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Defence Ministry to decide on Army's Rs 10,000 crore Akash missiles proposal for Pakistan, China border

The proposal to acquire two regiments of the Akash Prime missiles which can be deployed in high altitude areas to counter China and Pakistan would be discussed at the meeting of the Defence Acquisition Council scheduled to be held today

New Delhi: Seeking to prevent any intrusion of aircraft through the mountainous borders with Pakistan and China, the Defence Ministry is set to discuss a proposal to acquire two regiments of the Akash Prime missiles which can be deployed in high altitude areas above 15,000 feet.

The new Akash missiles which will have an extended performance range than its predecessors are being prepared to be deployed in high altitude areas in Ladakh which shares boundaries with both Pakistan and China.

"The Defence Ministry is scheduled to consider the Army proposal worth around Rs 10,000 crore for acquiring two regiments of the Akash Prime or extended performance Akash missiles. The Akash Prime Missile is an upgraded version of the missile system already existing in the Army," government sources told ANI.

The proposal would be discussed at the meeting of the Defence Acquisition Council scheduled to be held today after the return of Army Chief General Bipin Rawat and Defence Minister from Ladakh.

Defence Minister Rajnath Singh will inaugurate the Col Chewang Rinchen Bridge built between Durbuk and Daulat Beg Oldie in eastern Ladakh.

The Akash missile system has been developed in India by DRDO and has proven to be highly successful in the defence forces.

The Army already has two regiments of the missile and is looking to add two more for deployment on Pakistan and China border.

Even though the Army is facing minor issues with servicing of the system due to involvement of two production agencies including the Bharat Electronics Limited and the Bharat Dynamics Limited, it is generally happy with missile's performance.

The present order of two regiments was earlier to be given to foreign vendors but the Narendra Modi government decided in favour of 'Make in India' in defence.

Recently, the Cabinet Committee on Security headed by Prime Minister Narendra Modi cleared the project for the Air Force to buy seven squadrons of the surface to air missile.

During an exercise in Surya Lanka held last year, the Akash missile system was tested along with all other air defence missiles including Israeli ones in the Indian Air Force inventory and it came out as the best performer.

Defence Research and Development Organisation (DRDO) had successfully test-fired AKASH-MK-1S, the surface to air missile from ITR, Chandipur, Odhisa on May 25 and 27 this year. Akash Mk1S is an upgrade of existing AKASH missile with indigenous Seeker.

<https://economictimes.indiatimes.com/news/defence/defence-ministry-to-decide-on-armys-rs-10000-crore-akash-missiles-proposal-for-pakistan-china-border/articleshow/71685060.cms>

Why the army's changed mindset on indigenous technology is a relief | India Today insight

The army's record of embracing local technology leaves much to be desired

By Sandeep Unnithan

New Delhi: Two very significant pitches for indigenously developed arms came from the highest levels of the Indian Army in the past week. Addressing a DRDO conference on October 15, army Chief Gen. Bipin Rawat said the forces would fight and win the next war with homegrown solutions. Addressing the annual Defence Attaches' conclave four days later, Vice-Chief of Army Staff Gen. M.M. Naravane said that the army would accept indigenous technology even if they didn't meet the 'best' parameters. Improvements, he said, could be made later. In any other country, army officials endorsing home-grown technology would not have been a non-sequitur. But in the Indian context, these major endorsements signal a welcome shift in the thought process.

Indian industry officials say the army has been the slowest of the three services to embrace indigenous technology. This could also be explained by the fact that it is the least technology-intensive of the three services. The army is manpower intensive. It does not operate hundreds of fighter aircraft over vast airspaces nor does it have platforms as technologically intensive as an aircraft carrier or a nuclear-powered submarine. Army testing procedures are rigorous and trials of critically required equipment like bulletproof jackets often go on for years without achieving results. The navy has worked closely with the DRDO to perfect indigenous sonars. The army can only claim a handful of successful collaborations such as the Dhanush which fielded an indigenous 155 mm howitzer from blueprints supplied by Bofors in the 1980s. Three critical systems-the Tactical Communications System (TCS), Battlefield Management Systems (BMS) and the Future Infantry Combat Vehicle (FICV) have been on for over a decade without a prototype in sight.

But right now, the 1.3 million-man Indian army, the world's second largest, is looking at a budgetary wall. The army accounts for over half the total defence budget but spends 80 per cent of its share on salaries and running costs. Defence budgets are unlikely to rise for it to be able to fill all its equipment voids. The indigenisation route may be the only way around this.

