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THE TIMES OF INDIA

Tue, 30 June 2020

Breather for units making PPEs as export gets nod

By Mohit Behl

Ludhiana: In a relief to the personal protective equipment (PPE) suit manufacturers, who were facing the risk of closing their units due to huge shortage of local orders and drop in rates, the government of India's Directorate General of Foreign Trade (DGFT) on Monday allowed the export of their product.

However, as of now, the DGFT has restricted the monthly export quota to 50 lakh PPE suits/medical coveralls, for which the interested firms will have to apply for an exports licence.

An estimated 4.5 lakh to 5 lakh suits per day were being manufactured in India and the country went on to become its second largest manufacturer in the world in no time. The development is significant for Punjab's industry, especially Ludhiana's where more than 110 manufacturers have got approval from the Central government laboratories, like DRDO and SITRA, to manufacture PPE suits.

In the past few weeks, the manufacturers were upset with the government for not allowing them to export PPEs as lakhs of suits were piling up in their units due to overproduction. A few days ago, Punjab chief minister Captain Amarinder Singh too had shot off a letter to Prime Minister Narendra Modi, asking for a nod to allow the industry to export the PPE suits.

Welcoming the move, Harish Dua, a member of Apparel Export Promotion Council (AEPC), said, "We are thankful to minister of commerce Piyush Goyal and minister of textiles Smriti Irani for accepting our demand. Our chairman Dr A Sakthivel played a role in pursuing this matter, which concerned a large number of manufacturers who had huge unsold stock worth hundreds of crores. The newly started PPE industry of Punjab, especially Ludhiana's, was on the verge of collapse without any sales. But now after opening of exports, we will have a global reach. Not only will we be able to sell our products, but will also get better rates than India."

According to Harish Kairpal, finance secretary of Knitwear Club, "Ever since the lockdown, this is the only good news that we have received. However, the decision has come a little late as already the manufacturers from our neighbouring countries have started exporting PPE suits in large quantities to big markets like Dubai and Europe. But we are still hopeful that we will be able to sell our unsold stock. A PPE suit, which in April could easily fetch Rs 635, is not even selling at 50% discount. This has happened because a large number of manufacturers entered the field. From Ludhiana alone, about 200 factories are making PPE suits, of which about 110 have the approval."

Narinder Mittal, general secretary of Ludhiana Business Forums, said, "CM Captain Amarinder Singh and industry minister Sunder Sham Arora both took up the matter with the Prime Minister, giving us a glimmer of hope. Now with exports being allowed, though with some riders, we will at least be able to find overseas buyers."

Export sheet

- Export of 50 lakh units of PPE suits/medical coveralls for Covid-19 allowed every month from India
- Exporters need to apply through DGFT's ECOM system for export authorisation digitally

- Application filed from 1st to 3rd day of every month will be considered for the monthly quota
- Validity of export licence will be three months for the successful exporter

https://timesofindia.indiatimes.com/city/ludhiana/breather-for-units-making-ppes-as-export-gets-nod/articleshow/76697189.cms

The Indian EXPRESS

Tue, 30 June 2020

Ban on PPE export lifted, limit set at 5 million a month

Capping the monthly quota at 50 Lakh units, the Government on Monday permitted shipments of Covid-19 PPE medical coveralls after banning this product for export earlier

By Prabha Raghavan

New Delhi: The Centre Monday partially lifted its ban on exports of personal protective equipment (PPEs), allowing medical textile manufacturers here to ship up to five million units of such equipment to other nations seeking global suppliers during the ongoing COVID-19 pandemic.

"Boosting Make in India exports, Personal Protection Equipment (PPE) medical coveralls for COVID-19 have been allowed with a monthly export quota of 50 lakh (five million)," said Minister of Commerce and Industry Piyush Goyal in a tweet. The Directorate General of Foreign Trade (DGFT) had first banned exports of PPEs towards the end of January.

Despite a surge in COVID cases here, textile firms have not only managed to fulfill the government's demand for over 2.2 crore PPEs, but have excess capacity even after catering to additional demand, said a senior government official.

This also comes at a time when other countries are looking for alternatives to China for essential goods, and India has been looking to tap newer markets.

Faced with a steady growth in cases back in March, the Ministry of Home Affairs had constituted an empowered group ranging from officials from the Textiles Ministry and DRDO to the Department of Pharmaceuticals, and Department for Promotion of Industry and Internal Trade to ensure the availability of essential medical equipment.

Since March 30, where a little over 3,000 PPEs were manufactured a day, over 1,100 firms in the country manufacture anywhere between 700,000-800,000 PPEs daily now, said one of the members requesting anonymity. Apart from supplying to the Centre, over 250 licenced sellers are registered on the government's e-marketplace (GeM Portal) to cater to extra demand by states, the official said.

"It is important to give a boost to this industry, which has invested in equipment and raw materials to ramp up our domestic capacity of PPEs. Now that they've fulfilled the government's requirement, we need to allow them to use their excess capacity to cater to other markets in the world that have been asking for these PPEs," said the official.

"Right now, it's restricted to 50 lakh units a month, because we also want to be cautious and make sure that we are able to cater to any other domestic demand, including by private hospitals. But, going forward, this quota might be increased," the official added.

Some firms are in conversation with the government to receive quality certifications that would allow them to adhere to international standards, said two persons aware of the development. India has around nine approved laboratories to test the quality of PPEs.

"The PPE manufacturers showed extraordinary enterprise and nimbleness in their ability to rejig large production facilities to manufacture PPEs … The government should soon extend the export opportunity for N95 masks as well," said Apparel Export Promotion Council (AEPC) chairman Dr

A Sakthivel, adding that the size of the global market for PPEs is expected to be more than $60 billion over the next five years.

India is in competition with countries like Bangladesh, Indonesia and Pakistan, as they have lifted the ban on PPE exports and are receiving "huge" orders from large buyers in the US and Europe, he said.

https://indianexpress.com/article/india/govt-allows-export-of-covid-19-ppe-medical-coveralls-monthly-quota-fixed-at-50-lakh-units-6481526/

DRDO Technology News

The Tech Education

Tue, 30 June 2020

Indian Navy inducts new ATDS- 'Maareech'

By Vishakha

The Indian Navy said recently inducted an advanced anti-torpedo decoy system called 'Maareech' that is capable of being fired from all frontline ships.

About The ATDS

Defence Research and Development Organization (DRDO) has indigenously developed and designed the Maareech ATDS. Further, it is capable of detecting, locating and neutralizing incoming torpedo. About a torpedo, a modern torpedo is a weapon that has an underwater range. We can launch it above or below the water surface. It often self propels towards a target. It does so with an explosive warhead designed to detonate either on contact with or in proximity to the target.

Development of Torpedos over the Years

The battleship evolved initially around engagements between armoured warships with large-calibre guns. Further, the torpedo allowed small torpedo boats and other lighter surface vessels, submarines/submersibles, even improvised fishing boats or frogmen, and later light aircraft, to destroy large ships without the need of big guns. However, there is a risk sometimes at the of it hitting by longer-range artillery fire.

Announcement by the Navy

In a press release, the Indian Navy said that the prototype of this ATDS installed onboard a nominated naval platform. Further, it had successfully completed all user evaluation trials and showed the features as per the Naval Staff Qualification Requirements. This introduction of the system stands testimony to the joint dedication of the Indian Navy and DRDO towards indigenous development of defence technology. It also gives a major fillip to the government's 'Make in India' initiative. It also pushed the country's resolve to become 'atmanirbhar' (self-reliant) in niche technology, the Indian Navy stated.

Bharat Electronics Limited, a Defence PSU, would undertake the production of this decoy system, the Navy stated. Anti-Submarine warfare capability of the Indian Navy received a significant boost recently. Along with the conclusion of a contract for advanced torpedo decoy system, it is capable of firing from all frontline warships, they said.

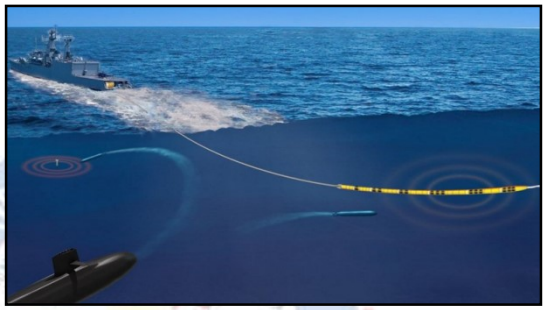
https://thetecheducation.com/indian-navy-inducts-new-atds-maareech/

Tue, 30 June 2020

Indian Navy Inducts indigenously developed torpedo decoy system

The Indian Navy said on Friday it has inducted an advanced anti-torpedo decoy system called 'Maareech' that is capable of being fired from all frontline ships

Anti - Submarine Warfare capability of the Indian Navy has received a major boost today with the conclusion of a contract for Advanced Torpedo Decoy System Maareech capable of being fired from all frontline warships.



