Receivables Electronic Discounting System (TReDS). It is a bill discounting service supported by Small Industries Development Bank of India for pre- and post-shipment of products.

Meanwhile, as small businesses have continued to complain of massive payment delays by government bodies, GeM has pushed the 'pool accounts', where states can make advance payment for their purchases but can't debit, thereby, eliminating the chance of non-availability of funds.

Blockchain technology will also be used for the first time for bulk procurement of pharmaceuticals, and automatic generation of provisional receipt certificates. The Uttar Pradesh government will test out the new system. A system of new seller ratings, taking into account buyer and user feedback, apart from transaction history will also be rolled out.

The portal has also onboarded most public sector enterprises, banks and state governments. While Goa and Rajasthan have recently started purchasing through the portal, Karnataka remains the only glaring exception that still buys outside GeM, officials said.

Three pitfalls of CDS, Dept of Military Affairs and why it should make us sceptical

CDS Rawat must articulate a management structure in the DMA that is internally consistent and logical. Otherwise, the military risks being neither here nor there

By Anil Mukherjee

India's first Chief of Defence Staff, General Bipin Rawat, recently argued that India's military is poised at the "cusp of a transformation". He is absolutely right on this, and Prime Minister Narendra Modi deserves credit for unleashing the beast of reform within the military. India's strategic community was pleasantly surprised when he unexpectedly announced the decision to create the post of Chief of Defence Staff on 15 August 2019.

However, when the mandate of the CDS was announced on 24 December, there was an even greater surprise because the CDS virtually got everything but the kitchen sink. The creation of a Department of Military Affairs (DMA), a previously unheard of initiative in India, empowered the CDS in an unprecedented and unexpected manner. However, this rush to reform must be carefully thought through and sagely handled — otherwise, its unintended consequences can cause significant institutional turbulence.

Two Speculations

The need to have a CDS has been debated, with varying levels of intensity, for more than six decades. It is entirely to Modi's credit, therefore, that India, without an immediate and precipitate crisis, is undertaking such significant defence reforms. His announcement of creating a CDS gave rise to two speculations.

First, which is still unanswered, is why did the Prime Minister at this particular juncture do so? Early on in his first term in office, PM Modi had identified defence reforms to be a 'key priority' but eventually made few substantive changes. What, therefore, was the specific triggering event that led to his decision to create a CDS? Was it a concern over defence expenditure and fiscal inefficiency, military operations like Balakot or Doklam, or was he spurred on to do so by his top advisers? At this stage, without an interview with Modi, we can only offer conjectures.

The second source of speculation centred on the powers of the CDS. PM Modi's announcement to create a CDS led to a flurry of commentaries speculating whether this post would be an empowered one or a mere figurehead. On this, the prime minister's office gave an emphatic reply — it has firmly empowered the CDS by, among other measures, creating the Department of Military Affairs.

The DMA is a completely new organisation that, to the best of our knowledge, has never been recommended by any previous reform committee. Surprisingly, there is almost no scholarship on defence reforms that even mentions this idea. Which brings us to another set of unanswered questions — how and why was the DMA conceived? The former is, as yet, unanswerable, but having recently written a book on civil-military relations, if I was to take a guess on the latter — the DMA was created primarily to give the military a seat at the high table.

Central fault in India's Civil-Military Relations

The central fault in India's civil-military relations is not that of civilian control (a rare success for our democracy), but more about the relations between the bureaucracy and the military. After the 2001 post-Kargil defence restructuring, military reformers settled upon the reasonable idea of integrating the civilian and military bureaucracies by cross-posting officers.

However, it is entirely to the intransigence of the civilian bureaucrats that even this relatively minor reform could not succeed. The DMA, therefore, appears to be an initiative from the uniformed community to ensure that, by virtue of being a department in the government of India, the military gets to drive policy and not go through what they perceive as a meddling civilian bureaucracy.