In recent years, the army has embarked on what could only be called Quixotic pursuits. A bizarre contest to buy a multi-caliber rifle-a single rifle firing two different types of ammunition-was scrapped after seven long years. Last year, it shut down a BMS project that would seamlessly link all its fighting formations, citing high project costs.

Yet, nothing compares in the scale of neglect to the army's now-shelved Beta battle computer project. The Kargil War of 1999 exposed how little the infantryman's kit had changed since the 1971 war. Project Beta, flagged off in 2003, then, seemed astonishingly ahead of its time by army standards.

Among the early projects initiated by the Army Technology Board, the aim was for every soldier to field a hand-held computer. It was the army's leap into the digital battlefield of the future, bringing the Indian soldier on par with counterparts in the US and Israel who were racing to develop the same capability. Project Beta's hand-held or body-worn PDA would enhance a soldier's situational awareness in the battlefield by answering three basic questions: where am I, where is the enemy, and where are my comrades?

The answers would blip on the screen of a hand-held device, rugged-proofed for military use. The device was meant to equip infantry companies (100 or more soldiers) engaged in counter-insurgency in Jammu and Kashmir.

The project combined the expertise of Bengaluru's IT industry with academia, defence scientists along with end-users. Bengaluru-based Encore software collaborated with the Indian Institute of Science (IISc) and the DRDO. The Indian Army's Directorate General of Information Systems worked as co-developers and end-users on the project. "It was a unique partnership and it would have been a fantastic base for us to build on for the army's future projects," says Colonel D.P.K. Pillay (retired) who coordinated Project Beta at Army HQ, New Delhi.

By 2005, the team had produced an integrated battlefield computer that would allow a soldier to pinpoint his exact location on a Geographical Information System (GIS) powered map, allow friendly troops to see his position on their screens and allow communication between them. The Situational Awareness and Tactical Handheld Interface (SATHI) packed a lot into an 875-gram rugged set that was smaller than a brick. The solar-powered PDA ran on a 128-bit encrypted system, a Linux programme and was capable of withstanding temperatures between -20 degrees C to + 70 C. It had a 5 km range and a GPS receiver-with a 24 hour battery life.

It supported both voice and text for devices deployed in the mission area. Its software-controlled radio allowed regular updates of device positions, messages and map markings over the entire network, directly, or by relay. The password-protected device, its manufacturers say, could even act as a decoy if it fell into enemy hands. If unauthorised attempts were made to log in, the unit could actually reveal the position of the person attempting the break-in to friendly troops.

When the first 120 units were tested, it was a formidable game-changer. Infantry closing in on the enemy knew their location and those of friendly forces in real time. Troop movements could be monitored by commanders on a laptop several kilometres away. Each Sathi unit theoretically had unlimited range because each unit acted as a relay station, bouncing signals to the next unit and thus doing away with the need to erect signal relay stations to boost range. The system was successfully demonstrated to President A.P.J Abdul Kalam. The developers drew up plans for a series of devices using the same core and operating systems which could scale up the Sathi's capabilities and be used by decision-makers up the command chain.

In 2008, a proposal for a second batch of 1,300 Beta-2 devices came up before the Army Technology Board for funding approval. The project team wanted to test it across a wider area. That's when the army pulled the plug on the project. The decision took the project team by surprise. It was almost inexplicable, says one officer who worked on the project. "We don't need to reinvent the wheel," a three-star officer who headed the army's Information Systems (IS), reportedly told the project team when they protested. Project Beta was closed down. The Sathis already manufactured were consigned to the almirahs in the office of the D-G, IS. It was a move that would have delighted the dozens of foreign equipment manufacturers who are now offering their own solutions to the Indian Army. Cut to 2019. The army still does not have a hand-held computer. Special forces operatives crawling up on the enemy at the Line of Control have no way of knowing where their comrades are at. Infantrymen engaged in combing operations operate just as they would do several years ago--through radio, mobile phone or hand signals. The Sathi project remains a wistful reminder of what might have been.

Could the project be revived? Quite easily, says Colonel K.P.M. Das (retired) who worked on the project and is now with Cisco Systems. "The technology has gone through four or five cycles since then, with the result that today's start point can be achieved in a matter of months. A Sathi for 2020 can do a hundred times more than what it did 15 years ago and a large number of military-grade systems can be fielded in a year." A resurrected Sathi could well be the biggest statement of the army's indigenisation intent.