Scheme of Maareech Advanced Torpedo Defence System (ATDS). (Picture source: DRDO)

Design & development of this anti-torpedo decoy system has been undertaken indigenously DRDO labs (NSTL and NPOL). Bharat Electronics Limited, a Defence PSU, would undertake the production of this decoy system.

The prototype of this system installed onboard a nominated naval platform had successfully completed all user evaluation trials and demonstrated the features as per the Naval Staff Qualification Requirements.

This induction not only stands testimony to the joint resolution of the Indian Navy and DRDO towards indigenous development of Defence technology but has also given a major fillip to the Government's 'Make in India' initiative and the country's resolve to become 'Atmanirbhar' in niche technology.

About the Maareech Advanced Torpedo Defence System

Maareech Advanced Torpedo Defence System (ATDS) is a torpedo detection and countermeasure system that offers a complete solution to detect and locate an incoming torpedo and to apply countermeasures to protect naval platform against torpedo attack.

The anti-torpedo system, which is equipped with sonars and towed and expendable decoys, is capable of detecting, confusing, diverting and decoying the incoming torpedoes. The decoy helps in exhausting the energy of the torpedo by running the later through long and ineffective course and prevents them from homing in to the targeted platform with its advanced counter-measure capabilities.

https://navyrecognition.com/index.php/news/defence-news/2020/june/8670-indian-navy-inducts-indigenously-developed-torpedo-decoy-system.html

Tue, 30 June 2020

A deal for 83 Tejas Mk1A by end of 2020: HAL Chief

By Raunak Kunde

R Madhavan, Chairman and Managing Director of Government-owned Hindustan Aeronautics Ltd (HAL) while speaking to livefistdefence.com, has said that deal for 83 Tejas Mk1A contract between IAF and HAL will be inked by end of 2020 and aircraft deliveries will begin from early 2024 onwards and whole order will be concluded within 5 years.

Madhavan stressed that HAL has capability in place to scale up the production line if asked by IAF from 16 to 20 per annum. While the deal for 83 upgraded Tejas Mk1A with improved Avionics and Radar has been cleared for over a year now after the Price negotiation committee brought down the cost after hectic negotiation with HAL.

Air Chief Marshal R.K.S. Bhadauria a few weeks back had said in an interview to a media house that the contract will be inked by mid of this year but that has not happened due to unknown reasons, while officials have been tight-lipped about the reasons behind delays in inking the deal for 83 Tejas Mk1A jets, people will know-how about the situation have told idrw.org that it is not in hands of key players due to current situations in the country.

The supply chain of the LCA-Tejas program has been adversely affected by the COVID-19 situation in the country and HAL is finding it hard to resume production of the FOC Configuration LCA-Tejas Mk1 after the production line was opened after lockdown of over a month. Some of the Country's MSME sectors that are part of the supply chain might not survive and alternative partners could need to be established before production can resume.

While some of the equipment due come from abroad are also stuck or delayed due to COVID-19 issues, HAL has been assured that supplies will resume soon in coming weeks but fear is mostly coming from the Country's MSME sectors which are not full-time Private defense sector companies and mostly rely on a major chunk of orders from other sectors due to which their economic conditions are not stable.

The supply chain issue has been taken up and will be resolved but it will take some time to fix the issue due to which HAL has complete spares and supplies of equipment only for first four FOC jets out of which the first one already has been handed over to the air force and the second one is ready for its first flight and two other will commence first flight in next few weeks.

https://idrw.org/a-deal-for-83-tejas-mk1a-by-end-of-2020-hal-chief/#more-230053

Tue, 30 June 2020

AMCA to be built by New Joint-Venture company with Private players: HAL Chief

By Raunak Kunde

R Madhavan, Chairman and Managing Director of Government-owned Hindustan Aeronautics Ltd (HAL) while speaking to livefistdefence.com, has said that countries first 5th generation fighter jet aircraft which is yet to be officially granted government funds will be ready for first flight in 2027 and before that a new Joint venture company will be formed between ADA, HAL and a new partner from Private defense sector company which will establish a new production line for the jet in the Defense Production Corridors to be set up in Tamil Nadu.

ADA will be the Nodal design agency under DRDO and HAL and a selected private sector company will be incharge of the production which will be listed to manufacture AMCA jets from TD (Technology Demonstrator) stage to Prototype stage. idrw.org has been informed in the past that under new Jv, No company will have majority share and HAL role will be that of the lead integrator which will oversee work done by the private supply chain and selected private player.

ADA is yet to freeze the final design of the AMCA jet and the Government of India is yet to sanction full funding for the program other than the seed money which was granted a few years back for initial design work. AMCA will be 5+ Generation fighter jet when it will hit production in 2035 and will come in two variants in Mk1 configuration which will be powered by F414 engines and Mk2 configuration which will be powered by a new higher powered engine.

Delays and push back in the first flight of AMCA will mean that TEDBF- Twin Engine Tejas Mk2 for the Indian Navy to meet its Carrier-based jet requirement for aircraft carrier will come before AMCA now and both MWF-AF and Tejas MK1A both will be ready in 2023 onwards but enter production by 2030.

https://idrw.org/amca-to-be-built-by-new-joint-venture-company-with-private-players-hal-chief/#more-230055

Tue, 30 June 2020

IDF to loan Barak-8 Air Defence System to India for deployment in Ladakh against China

By Raunak Kunde

IDF (Israel Defense Forces) owned Barak-8 medium-range surface-to-air missile system will be loaned to India on emergency requests for immediate deployment in the Ladakh region after India recently moved in short-range Israel's SPYDER air defense system and Indian-made Akash SAM systems due to hectic PLAAF Helicopter and fighter jet movement in the region closer to LAC and after reports that PLA also has moved in some of the Air Defense systems in the region.

Barak 8 is an advanced LRSAM naval air-defense system jointly developed by India's Defense Research and Development Organization (DRDO) in close collaboration with Israel's IAI's subsidiary ELTA, as well as Rafael Advanced Defense Systems. While the Indian Navy already has inducted ship-based version of the missiles which are active on three Kolkata-class stealth guided-missile destroyers but the land version of the same missile system for Air Force and Army are yet to be fully inducted.

MRSAM/Barak-8 surface-to-air missile system for the Indian Air force has been tested multiple times and few launchers have been developed but the Army version is still under development. Land-based Barak 8 system can be used to defend a large footprint with low manpower requirements by deploying several launchers that can be networked either by wired or wireless connections. Barak-8 is fitted with a 20 kg warhead to ensure damage or destruction in near-miss engagements and comes in two versions with a range of 70 km and 150 km.

Exact numbers of Barak-8 launchers loaned to India and the version provided is not clear yet but Barak-8 is the longest and most advanced state-of-the-art technology medium range surface to air missile system inducted by India which is effective against a myriad of short- to long-range (70-150 km.) airborne threats like incoming missiles, planes, and drones at both low or high altitudes till S-400 system is inducted by early 2021 by India.

https://idrw.org/idf-to-loan-barak-8-air-defence-system-to-india-for-deployment-in-ladakh-against-china/#more-230065

Defence News

Defence Strategic: National/International

TIMESNOWNEWS.COM

Tue, 30 June 2020

India-China standoff: Defence Minister Rajnath Singh meets CDS, Army Chief to assess LAC situation in Ladakh

The meeting comes amid no signs of any de-escalation in the almost month-long confrontation between Indian and Chinese troops in eastern Ladakh

New Delhi: Amid India-China standoff, Defence Minister Rajnath Singh on Monday met with Chief of Defence Staff Bipin Rawat, Navy Chief Admiral Karambir Singh and Army Chief General Manoj Mukund Naravane to assess the situation at the Line of Actual Control (LAC) in Ladakh.

File photo of Defence Minister Rajnath Singh | Photo Credit: PTI

The meeting comes amid the reports that there has not been any de-escalation from the Chinese side at the Line of Actual Control in Ladakh's Galwan Valley.

On Sunday, Prime Minister Narendra Modi had asserted that India has given a befitting reply to those who cast an evil eye on its territory in Ladakh, stating that while the country honours the spirit of friendship, it is also capable of giving an appropriate response to any adversary.

"Those who cast an evil eye on Indian soil in Ladakh have got a befitting response. India honours the spirit of friendship. It is also capable of giving an appropriate response to any adversary, without shying away," he said while addressing the nation through his monthly radio show 'Mann Ki Baat' without naming China.

Earlier this week the Army Chief had visited eastern Ladakh amid the simmering border tensions. He had also visited forward locations near the LAC. 20 Indian Army soldiers were killed when violent clashed broke out between Indian and Chinese armies in the Galwan valley area in Eastern Ladakh on June 15-16.