This would all be well and good, but there are at least three potential pitfalls of this initiative. First, the DMA is a uniquely Indian institution as one fails to think of another democracy that has a similar organisation. This should immediately make us somewhat sceptical.

Second, the DMA is based on an underlying assumption that one can clearly differentiate between military and defence issues — which is entirely untrue. Both are so intertwined that any attempt to do so will only create inconsistencies and further turbulence.

Third, the military's education policies and short and rapid tenure system does not augur well for its ability to staff the DMA. To be effective, the DMA would require military officers to tenet these posts for a duration of more than three years, at a minimum. However, that requirement does not comport with typical career trajectories in the military. More crucially, the military generally does not incentivise domain expertise and will have to properly think through policies to groom officers to assume such unique positions — which intersects civilian and military bureaucracies. There is no indication as yet that this is being done.

Neither here nor there

The main responsibility for crafting an appropriate organisation falls squarely on General Rawat who has his task cut out for him. While doing so, he has to attach utmost importance to creating an appropriate interface between the DMA, the services and the defence secretary.

The current reforms are very dynamic, but beyond media interviews, the CDS should perhaps focus on creating a vision document explaining the rationale, powers and role of the DMA (and the CDS itself) within the Ministry of Defence.

One structure, with obvious similarities, that might be instructive is the British system of higher defence management, but they have an intricate system of councils and boards.

It is right to assert, as General Rawat recently did, that India need not follow any particular model, but he has to articulate a management structure that is internally consistent and logical. If we fail to do so, then we risk having a military perennially poised at the cusp of a transformation — neither here nor there.

(The author is a non-resident fellow at Brookings India and the author of 'The Absent Dialogue: Politicians, Bureaucrats and the Military in India'. Views are personal.)

<https://theprint.in/india/three-pitfalls-of-cds-dept-of-military-affairs-and-why-it-should-make-us-sceptical/376468/>



Fri, 06 March 2020

India inks deal for missile defence systems for desi 'Air Force One'

By Rajat Pandit

New Delhi: The desi “Air Force One”, equipped with advanced missile defence measures, will finally be ready to fly the President or Prime Minister by the middle of next year. India has now inked the around \$190 million (Rs 1,300 crore) deal with the US for two self-protection suites (SPS), which will be retrofitted on the two custom-built Boeing-777 aircraft earlier acquired for long-haul VVIP travel.

The two wide-bodied B-777s, with their fully-integrated advanced missile approach warning sensors, defensive electronic warfare systems, infra-red counter-measures, digital radio frequency jammers and other such contraptions under the overall SPS, will be akin to the US President's iconic Air Force One or the "flying Oval office".

Though the US President's aircraft is much more advanced, and can even serve as an airborne command centre to direct military operations during NBC (nuclear, chemical, biological) attacks, the Indian PM will be able to fly in a much more secure, and plush, manner with the new planes.

The two extended-range B-777s, which will also have encrypted satellite communication facilities, will replace the almost three-decade old 747-400 jumbo jets being currently used for VVIP flights. The SPS will ensure a robust capability for automated detection and jamming of different kinds of missiles. The counter-measures dispenser systems, in turn, will swing into action by shooting flares and chaff to "misguide or divert" incoming radar-guided or heat-seeking missiles.

Sources on Thursday said the government-to-government deal for the two SPS was signed at the time President Donald Trump with his Air Force One was in India on February 24-25. It was in February 2019 that the US state department had notified the proposed "foreign military sale" of the SPS "to protect two Boeing-777 head-of-state aircraft" but negotiations delayed the inking of the contract till now.

"The two aircraft were slated for delivery in June 2020 after customisation at the Boeing facility in Dallas. But the SPS retrofitting in them will obviously take much more time," said a source.

Moreover, the B-777s are set to be placed under the IAF's control now, though the original plan was that Air India would own and operate them. A few IAF pilots have already been trained to fly the VVIP aircraft, and will take over operations from Air India pilots in the long run. With the SPS and other sophisticated systems, the aircraft will also have a military classification. "The call-sign is likely to be Indian Air Force One, not Air India One," said the source.