<https://www.indiatoday.in/india-today-insight/story/why-the-army-s-changed-mindset-on-indigenous-technology-is-a-relief-1611391-2019-10-21>

On wrong track

India's Defence Research and Development Organisation (DRDO) has announced that it is set to begin development of the next generation of hypersonic missiles. The move has come in the wake of a Chinese display of military ware at its National Day parade 01 October. It is being labeled as yet another 'necessity' in the face of growing military power in the neighbourhood. The question, though, is whether developing deterrents based on how well the neighbour is equipped will help this country innovate.

The Second World War had seen different countries, both Axis powers and the Allies, develop technologies that circumstances had forced upon them. The period saw an explosion of scientific exploration and technological development. Many of the technologies developed during both the World Wars helped the countries that fought in them to rebuild relatively well later. While fighting a war should not be an essential to develop deterrents, fresh approaches need to be developed to ensure that the country stays ahead of the curve. Hypersonic missiles are being developed across the world by leading nations including the US, Russia and China. But by the time India catches up with these nations, given its history of not only administrative delays and lack of political will but also general inabilities of people working on particular projects, the missile could become obsolete in technology by the time it sees the light of day. The research organization could rather focus on developing technology that treads into new areas which affect real life. If, for instance, the organisation is able to develop a weapons system that is of the stealth class and is economical then it would not only help India's defense, but may also be marketable globally as a weapon of Indian origin.

Such a technology, already available with many nations, would be of immense help and would work as a greater deterrent than bigger and more potent conventional arsenals. Recently the Indian army claimed that it had destroyed terror camps again in Pakistan Occupied Kashmir (POK) by means of an artillery strike. Success of the strike, even the military establishment would agree, is temporary and unfathomable. With global dynamics at play in the region, one cannot be assured anytime that the hydra of extremism will not sprout a fresh head. Most noticed by us all now is one big weapon the West has unleashed on the world – social media. It exerts influence on such a large segment of the world population today and at such unprecedented levels of speed and penetration that the conquest is complete and without resistance. While India has invested heavily on its services sector, what the country's best brains are doing is to develop software for foreign firms at a lower price for profit.

The country, however, is yet to develop, say, a search engine or even a simple platform such as TikTok or YouTube that gives the country soft power across borders. The deterrence that world powers have today developed rests also to a large extent on their ability to project an image of strength. In today's modern world, artificial intelligence (AI) is taking over most human responsibilities and actions. Drones and robots are not only frontline attack weaponry but are part of the AI environment which encompasses surveillance, attack and defence roles which were earlier the responsibilities of humans. In the absence of humans, such as foot soldiers, in large numbers, the need for conventional weapons also decreases. The question could be whether India needs hypersonic missiles or it requires anti-hypersonic counter missiles.

<https://www.orissapost.com/on-wrong-track/>

View: Unifying defence forces

A CDS will steer India's Strategic Command while using the combined wisdom of our defence chiefs in handling the various theatres of war. The new step will prove extremely rewarding in terms of the rapid consolidation of our defence potential

By DC Pathak

The announcement by the Prime Minister from the ramparts of the Red Fort on August 15 that the government had decided to appoint a Chief of Defence Staff (CDS) to consolidate the defence might of the country, is in tune with the Modi regime's consistent effort to build India as a world power that would play a meaningful role in both economic development and security at the global level.

It addresses the logical requirement of bringing defence forces and the nuclear, cyber and space domains under one umbrella of strategic planning, takes forward the concept of integrated combat on land, air and sea in today's world -- which, for India, is extremely important considering the hostile Sino-Pak military alliance against us -- and makes way for a new level of coordination that would achieve speedy, cost effective and futuristic defence acquisitions, manpower development and strategic deployment.

A helpful factor in the implementation of the CDS idea is the successful working of the Chiefs of Staff Committee over years with a rotational chairmanship that produced a tradition of consensual thinking on defence and security -- I saw this during my association with COSC as JIC Chairman. The decisions on issues of war and peace deserved to be taken through an arrangement that brought the voice of the defence chiefs directly to the political executive governing the sovereign nation. The Prime Minister has in his rule constantly worked for elimination of red tape, speedy decision-making and coordinated execution of projects and schemes that had been announced.

Taking into account the security challenges for India, it is easy to envisage the role of the Army as the pivot of our defence responses with the air force rendering it tactical support and the navy ensuring a strategic backing in the event of a war-like conflict developing outside of our shores. CDS will steer the Strategic Command while using the combined wisdom of our defence chiefs in handling the various theatres of war. The new step will prove extremely rewarding in terms of the rapid consolidation of our defence potential that it will ensure the old world prejudices earlier voiced by bureaucracy do not hold any more.