IAF Chief Air Chief Marshal RKS Bhadauria had also visited Leh and Srinagar recently to review the preparedness of the force.

The Army has sent thousands of additional troops to the LAC in various sectors including in Arunachal Pradesh, Uttarakhand and Sikkim. The Indian Air Force (IAF) has also moved its aerial assets such as the Sukhoi 30 MKI, Jaguar, Mirage 2000 aircraft and Apache attack helicopters in the forward air bases.

India-Japan joint Naval Exercise

In a show of unity, the Indian and Japanese navies conducted exercises in the Indian Ocean Region (IOR today. Indian Navy vessels INS Rana and INS Kulish conducted an exercise with the Japanese Maritime Self Defence Forces (JMSDF) training squadron that consisted of Japanese Ship Kashima and JS Shimayuki.

"JS KASHIMA (TV 3508) and JS SHIMAYUKI (TV 3513), the JMSDF Training Squadron, conducted an exercise with INS RANA and INS KULISH, Indian Navy at the Indian Ocean. JMSDF promoted mutual understanding with Indian Navy through this exercise (sic)," JMSDF said in a tweet along with photographs of the exercise.

The exercise assumes importance on the backdrop of ongoing tensions between India and China in Galwan along the Line of Actual Control (LAC).

https://www.timesnownews.com/india/article/india-china-standoff-defence-minister-rajnath-singh-meets-cds-army-chief-to-assess-lac-situation-in-ladakh/613592

livemint

Tue, 30 June 2020

India, China military delegates to meet again in next 2 days to resolve border issues

- ***The agenda of the meeting would be to take forward the proposals made by both the countries for disengagement***
- ***This time the talks will be held in Chushul on the Indian side. The last two meetings were held in Moldo on the Chinese side***

New Delhi: Amid tension at the borders, top Indian and Chinese military delegations will meet for the third time in the next two days in Chushul in Leh district, sources said.

"This time the talks will be held in Chushul on the Indian side. The last two meetings were held in Moldo on the Chinese side," said sources, adding that the agenda of the meeting would be to take forward the proposals made by both the countries for disengagement.

"All contentious areas during the current standoff will be discussed to stabilise the situation," sources added.

The last two meetings at the Corp Commander level were held on June 6 and June 22.

May 22, 2020, satellite image provided by Maxar Technologies shows China's PLA base in the Galwan Valley in LAC, the border between India and China. (Photo: AP)

On June 22, talks took place between Indian and Chinese military delegates for around 11 hours. The dialogue was held in a cordial, positive and constructive atmosphere and there was "mutual consensus to disengage".

"Modalities for disengagement from all friction areas in eastern Ladakh were discussed," the Indian Army had stated.

The meeting between 14 Corps Commander Lieutenant General Harinder Singh and South Xinjiang Military District chief Major General Liu Lin happened on the lines of the one they held at the Chushul-Moldo border personnel meeting (BPM) point in eastern Ladakh on June 6.

Also, Major General-level dialogue took place for three consecutive days after the violent clash at Patrolling Point 14 in Galwan Valley on June 15 left 20 Indian soldiers dead. The three-day talks were carried out to ease the tense situation and to get 10 Indian soldiers released, including four officers, who were in Chinese captivity.

Major General Abhijit Bapat, who is the Commander of the 3 Division of the Indian Army, had raised several points with the Chinese with regard to the incident on the intervening night of June 15/16.

The clash occurred at the South bank of Galwan river, which flows in an east-west direction before it's confluence with Shayok river, in which 20 Indian soldiers were killed by the Chinese People's Liberation Army troops.

Those were the first casualties faced by the Indian Army in a clash with the People's Liberation Army since 1975 when an Indian patrol was ambushed by Chinese troops in Arunachal Pradesh.

Sources said that Indian Army troopers were outnumbered by 1:5 ratio when they came under attack from the PLA soldiers at Patrolling Point 14 along the Line of Actual Control in eastern Ladakh.

"The numbers were stacked up against the Indian Army troopers. Yet, the Indian side decided to fight the PLA troopers. The Indian soldiers were outnumbered 1:5 by the Chinese troopers," sources said.

China is also said to have used thermal imaging drones to trace the Indian Army soldiers scattered on the treacherous terrain before brutally attacking them.

(This story has been published from a wire agency feed without modifications to the text. Only the headline has been changed.)

https://www.livemint.com/news/india/india-china-military-delegates-to-meet-again-in-next-2-days-to-resolve-border-issues-11593431992780.html

oneindia®

Tue, 30 June 2020

India ramps up military might, confident it would prevent misadventure by China

By Vicky Najappa

New Delhi: Amidst the tensions with China, India has been ramping up its resources along the Line of Actual Control amidst the tense stand off with China.

Sources familiar with the developments tell OneIndia that both sides are on a heightened state of readiness and there are currently no signs of the tensions easing.

The Indian Navy's P-81 maritime patrol is being used for surveillance of the Ladakh sector. It may be recalled that the P-18s had carried out similar exercises in 2017, during the Doklam stand off.

The Indian Air Force's capability has been ramped up immensely, with the induction of the C-17 Globemaster Super Hercules and the CH-47 Chinook. The Indian Army's strike formations are now spearheaded by the T-90 tanks.

Airlifting the T-90s was an important aspect for the IAF. The 46 tonne tanks is very crucial to the Indian Army as it faces the Chinese deployments, which also include a mix of both heavy and light tanks.

Airlifting the T-90 tank was possible only due to C-17, which has a payload capacity of 77 tonnes. The C-17 has come in handy because the Il-76 could airlift only 45 tonnes, while the weight of the T-90 is 46 tonnes. The C-17s have been in service since 2013 and there are 11 of them.

The Indian Army had three regiments of the older T-72 tanks, which weigh around 40 tonnes. Earlier, the IL-76 would airlift the T-72s and this is an exercise that has been going on since the 1990s.

Since tank transporters can only be used on some road stretches within Ladakh, it was not practical to negotiate the high mountain passes and narrow stretches that lie on the road link from the mainland to Ladakh.

The IAF's capability was also enhanced with the procurement of 15 Chinooks. This has in fact enhanced the round the clock and all weather capability, especially in the mountains, where manoeuvrability is a major issue.

It may be recalled that Indian Army Chief General M M Naravane had told the political leadership that the build up by India is likely to prevent any misadventure by the Chinese.

The Army Chief who returned to the national capital on Thursday after his visit to the forward areas in eastern Ladakh briefed both Prime Minister Narendra Modi and Defence Minister Rajnath Singh.

During the briefing, General Naravane said that the Chinese are unlikely to attempt any misadventure. The Chinese are flexing their muscles and have deployed a large number of troops an weaponry along the unresolved LAC. There is a heavy build up especially at the Daulat Beg Oldie Depsang area, the Army assessment says.

India has deployed thousands of additional troops. They are also backed by tanks, combat vehicles and howitzers in the region. The IAF fighters such as the Sukhoi-30 MKIs and MIG-29s are also regularly patrolling the skies.

The Indian troops are in a state of full preparedness and as a result of these actions, the Army's assessment is that the Chinese will not indulge in any misadventure. There would be clashes and face-offs owing to the tensions at the Galwan Valley and Pangong Tso. For now both the Indian and Chinese forces are maintaining stand-off distance from each other.

The Indian Army has however vowed not to let China grab any more territory and would continue to press for the restoration of status quo ante. The assessment also says that the de-escalation and disengagement will take many more months. Looking at how matters are on the ground, the internal assessment says that it may drag on at least until October before the situation normalises.

The Chief was on a two day visit to eastern Ladakh, where he took stock of the situation amidst the rising tensions with China.

https://www.oneindia.com/india/india-ramps-up-military-might-confident-it-would-prevent-misadventure-by-china-3112538.html

DefenceNews

Tue, 30 June 2020

India should be prepared for a two-front war with China & Pakistan – Army Chief

Indian Army Chief, General M.M. Naravane recently admitted that there is a threat of possible collusion between China and Pakistan against India which could lead to a two-front war.

"Though it can take place at any level, Siachen and Shaksgam Valley are the places where the territory of these two countries meet. The threat of collusion is maximum in the strategically important glacier which forces us to keep our possession," said General Naravane talking to the media ahead of the Army Day celebrations in the national capital.

With raging tensions between India and China on the eastern Ladakh border, where the troops of both the nations got into a brawl with 20 casualties on the Indian side and an unaccounted number on the Chinese side, both nations are now keen to de-escalate but 'how' remains a big question.

Thousands of Chinese People's Liberation Army (PLA) troops were reported to have moved into sensitive areas along the eastern Ladakh border, setting up tents and stationing vehicles and heavy machinery in what India considers to be its territory.

In response, the Indian army had also moved several battalions from an infantry division usually based in the Ladakh city of Leh to "operational alert areas" along the border, and reinforcement troops bought in.