<https://timesofindia.indiatimes.com/india/india-inks-deal-for-missile-defence-systems-for-desi-air-force-one/articleshow/74501315.cms>

The Telegraph
— online edition —

Fri, 06 March 2020

Stress on operational training: Indian Air Force Chief

He addressed the annual Commanders' Conference at the headquarters Eastern Air Command on Wednesday and Thursday

Shillong: The Chief of Air Staff, Air Chief Marshal Rakesh Kumar Singh Bhadauria, has emphasised the need to concentrate on operational training and readiness for a quick and effective response to a rapidly-changing threat scenario.

He addressed the annual Commanders' Conference at the headquarters Eastern Air Command on Wednesday and Thursday.

The air chief congratulated the Eastern Air Command for completion of 60 years of glorious service to the nation and highlighted the operational importance of the command. He also awarded trophies to the commanders for achieving excellence in the fields of operations, maintenance and administration.

Air force station Tezpur was awarded the trophy of "Best Flying Station — Pride of EAC" and air force station Laitkor Peak was declared the "Best Non-Flying Station".

During the conference, the Air Force Wives' Welfare Association president, Asha Bhadauria, reviewed various welfare activities undertaken for the welfare of Sanginis and their families in Eastern Air Command. She also interacted with the Sanginis and wives of Defence Service Corps personnel.

<https://www.telegraphindia.com/states/north-east/stress-on-operational-training-indian-air-force-chief-marshal-rakesh-kumar-singh-bhadauria/cid/1751300>



Fri, 06 March 2020

India, US sign Rs 1200 crore deal for advanced defense suite for VVIP aircrafts

US authorities which sanctioned the sophisticated suites for India has stated that the new defence system will facilitate a more robust capability into areas of increased missile threats on the planes

By Anirudh SK

In order to further improve the security of its VVIP planes, India has signed a deal worth Rs 1200-crore with the United States for buying protection suites. This will protect the two VVIP planes that are used to ferry the President and the Prime Minister of the country.

Reports citing sources close to the matter suggest that the deal was signed around the two-day visit of the US President Donald Trump to India. The new self-protection suites for the aircraft come in the form of infrared and electronic warfare countermeasures suites, countermeasure dispensing systems and missile warning sensors.

The two planes will arrive in India and will be put out on the field around the middle of next year. The Indian Air Force has made several visits to the Boeing facility where they frequently contributed with the progress and development of the aircraft. Additionally, as the aircraft now comes with new sophisticated equipment and is owned by the Indian Air Force, it will have military classification.

US authorities which sanctioned the sophisticated suites for India has stated that the new defence system will facilitate a more robust capability into areas of increased missile threats on the planes. During the two-day visit by Donald Trump, US and India had signed deals for 24 MH60 Romeo multirole helicopters for the Navy and six new Apache attack choppers for the Army.

<https://www.news18.com/news/auto/india-us-sign-rs-1200-crore-deal-for-advanced-defense-suite-for-vvip-aircrafts-2526833.html>



Fri, 06 March 2020

To counter Chinese intrusions, Territorial Army to get a bigger role

The role of the TA is gradually being expanded since the past few years and is likely to be given larger responsibilities in an effort to cut down costs

With major changes for the Territorial Army (TA) in the pipeline, Lt Gen DP Pandey on Monday took over as the first director-general.

The TA which is a voluntary force of around 40,000 is the second line of defence presently and once the restructuring of the Indian Army is completed the TA could be part of bigger roles including operational and possibly be used for intelligence gathering.

As part of re-structuring the TA is now directly under the new office of the Chief of Defence Staff and the Department of Military Affairs which is headed by Gen Bipin Rawat and not the Indian Army Chief.

The role of the TA is gradually being expanded since the past few years and is likely to be given larger responsibilities in an effort to cut down costs.