Post Cold War, the world has transited to an era of proxy wars, cross-border conflicts and insurgencies instigated by assertion of sub national identity. Terrorism is the new instrument of proxy war as the covert offensives are replacing open warfare. National governments are having to fight the adversaries on their own soil -- this is bringing in the Army to take on cross-border terrorists operating at the behest of the external enemy. India is the prime example of a country facing a proxy war unleashed by the hostile neighbour -- Pakistan -- through the heavily armed Mujahideen infiltrated from across the border specially in Kashmir.

For combating this Kashmir Jihad, India has had to induct the Army which, in turn, had to specially train the troops to take on the terrorists on our home ground. The army is attuned to facing a visible enemy and using the maximum force. The rise of terrorism was a challenge for it for the reason that the terrorists could spring from their hideouts existing in the midst of the civilian population and yet the army had to put them down with restraint as the counter-terror operation had to ensure minimal collateral damage.

CDS will have on his hands the work of preparing India for dealing with an external enemy, strategising for proxy wars and raising special forces to take on terrorists on our own soil. An attack

like 26/11 -- there are Intelligence reports about a further terror offensive from the sea -- would need involvement of Navy and Coast Guard just as further surgical strikes across our borders to destroy the base camps of terrorists needed joint planning of army and air force for readying paratroopers.

Mountain warfare, of which Kargil proved to be the first testing ground, is now a part of India's strategic planning resting on the use of both the army and air force. Defence of Indian Ocean and security of the Indo-Pacific maritime region are new elements in the charter of India's CDS. Coordination between civilian Intelligence agencies and the chief of Defence Intelligence would achieve greater perfection under the CDS. The structural and operational consolidation for maximising India's defence and security potential is therefore not coming a day too soon.

Multiple writings on the proposed CDS from defence experts have focused on three imperatives of the new experiment in the Indian context -- first, whether CDS will be the boss of the defence forces with five stars, secondly, will the new chief be totally impartial in dealing with the army, air force and navy and, lastly, if on issues of war the CDS will have his way with the political leadership? The answer is that even with four stars, CDS will be the principal interlocutor with the national government on all issues of defence development and organisation, that the chiefs of staff experiment had worked for long years creating a grid of understanding amongst the three services and that CDS would be like an elevated Chairman of the Chiefs of Staff Committee.

Both Defence Planning Committee and the National Security Council provide the CDS with an interface with the Prime Minister. And finally, in regard to decision-making in a war-like situation, the vital thing is that the input from CDS is fully weighed in even though the decision would lay with the political executive exercising the sovereign power of the democratic nation. On the whole, there is a case for early implementation of the CDS idea to strengthen our defence.

(The writer is a former Director Intelligence Bureau)

<https://economictimes.indiatimes.com/news/defence/view-unifying-defence-forces/articleshow/71682317.cms>



Tue, 22 Oct 2019

DAC OK's procurement of Rs 3.3K cr desi-designed weapon systems

Commoners can now visit Siachen glacier, the world's highest battlefield, as tourists and get a feel of how the Armed Forces guard this strategically important sector despite extreme weather conditions and inhospitable terrain. Defence Minister Rajnath Singh on Monday announced the glacier is now "open" to tourists and they can trek from the base camp to Kumar post.

The Defence Acquisition Council (DAC) chaired by Defence Minister Rajnath Singh on Monday approved procurement of Rs 3,300 crore worth of indigenously designed and developed equipment including anti-tank guided missiles(ATGM). The DAC is the apex body to give the nod for acquisitions by the armed forces.

Giving details of the decisions taken on Monday, officials later said maintaining its impetus on the 'Make in India' initiative, the DAC accorded approval for three projects to be indigenously designed, developed and manufactured by the Indian industry.

The first two projects include third generation ATGM and the Auxiliary Power Units (APUs) for the T-72 and T-90 Tanks. While the third generation ATGM would provide 'Fire and Forget' and "Top

Attack" capabilities to the troops in an armoured battle, the APUs would enable incorporation of various upgrades to Fire Control System and Night Fighting capabilities of the Tanks.

Both these projects will be progressed under the 'Make-II' Category and will provide a boost to indigenous research and development in the private sector. With this, for the first time the Defence Ministry has offered complex military equipment to be designed, developed and manufactured by the Indian private industry.

The third indigenous project pertains to discrete Electronic Warfare (EW) systems for the mountain and High Altitude terrain, which would be designed and developed by the Defence Research and Development Organisation (DRDO) and manufactured by design cum production partner from the Indian industry.