Relations between Pakitan and India have always been turbulent along the Line of Control (LoC) with Pakistan violating ceasefire in Jammu and Kashmir over 800 times this year.

"The troops have been put on alert and vigilance through manual and electronic surveillance equipment has been intensified," an officer said. The Army and police have identified 19 infiltration routes along the LoC in Baramulla, Kupwara, Poonch, Rajouri and Bandipora districts of J&K, they said.

For years, we have been focusing on the western border on the basis of threats. Now, we have to rebalance our deployment towards the northern sector. Northern front with China is being given importance by moving modern weaponry. Making roads, facilitating habitats and storage of modern equipment are aimed towards capacity building in the region," said the Indian Army chief.

Retd. Wing Commander Amit Ranjan Giri echoed a similar possibility of a two-front war. According to Giri, the worst-case scenario for India is that both the western as well as eastern fronts being attacked simultaneously.

"Any more coordinated effort by the enemies would require centralised command and control structures, aka WW II, which is envisaged not to be a possibility in the present situation," he said.

Talking about the Indian Army's strength to handle a two-front war with China and Pakistan, General Narvane said in case of a simultaneous threat, there would be a primary front and a secondary front.

Our forces will be concentrated on the primary front and we will adopt more deterrent posture on the secondary front so that we are not found wanting," he said.

Most of of our aggression will be concentrated on the primary front and we will adopt more deterrent posturing on secondary front. We have formations which can quickly be moved from the east to west or vice-versa," he added.

Commander Giri thinks that in a scenario of a two-front war, India would have to break down the war into three distinct major geographical theatres, that is the west theatre, encompassing the borders and sea we share with Pakistan, the north theatre, encompassing the border regions of Ladakh down south to the northwestern edge of Nepal and the northeastern theatre, encompassing border regions from the south-east of Nepal to all the way up to Arunachal and further down towards the south.

"This sounds rather rosy but in actuality would be a Herculean task for the centralised war room at Delhi to handle," he wrote.

While laying down the path ahead for the Army, General Naravane concluded saying that his focus was on ABC — Allegiance, Belief and Consolidation. "Allegiance to the Constitution should guide us at all times.

It also translates to core values of the Constitution that is justice, equality and fraternity. Second is the belief in our organisation—our seniors and juniors. If we have a belief in them, we will not fall to rumours.

Then comes the consolidation. We are in a transformative stage. We will follow the policies of my predecessor. Of course, there will be a course correction," he explained. He maintained that the focus of the army is quality and not quantity, both in terms of personnel and equipment.

https://www.defencenews.in/article/India-Should-Be-Prepared-For-A-Two-Front-War-With-China-and-Pakistan-%e2%80%93-Army-Chief-861333

THE FINANCIAL EXPRESS

Tue, 30 June 2020

India-China standoff: Indian Navy intensifies surveillance in Indian Ocean region to track Chinese activities

India-China News: Amidst Chinese Navy's regular forays in the Indian Ocean Region, the report added that the Indian Navy was asked to raise its alert level

India-China News: Post India's bitter clash with China in Ladakh's Galwan Valley, the Indian Navy has intensified its surveillance missions and ramped up its deployments in the Indian Ocean region, PTI reported people familiar with the development as saying.

The sources further added that in view of the emerging situations, the Indian Navy has been enhancing its operational cooperation with friendly naval forces like the US Navy and Japan Maritime Self Defense Force.

The Indian Navy had on Saturday undertaken an exercise with the Japanese Navy in the Indian Ocean region. (Representation Image; Courtesy: PTI)

The Indian Navy had on Saturday undertaken an exercise with the Japanese Navy in the Indian Ocean region. Sources told PTI that this exercises was done in an area that is frequented by the Chinese naval vessels and submarines.

The report added that the Indian Navy ships – INS Rana and INS Kulish – were part of the exercise, whereas Japan Maritime Self Defense Forces had also deployed their two ships – JS Kashima and JS Shimayuki.

The source was quoted as saying that the aim of the exercise was to enhance interoperability between the two navies.

To counter China's repeated efforts to expand military influence in the resource-rich Indo-Pacific region, the navies from the US, India, Australia, Japan and France have been increasing their mutual cooperation.

In the wake of Chinese Navy's aggressive posturing in South China Sea and Indo-Pacific region and the border standoff between India and China in Ladakh, these exercise have gained major significance.

Amidst Chinese Navy's regular forays in the Indian Ocean Region, the report added that the Indian Navy was asked to raise its alert level.

A military expert told PTI that the Indian Navy had increased surveillance to "track Chinese activities in Indian Ocean region."

The sources added that in the past few weeks, the Indian Navy has increased its operational deployment in the Indian Ocean region and enhanced its surveillance missions.

https://www.financialexpress.com/defence/india-china-standoff-indian-navy-intensifies-surveillance-in-indian-ocean-region-to-track-chinese-activities/2007971/

hindustantimes

Tue, 30 June 2020

India deploys T-90 tanks in Galwan Valley after China's aggressive posturing at LAC

Infantry combat vehicles along with 155mm howitzers have been deployed all along 1597 km long LAC in East Ladakh

By Shishir Gupta

New Delhi: Signalling that it is all for peaceful restoration of status quo ante in East Ladakh but is also prepared for the worst case scenario, the Indian Army has deployed six T-90 missile firing tanks and top-of-the-line shoulder fired anti-tank missile systems in the Galwan Valley sector. The senior military commanders from India and China are meeting at Chushul on Tuesday to work out the de-escalation and disengagement process on mutual terms.

The army's decision to deploy the T-90 Bishma tanks was taken after the Chinese People's Liberation Army (PLA) had beefed up its positions on the river bed with armoured personnel carriers and troop tents. The Indian Army is occupying the dominant heights in the sector within its side of the Line of Actual Control (LAC).

T-90 missile firing tank deployed in Galwan Valley sector.

Infantry combat vehicles along with 155mm howitzers have been deployed all along 1597 km long LAC in East Ladakh with two tank regiments deployed in Chushul sector to repel any aggressive plans of the adversary through the Spanggur Gap. While Chinese PLA wants to make a deal on the LAC in this sector as part of withdrawal, the Indian Army is no mood to give an inch as the military aggression came from the Western Theatre Command of China with the intention of redefining the LAC.

According to military commanders, India is prepared for a long haul in this limited spectrum with capability of a full spectrum retaliation in case the red flag goes up. With the water temperature in the river already touching 10 below zero and the river bed temperatures more frosty than the dominant heights due to temperature inversion, it is only a matter of time when "General Winter" takes over the area and makes Chinese positions in Galwan Valley untenable.

While the PLA propaganda talks about introduction of troops trained in martial arts in the East Ladakh sector, fact is that the Chinese foot soldier is conscripted into the army for two years unlike the Indian hardy trooper who stays a minimum of 17 years. Since 1984, the Indian trooper has been trained in high altitude war to repel Pakistan Army from taking over Siachen glacier and has been sitting heights of over 15,000 feet in both Kargil as well as East Ladakh sector.

The general morale of the Indian military commanders and troops is very high with both Indian Air Force and Indian Navy deployed in highest state of alertness. Majority of Chinese PLA Air Force fighters are taking off from Hotan air base in Taklamakan desert, some 240 km from the LAC with surface to air missiles deployed to counter the Indian fighters.

https://www.hindustantimes.com/india-news/india-deploys-t-90-tanks-in-galwan-valley-after-china-s-aggressive-posturing-at-lac/story-eTMbY40wHoV5w55edknd9K.html

जागरण

Tue, 30 June 2020

चीन से तनातनी के बीच भारतीय नौसेना ने हिंद महासागर क्षेत्र में बढ़ाई निगरानी, कई देशों के साथ किया युद्धाभ्यास

भारतीय नौसेना को हिंद महासागर क्षेत्र में चीनी गतिविधियों को बढ़ते देख कर बेहद सतर्क रहने का निर्देश दिया गया है।

नई दिल्ली: चीन से पूर्वी लद्दाख में सात हफ्ते से जारी तनातनी के बीच भारतीय नौसेना ने अब हिंद महासागर क्षेत्र में गश्त और निगरानी बढ़ा दी है। हिंद महासागर में नौसेना ने सामरिक दृष्टि से अहम स्थानों पर अपने पोत तैनात किए हैं। इसके साथ ही भारतीय नौसेना ने अमेरिकी और जापान की नौसेना के साथ संयुक्त सैन्य अभ्यास भी किया है।