There are plans to increase the strengths of TA especially in the Andaman region as there is a constant concern of Chinese intrusion. Those who want to join the TA from the island region will be given full support to gather intelligence.

Who can join the TA?

The TA often provides assistance to the civil administration in case of natural calamities and helps in maintaining the essential services during a crisis.

Also, during the war, they are the second line of defence for the Indian Army and have been actively involved in the 1962, 1965 and 1971 operations.

According to officials, any individual keen to join TA has to be either self-employed or in other services. They hold honorary ranks and depending on the approval of the Commanding Officers (CO) of respective units, in case there is a need these individuals can be attached to regular army units.

Last year the former captain of the Indian cricket team MS Dhoni had proceeded to join the 106 Territorial Army (TA) Battalion (Para). He was on static duty and did patrolling, guard and post duty.

<https://www.financialexpress.com/defence/to-counter-chinese-intrusions-territorial-army-to-get-a-bigger-role/1890000/>



Fri, 06 March 2020

Indian Navy P-8I MPA in Reunion Island for combined training with French forces

An Indian Navy P-8I Neptune Maritime Patrol Aircraft (MPA) visited Reunion Island to train with the French Air Force and Navy based on the island, known as "FAZSOI"

By Xavier Vavasour

FAZSOI stands for armed forces of the southern Indian Ocean area (forces armées de la zone sud de l'océan Indien in French).

According to local media *Zinfos974*, the P-8I and its crew stay for 5 days on the French island located in the southern Indian Ocean, and flew back to India on March 3.

The visit of the Indian MPA is in line with the framework of the Indo-Pacific relations and France-India cooperation desired by French President Emmanuel Macron.

The commanding officer of "Détachement Air 181 air base, located North of the island and which hosted the P-8I, explained that India is France' strategic partner in the southern area of the Indian Ocean. The P-8I interacted with both the French Air Force as well as with the French Navy's Floreal-class frigates based on the Island.

The commander of the Indian Navy P-8I told *Zinfos974*

“We are convinced that joint security operations make it possible to maintain the security of international maritime routes for trade and communications in accordance with international law to combat terrorism and maritime piracy, to raise awareness of the maritime domain and for better coordination of regional / international waters in the region. We expect fruitful engagements with the French Navy in the days to come ”

About P-8I MPA Neptune

The P-8A is a long-range multi-mission maritime patrol aircraft capable of broad-area, maritime and littoral operations. A military derivative of the Boeing Commercial Next-Generation 737 airplane, the P-8A combines superior performance and reliability with an advanced mission system that ensures maximum interoperability in the battle space.

The P-8I is a customized export variant of the P-8A featuring specific equipments for the Indian Navy. Two major components not fitted on the P-8A are a Telephonics APS-143 OceanEye aft radar and a magnetic anomaly detector (MAD). India has received eight of the P-8I variant to date with four more in production to be delivered from April 2020. It intends to procure six more aircraft.

The P-8A is militarized with maritime weapons, a modern open mission system architecture, and commercial-like support for affordability. The aircraft has been modified to include a bomb bay and pylons for weapons – two weapons stations on each wing – and can carry 129 sonobuoys. The aircraft is also fitted with an in-flight refueling system. With more than 180,000 flight hours to date, P-8 variants, the P-8A Poseidon and the P-8I, patrol the globe performing anti-submarine and anti-surface warfare; intelligence, surveillance and reconnaissance; humanitarian; and search and rescue missions.

The United Kingdom is one of six international customers for the P-8A Poseidon. The first British Poseidon MRA Mk1 was delivered earlier this year. As a direct commercial sale, India has received eight of the P-8I variant to date with four more in production to be delivered from April 2020. The U.S. Navy is on contract to receive 111 with the potential for additional quantities based on the fleet’s needs. As a cooperative partner with the Maritime Patrol and Reconnaissance Program Office, Australia began receiving their P-8A aircraft in 2016 with eight delivered and four more in production; Norway will begin receiving their five P-8As in 2022; both New Zealand and South Korea have signed agreements with the U.S. Navy to purchase four and six aircraft respectively.