<https://www.dailypioneer.com/2019/india/dac-ok-s-procurement-of-rs-3-3k-cr-desi-designed-weapon-systems.html>



Tue, 22 Oct 2019

Key bridge to allow tanks in N-E Ladakh

By Ajay Banerjee

New Delhi: In what may change the military dynamics in north-eastern Ladakh, specifically Depsang Plains, a major bridge allowing movement of tanks was opened today.

A 'class 70' bridge, which can withstand up to 70 tonne weight, was inaugurated across the Shyok river by Defence Minister Rajnath Singh. "Border area development is an integral part of our government's plan and this bridge is a part of that strategy," said Singh.

The 'Colonel Chewang Rinchen Setu', built by the Border Roads Organisation, connects Durbuk and Daulat Beg Oldie (DBO), a 16,000-foot-high plateau 20 km short of the 18,726-foot-high Karakoram Pass that divides Ladakh and Xinjiang of China.

Over the past few years, India has added tanks to the long-stationed mechanised columns in eastern Ladakh, but due to lack of proper bridging, tanks had not moved to north-eastern Ladakh.

<https://www.tribuneindia.com/news/nation/key-bridge-to-allow-tanks-in-n-e-ladakh/850493.html>



Tue, 22 Oct 2019

Highest battlefield thrown open to public

Commoners can now visit Siachen glacier, the world's highest battlefield, as tourists and get a feel of how the Armed Forces guard this strategically important sector despite extreme weather conditions and inhospitable terrain. Defence Minister Rajnath Singh on Monday announced the glacier is now "open" to tourists and they can trek from the base camp to Kumar post.

The Army earlier used to organise such treks for civilians annually but it was suspended two years back due to logistical and operational issues. The one-month long trek used to take place intermittently due to harsh weather conditions and all the trekkers had to undergo medical test before undertaking the arduous journey.

The temperatures there vary from minus 10 to minus 40 degrees Celsius and the troops have been guarding posts at heights ranging from 16,000 feet to 24,000 feet since 1984. More than 1,000 Indian soldiers have died there since then and most of the casualties took place due to weather and avalanches. However, the trekkers were taken through a guided route from Siachen base camp to Kumar post.

The base camp is at a height of 12,000 feet while the Kumar post is at an altitude of 16,000 feet. Given the nature of the terrain, the trekkers were put through a three-phase acclimatisation due to harsh winter and lack of oxygen.



Making the important announcement about the Siachen, Singh said it is “now open” to tourists, after inaugurating a strategically important bridge on the Shyok river in eastern Ladakh.

“From Siachen base camp to Kumar post, the entire area has been opened for tourism purposes,” he tweeted. Better connectivity in Ladakh would certainly bring tourists in large numbers, he said in another tweet.

The Indian Army had proposed some months back opening up of the glacier to masses to let them appreciate the working conditions of the troops, officials said and the Government later gave the nod.

The nearest airport to Siachen is located at Thoise and troops board and disembark there to serve a stint at the glacier or returning after finishing the term which lasts about three to four months.

As regards the bridge in Ladakh, the ‘Colonel Chewang Rinchen Setu’ was constructed by the Border Roads Organisation (BRO) at an altitude of 14,650 feet in the forward area of Ladakh region.

“This bridge has been completed in record time. It will not only provide all weather connectivity in the region but also be a strategic asset in the border areas,” Singh tweeted after the inaugural ceremony.

He also tweeted that India shares cordial relations with China and while there are “perceptual differences” between both the countries on the boundary issue but “the issue has been handled with great maturity and responsibly.”

“Both the countries have not allowed the situation to escalate or go out of hand,” he stated. Construction started in 2007 and the bridge is 4.5 meters wide and 1400 ft long and has a load carrying capacity of 70 tonnes. It will boost road connectivity from Drabuk to Daulat-Beg-Oldie (DBO). This is part of strategic roads under construction to facilitate faster movement of the military.

According to information given in Parliament by Minister of State for Defence Shripad Naik in July 2019, a revised Long Term Roll on Works Plan of Border Roads Organisation for five years (2018-19 to 2022-23) has been formulated for construction/improvement of 272 roads of length 14,545 km in border areas.

“Out of these 272 roads, 61 roads of length 3323.57 km have been identified as strategic. Work has been completed on 2304.65 km and work on balance stretches is in progress,” Naik had stated in a written reply adding that in addition to meeting the operational requirement, these roads on completion, “would also enhance accessibility to border areas where the border infrastructure and forward connectivity is lacking.”