भारतीय नौसेना को हिंद महासागर क्षेत्र में चीनी गतिविधियों को बढ़ते देख कर बेहद सतर्क रहने का निर्देश दिया गया है। सैन्य विशेषज्ञों का कहना है कि वह लगातार क्षेत्र में बढ़ती चीनी गतिविधियों पर कड़ी नजर रख रहे हैं। हिंद महासागर के रणनीतिक जल क्षेत्र में सुरक्षा को चाकचौबंद रखने के लिए भारत ने मित्रवत नौसैनिक अभ्यास भी इन क्षेत्रों में अमेरिका और जापान के साथ किया है।

अमेरिका और जापानी नौसेना के साथ किया युद्धाभ्यास

विगत शनिवार को भारतीय नौसेना ने हिंद महासागर क्षेत्र में जापानी नौसेना के साथ अहम युद्धाभ्यास किया है। इन इलाकों में चीनी नौसैनिक जहाज और पनडुब्बियां गश्त लगाती हैं। इस सैन्य अभ्यास में भारतीय नौसैनिक जहाज आइएनएस राणा और आइएनएस कुलिश भी शामिल हुए।

वहीं, जापान के दो युद्धपोत जेएस काशिमा और जेएस शिमायुकी शामिल हुए। इस अभ्यास का मकसद इन देशों के साथ नौसैनिक तालमेल और सहयोग बढ़ाना है। भारतीय नौसेना ने इसके अलावा ऑस्ट्रेलिया और फ्रांस की नौसेना से भी सहयोग बढ़ाया है। यह सैन्य अभ्यास चीन के पूर्वी लद्दाख में घुसपैठ की कोशिश व मुठभेड़, दक्षिण चीन सागर और हिंद-प्रशांत क्षेत्र में दखलंदाजी के बीच बेहद अहम हैं।

https://www.jagran.com/news/national-indian-navy-increased-surveillance-in-the-indian-ocean-region-amidst-escalation-from-china-20453818.html

livemint

Tue, 30 June 2020

Govt launches online portal for issuing NOCs for projects in Indian waters

The online system will establish an effective, speedy and transparent mechanism to process these proposals, says the government statement

By Elizabeth Roche

New Delhi: Defence Minister Rajnath Singh on Monday launched a web portal for issuing no objection certificates (NOCs) to companies undertaking power projects as well as activities related to research, survey, exploration and exploitation of natural resources in the Indian territorial waters and exclusive economic zones, a government statement said.

Singh launched the portal in the presence of Army Chief Manoj Mukund Naravane, Navy Chief Karambir Singh and Indian Air Force Chief Rakesh Kumar Singh Bhadauria.

"The online system will establish an effective, speedy and transparent mechanism to process these proposals. The ministry has earlier launched a similar portal for grant of NOC for aerial survey," the statement said.

According United Nations' rules, an area up to 12 nautical miles from a country's coastline comprises its territorial waters and an area extending up to 200 nautical miles from a country's coastline make up its exclusive economic zones (EEZ).

The statement said that the Defence Ministry grants security clearance to various private sector companies, public sector entities and government organisations for power, wind or solar projects in "areas nearby defence installations and also RSEE (research, survey, exploration and exploitation) activities in the Indian TW and EEZ" through various ministries.

Applications for NOCs are received from the Ministry of New and Renewable Energy, Ministry of Power, Ministry of Petroleum and Natural Gas and the Ministry of Shipping and it is these that the new online process is expected to speed up, it added.

https://www.livemint.com/news/india/govt-launches-online-portal-for-issuing-nocs-for-projects-in-indian-waters-11593443050044.html

INDIAN DEFENCE RESEARCH WING

Tue, 30 June 2020

India holds superiority over China in satellite surveillance, have eyes much above enemy satellite

India have eyes above China's satellites looking down at the nation's borders in the north. Though China does have more satellites, India outdoes them when it comes to surveillance satellites.India has deployed the world's most powerful surveillance satellite Cartosat 3, and RISAT 2BR1 to observe the northern borders. In its orbit 509 km above, the satellite is keeping an eye on both Pakistan and China. The Chinese presence in Ladakh was spotted in March itself by these satellites. China's reluctance to de-escalate was also spotted by the nation's eyes in the sky.

Cartosat 3 can take pictures of objects with just 25 cm size up to areas of 16 square kilometers and transfer it to ground station within seconds. It's much more capable than America's World View 4 satellite. RISAT 2BR1 satellite can do surveillance in adverse conditions and in dark.China has launched 363 satellites to India's 118. As they fear American intrusion, the focus is on South China Sea.

Only once in five days, the Chinese satellite flies over the Indian border. Following the conflict with India, they have launched another surveillance satellite.To empower satellite surveillance, India is all set to launch RISAT 2BR2 which has the Radar Imaging Technology. This is entirely an Army satellite. ISRO and other science departments don't control or have connection with army satellites. It's carried out by Technical Research Organization of the army.

https://idrw.org/india-holds-superiority-over-china-in-satellite-surveillance-have-eyes-much-above-enemy-satellite/

THE ECONOMIC TIMES
WWW.ECONOMICTIMES.COM

Tue, 30 June 2020

First batch of six Rafale jets likely to arrive in India by July 27; to be based in Ambala

The IAF has been on a high alert for the last two weeks in view of escalation in tension with China following clashes between troops of the two countries in Galwan Valley in eastern Ladakh in which 20 Indian Army personnel were killed. The two armies are locked in a bitter standoff in the region for seven weeks

New Delhi: India is likely to receive by July 27 the first batch of six Rafale fighter jets which are expected to significantly boost the combat capability of the Indian Air Force, people familiar with the development said.

Rafale takes off during 2nd day of the Aero India 2019 at Yelahanka Airforce station in Bengaluru on Thursday.

The IAF has been on a high alert for the last two weeks in view of escalation in tension with China following clashes between troops of the two countries in Galwan Valley in eastern Ladakh in which 20 Indian Army personnel were killed. The two armies are locked in a bitter standoff in the region for seven weeks.

On June 2, Defence Minister Rajnath Singh held a telephonic conversation with his French counterpart Florence Parly during which she conveyed that the Rafale jets will be delivered to India as scheduled notwithstanding the coronavirus pandemic in France.

Military officials, on the condition of anonymity, said the arrival of the Rafale jets will significantly enhance the IAF's overall combat capability and will send a clear message to India's "adversaries".

When asked about the matter, the IAF did not comment.

The first squadron of the aircraft will be stationed at Ambala air force station, considered one of the most strategically located bases of the IAF.

India had signed an inter-governmental agreement with France in September 2016 for procurement of 36 Rafale fighter jets at a cost of around Rs 58,000 crore.

The aircraft is capable of carrying a range of potent weapons. European missile maker MBDA's Meteor beyond visual range air-to-air missile and Scalp cruise missile will be the mainstay of the weapons package of the Rafale jets

Meteor is the next generation of BVR air-to-air missile (BVRAAM) designed to revolutionise air-to-air combat. The weapon has been developed by MBDA to combat common threats facing the UK, Germany, Italy, France, Spain and Sweden

Besides the missile systems, the Rafale jets will come with various India-specific modifications, including Israeli helmet-mounted displays, radar warning receivers, low-band jammers, 10-hour flight data recording, infra-red search and tracking systems among others

The IAF has already completed preparations, including readying required infrastructure and training of pilots, to welcome the fighter aircraft.

The second squadron of Rafale will be stationed at Hasimara base in West Bengal. The IAF spent around Rs 400 crore to develop infrastructure like shelters, hangars and maintenance facilities at the two bases

Out of the 36 Rafale jets, 30 will be fighter jets and six will be trainers. The trainer jets will be twin-seater and they will have almost all the features of the fighter jets.

The Congress had raised questions on the deal, including on rates of the aircraft, and alleged corruption, but the government had rejected the charges.

https://economictimes.indiatimes.com/news/defence/first-batch-of-six-rafale-jets-likely-to-arrive-in-india-by-july-27-to-be-based-in-ambala/articleshow/76688506.cms

Tue, 30 June 2020

Arrival of Rafale jets will send a clear message to India's 'adversaries':?Officials

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https://idrw.org/arrival-of-rafale-jets-will-send-a-clear-message-to-indias-adversaries%e2%80%89officials/

THE ECONOMIC TIMES
WWW.ECONOMICTIMES.COM

Tue, 30 June 2020

Ladakh standoff: India's allies pitching in with weapons and ammunition

Allies are pitching in with commitments to deliver urgently needed weapons for the armed forces

By Manu Pubby

New Delhi: As Indian troops remain dug in at Ladakh in a prolonged standoff with China, allies are pitching in with commitments to deliver urgently needed weapons and ammunition for the armed forces. France has promised to deliver additional Rafale jets next month, an in-service Israeli air defence system is expected soon, precision artillery rounds will be sent by the US, and Russia will make early deliveries of ammunition and weapons worth $1 billion.

The commitments have been made after top-level bilateral talks and a key meeting in the capital at which it was decided that emergency financial powers will be given to the armed forces to prepare for a prolonged standoff in eastern Ladakh.