<https://www.navalnews.com/naval-news/2020/03/indian-navy-p-8i-mpa-in-reunion-island-for-combined-training-with-french-forces/>

DefenseNews

Fri, 06 March 2020

US-India helicopter deal deepens vital partnership

By Bradley Bowman , Cleo Paskal , and Maj. Liane Zivitski

Due to American and Indian negotiators’ failure to reach a trade agreement, some media reports panned President Donald Trump’s visit last week to India as more show than substance. Yet a closer look at the U.S.-India defense deals finalized during the trip shows that the visit facilitated deeper security cooperation with a critical U.S. partner in Asia.

Washington and New Delhi used the presidential visit to announce India’s decision to purchase more than \$3 billion in defense equipment. This purchase includes six AH-64E Apache attack helicopters for the Indian Army and 24 MH-60R Seahawk helicopters for the Indian Navy. According to a U.S.-India joint statement, the helicopters will “advance shared security interests, job growth, and industrial cooperation between both countries.”

The AH-64E specializes in armed reconnaissance, mobile strike and close-air support missions. The Apache has seen extensive combat experience with the U.S. Army and is also flown by countries such

as Japan, the United Kingdom and Israel. The Apache will provide a significant capability improvement over India's legacy attack helicopters.

The Indian Air Force, which has traditionally operated military helicopters, already has 17 AH-64Es and expects to induct five more. But this new sale will provide the Indian Army Aviation Corps organic attack helicopters. The Apache will provide the Indian Army valuable close-air support in India's challenging border regions. India's infantrymen in need of close-air support will no doubt appreciate that the Indian Army's Apaches will be equipped with AGM-114 Hellfire missiles and Hydra-70 rockets.

The Indian Army needs many more attack helicopters, so this initial Apache purchase could represent just a first step toward the acquisition of around 40 total helicopters.

Pakistan has taken notice of New Delhi's Apache purchases and is reportedly threatening to purchase Chinese Z-10 attack helicopters if Islamabad cannot acquire new Turkish or American aircraft. Given India's concerns with China, as well as the increasingly close relationship between Moscow and Beijing, Pakistan's actions may further encourage New Delhi to deepen its military partnership with the United States.

In addition to the Apaches, New Delhi is also purchasing MH-60R helicopters for its Navy. The MH-60R excels in anti-submarine and anti-surface warfare, and can operate from a variety of vessels. The MH-60R helicopters will begin to address an important Indian capability gap with respect to anti-submarine warfare.

China has worked to increase both the size and capability of its submarine fleet — and Beijing has increasingly deployed its submarines to patrol in the Indian Ocean. This development causes justifiable consternation in New Delhi.

The helicopters will also be able to perform a variety of other missions, including special operations insertions, search and rescue, resupply, as well as command-and-control functions.

The capabilities of both the AH-64E and MH-60R will be further augmented by the recent Communications, Compatibility and Security Agreement, or COMCASA, which formalized the integration of secure, bilateral communication networks between the United States and India in 2018. The helicopters will be the first post-COMCASA hardware available to the Indian military.

If India decides to do so, upon delivery the helicopters could come fully integrated with bilaterally secure networks and communications. This would increase Indian military capability and dramatically enhance U.S.-India military interoperability. More broadly, this could help incorporate India into the larger sphere of cooperation with other Western militaries that use similar equipment and software. It would create a pocket of exceptional capability and connectivity in an Indian force traditionally dominated by inferior Russian equipment.

The agreements for both helicopters include the provision of logistical support and spare parts. This will deepen valuable U.S.-India defense ties for decades to come, long after all of the helicopters are delivered.