<https://www.dailypioneer.com/2019/pioneer-exclusive/highest-battlefield-thrown-open-to-public.html>

सेना के युद्धाभ्यास से थर्राया रेगिस्तान, अचूक बमबारी से दुश्मन के ठिकाने नेस्तनाबूद

जयपुर: राजस्थान के सीमांत जैसलमेर जिले में सेना की सुदर्शन चक्र वाहिनी एवं वायुसेना का संयुक्त युद्धाभ्यास से रेगिस्तान थर्रा उठा और इस दौरान दुश्मन के काल्पनिक ठिकानों को अचूक बमबारी कर नष्ट कर दिया गया। पोकरण फील्ड फायरिंग रेंज में रविवार को शुरू हुए दो दिवसीय युद्धाभ्यास में थल सेना एवं वायुसेना अपनी मारक क्षमता का प्रदर्शन कर रही है।

सोमवार (21 अक्टूबर) को युद्धाभ्यास के दौरान पोकरण फील्ड फायरिंग रेंज धमाकों से गुंज उठी और सैनिकों ने दुश्मन के काल्पनिक ठिकानों पर अचूक बमबारी कर उन्हें नेस्तनाबूद कर दिया। इस दौरान के-9 वज्र गन ने अचूक निशाने साधे तथा अटैकिंग हेलीकाप्टर एवं वायुसेना के विमानों ने जबरदस्त बमबारी करते हुए इन ठिकानों को तहस-नहस कर दिया। धमाकों के कारण पूरी रेंज में रेत का गुबार छा गया। रॉकेट लॉन्चर से शत्रु के छद्म ठिकानों एवं आतंकवादी ठिकानों आदि को नष्ट करने का अभ्यास किया गया।

थल एवं वायुसेना की मारक क्षमता को मजबूत और बेहतर बनाने के लिए सेना की दक्षिणी कमान के हजारों सैनिक अभ्यास कर रहे हैं। वायुसेना द्वारा कम समय में कैसे दुश्मन को नेस्तनाबूद किया जाए, इस पर थल सेना का साथ लेकर विजय प्राप्त करने का प्रदर्शन किया जा रहा है। इसमें सेना की आर्म्ड, मेकेनाइज्ड एवं इंफैंट्री ब्रिगेड की यूनिट्स शामिल हैं। खासकर दक्षिणी कमान की सुदर्शन चक्र कॉप्स इसमें महत्वपूर्ण भूमिका निभाई। मौके पर सेना के कई उच्चाधिकारी भी मौजूद थे।

<https://www.livehindustan.com/national/story-indian-army-indian-air-force-conducting-joint-maneuvers-at-jaisalmer-firing-range-2809937.html>

THE ECONOMIC TIMES

The Indian Navy's Western Naval Command carrying out major exercise in the Arabian Sea

The exercise in the Arabian Sea will go till first week of November. Exercise is aimed at strengthening the Navy's operational skills, testing training efficacy and examine seamanship practices and procedures

By Shaurya Karanbir Gurung

New Delhi: The Indian Navy's Western Naval Command is carrying out a major exercise in the Arabian Sea over the next fortnight.

The exercise, which will go on till the first week of November, will involve live firing drills, helicopter operations from ships, operational logistics and communication standard operating procedures. These are some of the focus points of the exercise, aimed at strengthening the navy's operational skills, testing training efficacy and examine seamanship practices and procedures.

“With the withdrawal of the monsoon and improved sea conditions, this is the right time to test our operational preparedness, validate procedures and try out new strategies and concepts of naval operations”, a naval spokesperson said.

“It is customary for the navy to gear up for exercises and deployments immediately following the monsoon season, taking advantage of improved conditions at sea. This is the ideal time to fine tune our deployment concepts, test communication plans, exercise contingencies at sea and validate our inputs towards better maritime domain awareness,” he added.

The Western Naval Command just concluded an offshore security and contingency exercise code named “Prasthan” on 17 October. The Indian Navy has a key presence in the Arabian Sea following its prolonged anti-piracy deployments in the Gulf of Aden and Op Sankalp off the Gulf of Oman. Defence Minister Rajnath Singh had embarked on the Western Fleet last month and the navy had carried out carrier-based evolutions and fighter operations.

<https://economictimes.indiatimes.com/news/defence/the-indian-navys-western-naval-command-carrying-out-major-exercise-in-the-arabian-sea/articleshow/71681637.cms>



Tue, 22 Oct 2019

India, Maldives to take forward defence ties

Dornier aircraft will be leased to Male

By Dinakar Peri

New Delhi: With the recent improvement in relations, India and the Maldives will take forward several pending measures to promote defence cooperation in the next few months, diplomatic sources said.