The first set of cutting-edge Rafale fighter jets – equipped with perhaps the world's best long-range air-to-air missiles – is expected to reach India by July 27. As per the initial plan, four fighters were to reach the home base at Ambala next month but sources said that France has now made a commitment to send additional Rafales in the first batch. A total of eight aircraft are nearing certification but it is unclear how many additional fighters could be delivered early.

Ferried by Indian Pilots

The planes will be ferried by Indian pilots who have been trained in France and will be fully combat ready when they arrive at Ambala. Sources said that in support of early delivery, France has committed that it will deploy its aerial refuelers to ensure that the jets make it to India with just a single hop.

Key defence supplier Israel – which showed its commitment as a reliable partner during the Kargil war too – is expected to deliver a much-needed air defence system that will be deployed along the border. Sources said that the unnamed air defence system is likely to come from the current holdings of the Israeli defence forces and would supplement the Ladakh sector. This would be useful as the Chinese side is said to have deployed its newly acquired S-400 air defence system in the sector as well.

India's largest defence supplier Russia has pledged urgent delivery of weapons, ammunition and missiles that India asked for during the recent visit to Moscow by defence minister Rajnath Singh. A detailed list has been shared by India for several dozen requirements that would cost in excess of $1 billion and a commitment has been received from Russia of delivery within weeks.

Given that most land-based systems such as tanks and armoured carriers are of Russian origin, India is looking for a variety of ammunition that will be required in the event of a larger conflict. The air force is looking for urgent supply of air-dropped bombs and missiles while the army requires anti-tank missiles and man-portable air defence systems for the border.

India's newest strategic partner – the US – has already been helping out with vital intelligence and satellite imagery that give military planners clarity on the border situation. Sources said that the US has invited India to share a list of all requirements with a commitment to be of assistance at the earliest.

In particular, additional Excalibur artillery rounds have been ordered on an emergency basis. The precision attack rounds with a range of over 40 km are used in a variety of artillery guns in the Indian inventory, including the M 777s that are designed for mountain warfare. These rounds are known for their accuracy and damage potential and have been tried and tested by the army.

https://economictimes.indiatimes.com/news/defence/ladakh-standoff-indias-allies-pitching-in-with-weapons-ammunition/articleshow/76680551.cms

THE ECONOMIC TIMES
WWW.ECONOMICTIMES.COM

Tue, 30 June 2020

Army to procure multipurpose survival kits for infantry troops

Each such kit should consist of components such as drop point blade, wire cutter, electric wire stripper, flat blade screwdriver and can opener, the sources noted

New Delhi: The Indian Army will procure multipurpose survival kits for foot soldiers as part of its infantry modernisation plan, said Army sources on Monday. The sources stated that the Army will be floating an open tender to procure these kits in which foreign vendors will also be able to bid.

Each such kit should consist of components such as drop point blade, wire cutter, electric wire stripper, flat blade screwdriver and can opener, the sources noted.

The Indian Army has drawn a mega plan for infantry modernisation under which various equipment are being procured.

https://economictimes.indiatimes.com/news/defence/army-to-procure-multipurpose-survival-kits-for-infantry-troops/articleshow/76696468.cms

THE FINANCIAL EXPRESS

Tue, 30 June 2020

More firepower for Indian Army! To buy small arms for Special Forces from US-based company

"The 7.62 x 51 mm FN Scar, made by a US unit of Belgium's FN Herstal, is being purchased by the Army under its own financial powers and is roughly around Rs 200-300 crore," confirmed a source

By Huma Siddiqui

The Indian Army is all set to purchase small arms through a Foreign Military Sales (FMS) route from a US-based firm FN Herstal for the Special Forces (SF). "The 7.62 x 51 mm FN Scar, made by a US unit of Belgium's FN Herstal, is being purchased by the Army under its own financial powers and is roughly around Rs 200-300 crore," confirmed a source.

The 7.62 x 51 mm FN Scar, is going to help in the upgrading of the firepower of SF in the dense jungles of the Northeast and Myanmar and will be replacing the '1B' LMGs which were manufactured by the Ordnance Factory Board (OFB) almost a few decades ago. These small weapons are considered to be of critical value for the Special Forces as support weapons enabling them with heavy firepower.

These small weapons are considered to be of critical value for the Special Forces as support weapons enabling them with heavy firepower. (Photo source: fnherstal.com)

The modernization of the Special Forces has been pending since 2005 and last year a decision was taken to start the process gradually of the Special Forces and a decision to procure from the US through the FMS route was taken.

More about FN MAG

This 7.62 mm a general-purpose machine gun was designed in the 1950s at the Fabrique Nationale (FN) in Belgium by a man named Ernest Vervier. In India, this has been licensed produced by OFB.

The wish list of Special Forces includes

715 Mk 48 Light Machine Guns (LMGs),

1,050 FN Scar (H) 7.62×51 assault rifles,

1,400 FN Scar (L) or HK-416 assault rifles,

110 .50 Cal Browning heavy machine guns (HMG),

400 helmet-mounted night vision systems

600 combat free fall parachutes

100 Barret M107 A1 heavy sniping rifles

There is an urgent requirement of 20 million rounds of ammunition. These will be used in the small arms.

https://www.financialexpress.com/defence/more-firepower-for-indian-army-to-buy-small-arms-for-special-forces-from-us-based-company/2007444/

hindustantimes

Tue, 30 June 2020

Weapon systems bought from US an integral part of arsenal

The new weapon systems bought from the United States are being used to support the military's forward deployments in eastern Ladakh, said an official familiar with the developments

By Rahul Singh

New Delhi: New weapon systems bought from the United States form an integral part of India's military posture and its preparations to deal with any provocation by the Chinese forces in eastern Ladakh, where both India and China are in a heightened state of readiness and tensions show no signs of easing, people familiar with developments said on Monday.

From the Indian Air Force's C-17 heavy-lifters, Apache attack helicopters and C-130J special operations aircraft, to the India's Navy's P-8I surveillance aircraft and the Indian Army's M-777 ultra-light howitzers -- these weapons and systems are playing a crucial role in strengthening the Indian military's deployments, said one of the persons cited above who asked not to be named.

From the Indian Air Force's C-17 heavy-lifters, Apache attack helicopters and C-130J special operations aircraft, to the India's Navy's P-8I surveillance aircraft and the Indian Army's M-777 ultra-light howitzers -- these weapons and systems are playing a crucial role in strengthening the Indian military's deployments.(PTI)

IAF's C-17 Globemaster III transport aircraft have been used to move soldiers, tanks and infantry combat vehicles to the sector, while C-130J Super Hercules aircraft have undertaken sorties to the advanced landing ground in the strategic Daulat Beg Oldie (DBO) sector to support the military's forward deployments, said the second person on condition of anonymity.

At 16,614 feet, the DBO airstrip in north-eastern Ladakh is the world's highest runway and is located 8km from the Line of Actual Control (LAC). The Chinese People's Liberation Army (PLA) has mobilised troops, weapons and equipment to areas across the Depsang plains near DBO, with its forward presence aimed at disrupting the army's patrolling patterns there.

The navy's P-8I maritime patrol and reconnaissance aircraft have been used for surveillance of the Ladakh sector, while their primary role encompasses carrying out anti-submarine warfare, anti-surface warfare, intelligence, surveillance, reconnaissance of the oceans, said a third person aware of the matter. The P-8Is carried out similar surveillance missions during the 2017 Doklam standoff.

Apart from Sukhoi-30s and upgraded MiG-29 fighter jets, IAF is operating Apache AH-64E attack helicopters and CH-47F (I) Chinook multi-mission helicopters --- both imported from the US --- in the region even as forward air bases have been ordered to be on their highest state of alert to deal with any Chinese provocation.

Experts said India's deployment in the sector --- in response to the Chinese military buildup --- was adequate to handle any adventurism or aggressive moves by the northern neighbour.

"A very balanced and formidable mix of Russian and new Western equipment has been deployed by the Indian military in the Ladakh sector to deal with any eventuality," said former IAF chief Air Chief Marshal Fali H Major (retd).

The army has deployed its new US-origin M777 ultra-light howitzers, which can provide accurate artillery fire support in mountainous terrain, in eastern Ladakh. The 155 mm/39-caliber M777 howitzers, inducted only last year, can be sling-loaded to helicopters and swiftly deployed to high-altitude areas. The howitzers have a range of 24-30 km.

The Russian equipment Air Chief Marshal Major referred to includes Sukhoi-30 fighters, MiG-29 jets, Ilyushin-76 heavy-lift planes, An-32 transport planes, Mi-17 utility helicopters, T-72/T-90 tanks and BMP-2/2K infantry combat vehicles.