The agreement also addresses New Delhi's desire to strengthen its domestic defense-industrial and innovation base. The Apache's manufacturer, Boeing, has already established a factory in Hyderabad in a joint venture with Tata Advanced Systems to produce helicopter fuselages, with the plant expected to become the sole producer of Apache fuselages in the world. Boeing notes that 90 percent of the fuselage parts originate with Indian suppliers.

The sale of the helicopters follows the Tiger Triumph military exercise in November, the first U.S.-India military exercise to include all three of India's military services. These new helicopters will enable additional future U.S.-India training opportunities that Washington and New Delhi should seek to maximize.

In the joint statement last week, the U.S. and India asserted that a “close partnership between the United States and India is central to a free, open, inclusive, peaceful, and prosperous Indo-Pacific region.”

To defend those shared interests against persistent terror threats and a growing threat from China, the U.S. and India will need an even deeper and more effective defense partnership. India’s purchase of the AH-64E and MH-60R American helicopters represents a significant and positive step in that direction.

(Bradley Bowman is senior director of the Center on Military and Political Power at the Foundation for Defense of Democracies, where Cleo Paskal is a nonresident senior fellow and U.S. Air Force Maj. Liane Zivitski is a visiting military analyst. Opinions, conclusions and recommendations expressed or implied are solely those of the authors and do not necessarily represent the views of any U.S. military service, the Defense Department or any other government agency.)

<https://www.defensenews.com/opinion/commentary/2020/03/05/us-india-helicopter-deal-deepens-vital-partnership/>

THE ECONOMIC TIMES

Fri, 06 March 2020

Remembering Subroto Mukerjee: Father of the Indian Air Force

Father of the Indian Air Force

Known as the ‘Father of the Indian Air Force’, India’s first Chief of Air Staff, Air Marshal Subroto Mukerjee was one of Indian Air Force’s first recruits and went on to win numerous awards throughout his illustrious career. He was born on 5 March 1911, Kolkata.

The first batch

He was commissioned in the Indian Air Force (IAF) as a pilot in October 1932 and became chief of air staff in April 1954.

Subroto was one of the six Indians selected for training as pilots at the RAF College, Cranwell.

The legend

Subroto Mukerjee was the first Indian to command a flight, a squadron, a station and finally the service.

He was made an officer of the Order of the Marshal British Empire in 1945.

End of an era

While having a meal with a friend of his, a senior officer in the Indian Navy, in a restaurant in Tokyo, a morsel stuck in the windpipe choking him to death. Before a doctor could be summoned, it was all over.

The football fan

Subroto Mukerjee was an avid football fan. The inter-school football tournament Subroto Cup is named after him.

<https://economictimes.indiatimes.com/news/defence/remembering-subroto-mukerjee-father-of-the-indian-air-force/father-of-the-indian-air-force/slideshow/74490967.cms>

चीन की सैन्य शक्ति पर दिया बयान जनरल नरवणे ने

भारत के आर्मी चीफ जनरल एमएम नरवणे ने चीन की रणनीतिक सैन्य शक्ति की बढ़त पर गंभीर बयान दिया है. इसी बयान के दौरान उन्होंने संकेतों में ही भारतीय सेना के भावी लक्ष्य को रेखांकित भी किया.

नई दिल्ली. जनरल एमएम नरवणे गंभीर व्यक्तित्व हैं. वे किसी भी बयान का अर्थ और महत्व बखूबी समझते हैं. उनके इस बयान के पीछे जितना भारत का आत्मविश्वास दर्शित होता है उतना ही इसमें चीन के लिए भी गंभीर संदेश है. आर्मी चीफ ने कहा है कि चीन ने विवादास्पद दक्षिण चीन सागर में बिना एक भी गोली चलाए इस क्षेत्र की भू-रणनीतिक स्थिति को परिवर्तित कर दिया है. उन्होंने कहा कि भारत भी अपनी सीमाओं पर लगातार अपनी क्षमता को विकसित कर रहा है.