These include lease of a Dornier aircraft, bringing the Maldives under India’s coastal radar chain network and a broad-based humanitarian assistance and disaster relief (HADR) exercise.

“The agreement for lease of a Dornier aircraft for maritime surveillance is being finalised. It should be done in the next few months, at the latest by early next year,” diplomatic sources told *The Hindu*, adding the Maldives was looking to transform its military in a big way, and the cooperation would be beneficial to the island nation.

New Delhi sent a Letter of Exchange for a two-year lease of the Dornier at the request of Male a few years ago. But the deal was not finalised by the Maldives owing to the friction in the relationship. In this context, sources pointed out that the two Advanced Light Helicopters (ALH) given by India were of “great service”. They were flying round the clock for medical evacuation and search and rescue.

India had gifted the Maldives two ALHs in 2013 and each was operated by the Indian Coast Guard and the Indian Navy. However, a controversy broke out last year after the previous Maldives government refused to extend the visas of Indian military personnel and asked India to take back the helicopters.

Work on the radar stations to plug the Maldives into India’s coastal radar chain is progressing fast. “Two of the stations are functional and the third is in an advanced stage. It should be fully linked by January,” the sources added.

In the aftermath of the 26/11 Mumbai terror attacks, India began setting up the coastal radar chain network to monitor the movement of traffic on the high seas. Mauritius, Seychelles and Sri Lanka have already been part of the network.

At the Goa Maritime Conclave, hosted recently by the Navy for Indian Ocean littoral states, the major focus was on information-sharing. India offered to share real-time movement of maritime traffic. Of late, the Navy has stepped up cooperation with the countries in the region.

Terrorism is a major threat to the Maldives, and maritime security is the top-most concern, diplomatic sources said.

Joint exercise

A proposal for a joint humanitarian assistance and disaster relief exercise is in the works. The aim is to draft all agencies of both countries involved in the area, officials said.

In the recent past, the Indian Navy has become the first responder to calls for help from countries affected by natural disasters in the Indian Ocean Region. The exercise is especially important owing to the increase in natural disasters in the region, official said.

The bilateral relationship went on a downward trajectory since the Maldives started moving closer to China under the earlier regime of President Abdulla Yameen. However, the relations have normalised after President Ibrahim Mohamed Solih took over.

<https://www.thehindu.com/news/national/india-maldives-to-take-forward-defence-ties/article29751956.ece>



Tue, 22 Oct 2019

Indian Navy training squadron visits Tanzania

The Indian Navy's First Training Squadron has visited Dar Es Salaam and Zanzibar, Tanzania, as part of the African leg of its voyage.

The squadron includes the Indian Naval Ships Tir, Sujata and Shardul and Indian Coast Guard Ship Sarathi. They visited Tanzania from 14 to 17 October.

The Indian Navy's First Training Squadron, under the Flag Officer Commanding-in-Chief, Southern Naval Command based at Kochi, imparts training to Officer Cadets of the Indian Navy, Indian Coast Guard as well as from friendly foreign countries. The training curriculum includes subjects like Seamanship, Navigation, Shiphandling, Boat Work and Engineering, imparted onboard the ITS Ships, and Sail Training onboard IN Sail Training Ships Tarangini and Sudarshini.

Tanzania People's Defence Force spokesman Colonel Ramadhan Dogoli said, "we are determined to continue strengthening our military ties with India and make sure that our territories in the Indian Ocean remain safe and peaceful."

The Indian Navy said Tanzania and India have traditionally enjoyed warm and friendly bilateral relations, sharing common values of democracy and development. There have been regular high level exchanges and interactions in numerous fields between both countries.

Senior officer of the First Training Squadron Captain Varun Singh led the four ships to Tanzania after making a three-day port of call at Mombasa in Kenya.

<https://www.defenceweb.co.za/sea/sea-sea/indian-navy-training-squadron-visits-tanzania/>

Tue, 22 Oct 2019

NASA eyeing inflatable space lodges for moon, Mars and beyond

Las Vegas: When astronauts orbit the moon or live on its surface in the decade ahead, they will probably be doing so inside inflatable space lodges now in development.

Dozens of NASA officials and veteran astronauts are wrapping up a review of five space habitat mockups built by different companies. The mockups offer the US space agency ideas for an ideal Gateway—the planned research outpost in lunar orbit that will house and transfer astronauts to the surface of the moon.