India has also ordered more stocks of Excalibur precision guided munitions from the US for its artillery guns, while Russia assured swifter delivery of weapons and ammunition during defence minister Rajnath Singh's visit to Moscow last week, said the fourth person cited above.

India is pushing Russia to speed up the delivery of S-400 Triumf air defence missile systems following the tense stand-off with China. New Delhi is keen to accelerate the purchase of a mix of 33 more MiG-29s and Sukhoi-30s from Russia, and is also looking at sourcing an operational surface-to-air missile system from Israel as a 2017 order worth $2 billion for such advanced systems to take down hostile aircraft and missiles hasn't translated into deliveries yet, he added.

India has deployed its air defence weapon systems, including the indigenous Akash, in the Ladakh region where tensions rose sharply after a brutal brawl in Galwan Valley left 20 Indian and an unconfirmed number of Chinese soldiers dead on June 15, as reported by HT on Sunday.

Both India and China have significantly reinforced their deployments with fighter jets, helicopters, tanks, heavy artillery and missiles in the region. The Indian armed forces have given the government details of critical purchases they need to make keeping in mind that the border stand-off could last weeks or even months.

https://www.hindustantimes.com/india-news/weapon-systems-bought-from-us-an-integral-part-of-arsenal/story-1PhbP1M72Rg0UKeZiG4GJO.html

THE WEEK

Tue, 30 June 2020

Armed or unarmed, Indian Army Ghatak commandos will be ready for China

Ghatak commandos have played key roles in a number of Army operations in recent years

Chinese state media reported over the weekend that the People's Liberation Army had sent martial arts experts to Ladakh before the clash with the Indian Army at Galwan on June 15.

News agency *AFP* reported that members of a mixed martial arts club "presented themselves for inspection at Lhasa on June 15". *AFP* also reported that a Chinese military commander had claimed the martial arts experts would "greatly raise the organisation and mobilisation strength" of troops and their "rapid response and support ability".

Representational image of Ghatak personnel on an exercise with Russia | Russian ministry of defence via Wikimedia Commons

Before the deadly clash at Galwan on June 15, the Indian and Chinese armies had engaged in unarmed clashes and stone-pelting on two occasions in May, resulting in injuries on both sides. The announcement by Chinese media over the weekend on the deployment of the martial arts experts was interpreted as a message that the PLA would not shy away from more localised clashes.

The Indian Army has, reportedly, responded to the claims of martial arts training for the PLA by stating that it had deployed its Ghatak commandos. The Ghatak commandos are a specialised platoon that every infantry battalion of the Indian Army has. Members of the Ghatak force receiving a higher level of training in armed and unarmed combat compared with regular infantry personnel.

The Ghatak commandos are considered to be the 'tip' of the spear of an infantry battalion and lead assaults on protected enemy positions and strategic facilities like airfields and artillery sites.

The fittest personnel from an infantry unit are selected for training to become Ghatak commandos. These personnel undergo an intensive 43-day course at the Indian Army's commando school in Belgaum, Karnataka. The strenuous physical exercises in the course include running tens of kilometres with 35kg of weapons and supplies as well as a focus on unarmed combat.

It must be noted that the Ghatak commandos are not classified as 'special forces' personnel, who are qualified for parachute jumps and receive specialised training in a variety of domains. However, the Ghatak commandos have played key roles in a number of Army operations in recent years.

In December 2017, Ghatak commandos of Poonch Brigade crossed the Line of Control and inflicted casualties on Pakistani Army personnel to retaliate against the killing of four Indian personnel.

The Ghatak commandos also played a part in the surgical strike across the Line of Control in 2016 to avenge the attack on an Army base in Uri that year. Ghatak commandos of the 6 Bihar and 10 Dogra units participated in the surgical strike along with the Parachute regiment personnel.

In fact, Gurtej Singh, one of the 20 Indian soldiers who died in the Galwan clash, was a Ghatak commando. Gurtej, who belonged to 3 Punjab unit, was credited with killing several Chinese soldiers in the clash before breathing his last.

https://www.theweek.in/news/india/2020/06/29/armed-or-unarmed-indian-army-ghatak-commandos-will-be-ready-for-china.html

The Indian EXPRESS

Tue, 30 June 2020

Explained Ideas: Why India can't depend on the US and EU to counter China

Pratap Bhanu Mehta on India-China border dispute: The Xi regime's unprecedented global alienation notwithstanding, no other country has a serious stake in the fate of the terrain India and China are disputing

New Delhi: The border stand-off with China has made it crucial for India to rethink all its strategic options. Can it use the growing anti-China sentiment across the world to its advantage? The moment seems ripe, writes Pratap Bhanu Mehta, contributing editor, *The Indian Express*, in his latest column. "The degree of global alienation with the Xi Jinping regime is unprecedented. But can this be translated into concerted global action to exert real pressure on China?"

Many strategic experts are salivating at the prospect of India deepening its alliance with the US. In reality, India's options may be limited, Mehta points out.

"It is an odd moment in global affairs, where there is recognition of a common challenge emanating from China, but no global appetite to take concerted action."

Indian soldiers keep guard as an army convoy moves on the Srinagar-Ladakh highway at Gagangeer on Thursday, June 18, 2020. (AP Photo)

Look at the global response to China's Belt and Road Initiative (BRI). "Many countries are struggling to meet their BRI debt obligations. Many Chinese loans have become a millstone around the debtor countries' necks. But it is difficult to see the rest of the international community helping all these countries to wean their regimes away from dependence on Chinese finance. Similarly, there are now great concerns over frontier areas of conflict like cyber security and space," Mehta writes.

But why is that?

"International relations", Mehta says, "are formed in the context of a country's development paradigm". The US-China relationship for example, may have had its origins in the strategic attempt to create a Sino-Soviet split, "but for decades, this relationship was sustained not by a strategic logic, but by the logic of the political economy of development in both the US and China, where they reciprocally depended on each other". This US-China arrangement largely benefitted big businesses in America at the expense of its own domestic manufacturing base.

But the political legitimacy of this development model has waned in recent years.

The question before India is whether its development needs will fit into the emerging US development paradigm. That is, "Will a US hell-bent on bringing manufacturing jobs back to the US, easily gel with an "atma nirbhar" Bharat?"

Mehta concludes: "We are in a paradoxical world where the strategic necessity of the rest of the world to come together on China has never been higher; yet the appetite for concerted action has never been weaker. Fundamentally, few countries are going to put their money where their mouth is."

The efforts of the international community will therefore be to try and throw cold water on the India-China conflict as "no one has a serious stake in the fate of the terrain India and China are disputing".

At the end of the day, Mehta underlines, "India has to manage China and Pakistan largely on its own."

https://indianexpress.com/article/explained/india-china-border-dispute-the-ue-eu-6477314/

THE TIMES OF INDIA

Tue, 30 June 2020

LAC stand-off: India, Japan conduct Naval exercise amid China row

By Rajat Pandit

New Delhi: At a time when India and China are locked in a major troop confrontation in eastern Ladakh, Indian and Japanese warships held a small exercise towards the Malacca Strait in the Indian Ocean Region (IOR) on Saturday.

LAC stand-off: India, Japan conduct naval exercise amid China row

Indian warships patrolling the region, Rajput-class destroyer INS Rana and Kora-class missile corvette INS Kulish, took part in the exercise with JS Shimayuki and JS Kashima from the Japanese Maritime Self-Defence Force's training squadron. Though it was "largely a PASSEX (passing exercise)", it definitely amounts to some strategic signaling for China, said sources.

Three American aircraft carriers, USS Ronald Reagan, USS Theodore Roosevelt and USS Nimitz, incidentally, are also currently deployed in the Pacific Ocean for the first time in recent years, in a move that has not gone down well with China. Japan has become a regular participant in the high-voltage "Malabar" naval combat exercise between India and the US since 2015, with the three countries being concerned about China's aggressive muscle-flexing in the Indo-Pacific region, especially in the South China Sea. The exercise is slated to be held in the Bay of Bengal later this year.

Cranking up their bilateral military ties, India and Japan have also kicked off an annual joint land military exercise named "Dharma Guardian" since 2018. The two countries, after holding their first "two-plus-two" defence and foreign ministerial dialogue in November last year, are also now finalising a reciprocal military logistics pact to further strengthen their strategic partnership.

India has already inked such pacts with the US, France, South Korea, Singapore and Australia to extend its naval operational reach to counter China's expanding footprint in the IOR, which is witnessing regular forays by PLA warships and submarines.