"चीन का रणनीतिक सैन्य विस्तार दर्शनीय है"

यद्यपि आर्मी चीफ जनरल एमएम नरवणे के बयान के केंद्र में चीन की सैन्य ताकत की आज की स्थिति थी किन्तु उसके आधार पर उन्होंने भारत की भावी स्थिति का रेखाचित्र भी खींच दिया. सेनाप्रमुख ने कहा कि कुछ दशकों से चीन ने कोई युद्ध नहीं लड़ा लेकिन उसने अपनेआपको दुनिया की एक सैन्य ताकत के रूप में स्थापित किया है. उन्होंने कहा कि चीन ने इस तरह का अपना दबदबा स्थापित किया है कि वह प्रमुख तकनीकी क्षेत्रों में अविवादित सैन्य ताकत है।

"सीमा पर 'तेजी के साथ जवाब' दिया जाएगा "

चीन के रणनीतिक सैन्य विस्तार पर बयान देने के साथ ही इसमें जनरल नरवणे ने भारतीय सेना की सोच का मुजाहिरा भी कर दिया जो कि चीन के लिए अपरोक्ष संकेत है. उन्होंने चीन के बिना बम गोली के किये गए सैन्य विस्तार के साथ भारतीय सेना के विस्तार की योजना को भी जोड़ दिया. सेना प्रमुख ने कहा कि इसी तरह भारतीय सेना भी अपनी योजनाओं और क्षमता की फिर से समीक्षा कर रही है ताकि चीन और पाकिस्तान सीमा पर तेजी के साथ जवाब' दिया जा सके.

"चाणक्य-नीति हमारी मार्गदर्शक"

जनरल नरवणे ने कहा कि चीन की सुन तजू की रणनीति को टक्कर देने के लिए भारत के पास महान रणनीतिकार चाणक्य का अर्थशास्त्र उपलब्ध है जो कि आज भी पहले की तरह ही प्रासंगिक है. अपने वक्तव्य को आगे बढ़ाते हुए सेना प्रमुख ने कहा कि भारत अंतरिक्ष, साइबर युद्ध और इलेक्ट्रॉनिक युद्ध कौशल में अपनी क्षमता का विस्तार करने के साथ ही लेजर-हथियारों के विकास की दिशा में प्रयत्नशील है.

<https://zeenews.india.com/hindi/zee-hindustan/utility-news/indian-army-chief-general-narvane-made-a-statement-over-the-military-power-of-china/650445>

Fri, 06 March 2020

Geo Imaging satellite GISAT-1 can keep a 24/7 watch on Indian subcontinent, say ISRO veterans

Indian Space Research Organisation's (ISRO) latest earth observation satellite GISAT-1, the launch of which was postponed by the space agency due to technical reasons on March 4, 2020, can keep a 24/7 watch on Indian subcontinent.

Though the launch was postponed for some time, ISRO veterans claimed that the the geo-imaging satellite GISAT-1, which is one of the first-of-its-kind satellites, is equipped with a very powerful telescope and very sensitive imaging sensors which have been developed indigenously.

Explaining reasons for placing the earth-observation satellites in GEO, Padma Shri Dr Mylswamy Annadurai, Programme Director Chandrayaan 1 and Mangalyaan, Vice President TN State Council for Science and Technology, said, "Satellites in Low earth orbit can only click an image of a particular spot only 2-3 times a day, when they make a pass, but satellites in geostationary orbit (In sync with the movement of the earth) can constantly monitor a vast area. When a satellite is placed in GEO, it can click pictures of a particular spot in India or any spot that is visible to it, almost 24/7."

When asked if the image quality will not be adversely affected due to its distance of nearly 36000 km from earth, Annadurai said, "It is true that the resolution and quality of an image would be affected due to the 36,000 km orbit at which the satellite is placed, but besides optical cameras, we can also use other infrared-based imaging sensors that are part of the satellite."