“The whole point is to define what we like and what we don’t like about these different habitats,” NASA astronaut Mike Gernhardt, principal investigator for the testing campaign, told Reuters.

He and his team were making a final inspection recently in Las Vegas, Nevada at the headquarters of Bigelow Aerospace, a space habitat company founded by hotel chain billionaire Robert Bigelow.

US Vice President Mike Pence in March told NASA to land its first crew of astronauts on the moon by 2024. That accelerated timeline spawned the space agency’s Artemis program, which calls for privately built lunar landers, robotic rovers and Lunar Gateway—a modular space station in orbit around the Moon with living quarters for astronauts, a lab for science and ports for visiting spacecraft.

"Gateway is an opportunity to test all these structures in a deep space environment... as a prelude to going to Mars," Bigelow told reporters. "Potentially we think that for the rest of this century, the expandable architecture is where it's at."

Bigelow's B330 habitat, launched from Earth compacted inside a rocket, is made of a fabric-like material designed to shield inhabitants from deep-space radiation and high-speed space debris. Once docked alongside other Gateway modules in lunar orbit, the habitat unfurls into a two-story, 55-foot-long (16-meter-long) outpost that up to six astronauts could stay in.

The lunar space habitat and colonization program is expected to cost over a billion dollars through 2028.

Four other companies are doing mockups: Boeing Co, Northrop Grumman, Sierra Nevada Corporation, and Lockheed Martin.

Each of the companies received a chunk of the \$65 million that NASA allotted in 2017 to develop the prototypes. The space agency’s proposed funding for 2020 includes \$500 million to kickstart development of an initial version of Gateway.

The companies are giving NASA ideas — such as where to place astronaut toilets, how big the beds should be and how many windows the station should have. Those will inform a blueprint that NASA is due to release in the coming months.

NASA wants the habitats to include exercise equipment, a small kitchen, noise-cancelling sleep stations that also block out light and “a reliable and easy-to-use toilet that’s in a location that minimizes the potential for cross contamination with science and meal preparation activities,” Gernhardt told Reuters.

Gernhardt and two other astronauts spent three days living in each prototype habitat.

For its Gateway habitat mockup, Lockheed Martin is outfitting beds, tables and windows in a 15-foot-wide and roughly 22-foot-long stainless steel structure originally designed as a shipping container to carry supplies to and from the International Space Station.

"The space that you're living in has to be reconfigurable for the task at hand," Bill Pratt, Lockheed's habitat program manager, told Reuters. "Like in an RV, your table becomes the bed that you sleep on at night."

Bigelow said his B330 habitat has two toilets for a crew of up to six to use, and that entertainment in the form of virtual-reality Earth simulations for astronauts to feel at home was in the works for future habitats that will revolve around Mars. — **Reuters**



Tue, 22 Oct 2019

N-deal led to synergy in defence: Rice

At US-India strategic partnership forum, she pushes for trade agreement at the earliest

New Delhi: Former US Secretary of State Condoleezza Rice, who was part of the India-US civil nuclear deal negotiations, today said the deal was not just about nuclear energy, it was about removing the long-standing sanctions. The deal opened up possibility of cooperation in defence or high-end technology.

The deal was done in 2008 and high-end technology in military cooperation opened up with the first deal to buy C-130 strategic planes from US firm Lockheed Martin. And 11 years later, the collective military trade is now at \$18 billion.

"George W Bush was attracted to India," Rice said at the US-India Strategic Partnership Forum (USISPF)-hosted India Leadership Summit here.

The former Secretary of State advised the negotiators now dealing with the India-US trade talks to "get a deal".

On China, Rice said: "Let's cooperate with China where we need to and challenge it in areas like seeking freedom of navigation in the South China Sea. "We will not allow China to outrun the US in military modernisation."

Asked about Russia, Rice said: "I know Vladimir Putin very well. He once told me I understand Russia." She added the US had to find a relationship with Russia. "Putin is not the future of our relationship. We have to find our relationship." Russia has used its ability in cyber to disrupt elections worldwide.

Rice said the importance of democracy was what India and US shared.

Meanwhile, Vishal Wanchoo, president and CEO of General Electric, South Asia, said in the coming years, India would supply 40 per cent structures for the "LEAP engine" used in commercial airlines.

A separate class of GE engines, made in the US, are also used in the home-made fighter jet Tejas that has been inducted into the IAF.

<https://www.tribuneindia.com/news/nation/n-deal-led-to-synergy-in-defence-rice/850502.html>