Replying to a question if there were other Indian satellites apart from communication satellites which have been placed in GEO, Annadurai said, "Some of our earlier satellites such as Kalpana, INSAT 3D and INSAT 3DR can click images 24/7. INSAT 3D and 3DR are utilized for communication, monitoring climate, environment and for disaster management system and are placed in GSO."

"These are the satellites that help us track changing weather patterns every 15 minutes. While the earlier ones were multi-purpose satellites, the current satellite GISAT-1 is a more advanced version dedicated mainly to earth observation and can give higher resolution images and incorporates a different kind of technology," he added.

Dr. Mylswamy Annadurai also explained how the new technology will change the functionality of the satellite and said, "Some of our earlier generations of satellites like INSAT series had a scanning mirror in them, that moved east-west in a sweeping motion as a part of the image capturing process. However, since the satellites were also used for communications purposes (and are required to move in such a way that it appears fixed over a particular spot above the equator), the satellite was only moving on its GEO (in sync with the angular velocity of the earth). But since the GISAT is dedicated mainly for different kinds of earth observation, the satellite itself can rotate on an east-west, north-south axis to enable imaging of a specific region. In layman's terms, its like tilting a handheld camera and moving it for getting the best shot."

Meanwhile, Padma Vibhushan Dr G Madhavan Nair, former Chairman, ISRO, said revealed some of the real world applications of the GISAT -1.

Nair said, "If we have a natural calamity in a particular region or a region that has to be monitored, we can issue commands for the satellite to point towards that specific region, or a weather pattern such as a cyclone and look at it in more detail. Low earth orbit satellites can give us better quality pictures, but they can make a pass only every 110minutes or so. But in the case of GISAT, we can continuously

observe the area. So if a region is affected by forest fires or floods, we will know it near-real time and (if required) can deploy the satellites in Low Earth Orbit to click high-resolution pictures to improve our awareness of the situation.”

Explaining why ISRO calls it the first state-of-the-art agile earth observation satellite from Geostationary orbit, Nair said, “As far as India is concerned this is the first-of-its-kind satellite. Basically this is a technology breakthrough as it requires a very powerful telescope and very sensitive imaging sensors which we have developed indigenously. We have been working on this technology for sometime.”

The launch of ISRO’s GSLV-F10 rocket carrying the geo-imaging satellite GISAT-1, that was scheduled for 5:43 pm on Thursday, was postponed by the ISRO due to technical reasons. ISRO has said that a revised launch date would be announced in due course.

The GSLV rocket will be carrying what ISRO calls a state-of-the-art agile Earth Observation Satellite into Geo Stationary Transfer Orbit(GTO), which is 36,000 km at its farthest point from earth and 170km at its nearest point to earth.

After it is placed in GTO, the satellite would be issued a series of commands to fire its Liquid Apogee Motor(LAM) for a few sequential burns, until it is placed in Geostationary orbit (GEO) of 36000km circular from where the satellite would be seen stationary to all the points from the earth.

According to ISRO, the satellite is meant to provide near real time imaging of large regions of interest at frequent intervals, quick monitoring of natural disasters, episodic events and also obtain spectral signatures for agriculture, forestry, mineralogy, disaster warning, cloud properties, snow & glaciers and oceanography.

While conventionally, earth-observation satellites are placed in Low-Earth orbit (between 500 and 2000kms), to ensure high resolution imagery, better capabilities, it is pertinent to note that ISRO’s latest agile earth-observation satellite is to be placed in 36,000kms away. The GEO orbit is generally meant for Communication Satellites that are required to relay signals across a vast landmass. Being placed in the 36,000km circular orbit would also mean that the 2268kg GISAT-1 is beyond the range of Anti-satellite missiles.

<https://www.defencenews.in/article/Geo-Imaging-Satellite-GISAT-1-can-keep-a-24/7-watch-on-Indian-subcontinent,-say-ISRO-veterans-809584>