China had strongly objected to the India-US Malabar exercise in the Bay of Bengal in 2007 when it was expanded to include Japan, Australia and Singapore. India had then restricted Malabar to a bilateral one with the US for several years, including Japan only when the exercise was held in the north-western Pacific in 2009 and 2014, to avoid antagonising China.India

https://timesofindia.indiatimes.com/india/india-japan-conduct-naval-exercise-amid-china-row/articleshow/76680779.cms

ZEENEWS

Tue, 30 June 2020

Chinese fighter aircraft spotted at Skardu airbase in PoK amid Sino-India border row

Over 40 Chinese fighter jets, J10, have been witnessed in Skardu in the month of June itself. The Chinese Air Force is understood to have been preparing to use the Skardu airbase to launch an attack against India

By Krishna Mohan Mishra

New Delhi: Amid Sino-India border along the Line of Actual Control in Ladakh, Indian intelligence agencies have recently noticed activities of the Chinese Air Force at Skardu Airbase in Pakistan occupied Kashmir (PoK).

Zee News has come to more than 40 Chinese fighter jets, J10, have been witnessed in Skardu in the month of June itself. The Chinese Air Force is understood to have been preparing to use the Skardu airbase to launch an attack against India.

Since Skardu is merely 100 kms away from Leh and is much closer than any Chinese airbase, China is testing the capabilities of this airbase so that it can be used against India, which may have to face attack from the double front.

China is learned to have three airbases, including Kashgar, Hotan, and Nagri Gurgunsa, to launch its fighter jets against India in Ladakh. These three airbases, however, have limited abilities to take action against India. The distance from Kashgar to Leh is 625 km, Leh to Khotan is 390 km and Leh to Gurgunsa is 330 km. All these airbases are located in Tibet at an altitude of over 11000 feet.

On takeoff from such a height, both the fuel and the carrying weapon of fighter jets have to be kept low, reducing their firepower as well as range. Also, the possibility of getting caught on such a long-distance flight from radar also increases, according to Zee News.

For the Chinese Air Force, it will be easier to attack Indian bases, both Ladakh and Kashmir, from Skardu, which is around 100 km away from Leh is, while Kargil is around 75 km. This airbase has two runways, one of which is two and a half km long and the other is 3.5 km long. Chinese fighter jets can easily proceed and return to Skardu.

Notably, if India retaliates against Skardu, then Pakistan will have an excuse to start the war.

https://zeenews.india.com/india/chinese-fighter-aircraft-spotted-at-skardu-airbase-in-pok-amid-sino-india-border-row-2292648.html

EurekAlert!

Tue, 30 June 2020

Researchers discover algorithms and neural circuit mechanisms of escape responses

Ordered and variable animal behaviours emerge to explore and adapt to the environment. They are generally considered as the combination of a series of stereotyped motor primitives. However, how the nervous system shapes the dynamics of motor sequences remains to be solved.

In a study published in *eLife*, Prof. WEN Quan from School of Life Sciences, University of Science and Technology of China (USTC) of the Chinese Academy of Sciences (CAS) has proposed the algorithms and circuit mechanisms for the robust and flexible motor states of nematodes during escape responses.

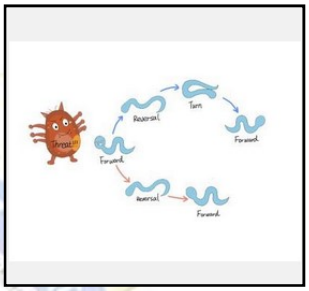


Image: Schematic diagram of C. elegans' escape behaviour.

Prof. WEN's group investigated nematode Caenorhabditis elegans (C. elegans) on the neural circuit mechanisms of how robust and flexible the motor sequences are generated.

C. elegans are ideal subjects for their simple yet fully functional neural system with only 302 neurons, approximately 6400 chemical synapses and 890 electrical synapses. Early in the 1980s, the coupling image of neural networks were reconstituted at the synapse scale by the electron microscope, laying a solid foundation for the research on the neural circuit. Besides, optical manipulation and detection are easily conducted considering C. elegans' overall transparent bodies.

Potential threats like mechanical or thermal stimuli robustly trigger escape responses comprised of stereotyped motor modules including forward movement, backward movement and turning movement. However, the sequence and timing of actions of every module vary from each other.

With the help of optogenetic technology, calcium image and computational models, the researchers discovered that the excitatory feedforward coupling accounts for certain motor sequences robustly triggered by stimuli, while a winner-take-all operation via mutual inhibition between motor modules realizes the flexible alteration of different motor patterns. Also, the plasticity of short-term synapses and the intrinsic noise of the nervous system play an important role in the sequence and timing of motor patterns.

Applying the coupling image of neural networks of C. elegans and molecular biological methods, the researchers further proved that electrical synapses contribute to feedforward coupling, whereas glutamatergic synapses contribute to inhibition between modules through glutamate-gated chloride expressed by downstream neurons.

The study opens more possibilities to understand the mechanisms of motor manipulation of advanced organisms, and sheds new light on the design of the next generation of brain-inspired intelligence.

https://www.eurekalert.org/pub_releases/2020-06/uosa-rda062820.php

Devdiscourse
Discourse on Development

Tue, 30 June 2020

INST scientists synthesize novel inorganic-organic hybrid compound

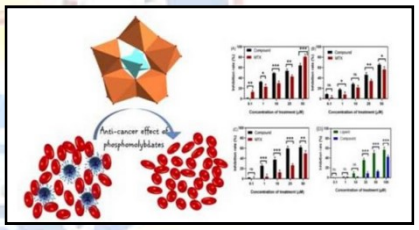
The team of scientists led by Dr Monika Singh and Dr Deepika Sharma has chalked out the mechanism by which the compound kills the cancer cells

Mohali: Scientists from the Institute of Nano Science & Technology (INST), Mohali, an autonomous institute of the Department of Science and Technology Government of India, have synthesized a novel inorganic-organic hybrid compound that can inhibit breast, lung, and liver cancer cells, opening up new possibilities for metallodrugs.

The solid compound based on phosphomolybdate cluster, an inorganic salt of phosphomolybdic acid, belongs to the Polyoxometalates (POMs) family, which had earlier been identified to have antitumor potential. The team of scientists led by Dr Monika Singh and Dr Deepika Sharma has chalked out the mechanism by which the compound kills the cancer cells. The research has been published in the journal Dalton Transactions.

POMs are an evolving class of inorganic metal oxides, which over the last decades, established promising biological activities by the virtue of their great diversity in structures and properties.

In order to probe into the mechanism of how the cancer cells are attacked by the compound, the team synthesised it by hydrothermal method. The aqueous mixture of sodium molybdate, phosphorus acid, and bipyridine was heated in an acetate buffer solution of pH 4 at 160 °C for 72 hours.



POMs are an evolving class of inorganic metal oxides, which over the last decades, established promising biological activities by the virtue of their great diversity in structures and properties. Image Credit: Twitter(@PIBAgartala)

In vitro cytotoxicity of the compound was determined on breast cancer (MCF-7), lung cancer (A549) and liver cancer (HepG2) cells by the conventional MTT assay (used for assessing cell metabolic activity). The cytotoxic effect observed for the compound on the various cancer cell lines was further compared with that of a routinely used chemotherapeutic agent, Methotrexate (TCI), by the MTT assay.

The mechanism of cell death occurring in breast cancer (MCF-7), lung cancer (A549) and liver cancer (HepG2) cells were evaluated using an Alexa Fluor 488 annexin V/dead cell apoptosis kit (Invitrogen). To determine the effect of the synthesized materials on the cell division, cell cycle analysis for the MCF-7, A549, and HepG2 cell lines was done by using flow cytometry. The in vitro results showed that this hybrid solid is less toxic towards normal cells, and its antitumor activity was also found to be comparable with that of a routinely used chemotherapeutic agent, Methotrexate (MTX).

In the past few decades, POMs have evolved as a promising candidate for future metallodrugs for combating cancer. The compound synthesized by the INST team could open new avenues for antitumor applications. (With Inputs from PIB)

https://www.devdiscourse.com/article/science-environment/1109976-inst-scientists-synthesize-novel-inorganic-organic-hybrid-compound

EurekAlert!

Tue, 30 June 2020

Newly designed ligands for a catalytic reaction to synthesize drugs and useful compounds

Scientists spur advances in the field of drug development by designing a novel strategy to generate useful compounds

Currently, various therapeutic compounds in the market, such as proteins, enzymes, and amino acids, are "chiral compounds"--molecules with two structures that are "mirror" images of each other but cannot be superimposed. Although the two variants of the molecule, also called "enantiomers," are structurally the same, how they are oriented (their "chirality") makes them functionally different from each other. Medicinal drugs can be either a single enantiomer or racemic mixtures (consisting of both enantiomers), often designated as (S) or (R), respectively. They often have distinct biological activities: for example, one enantiomer of a pharmaceutical may be far more effective than its counterpart (such as thalidomide, a racemic mixture that caused various birth defects in children). Thus, synthesizing chiral compounds in an effective manner is crucial to the field of drug design.

In a new study published in *Chemical Science*, a group of scientists, led by Prof Sukwon Hong of Gwangju Institute of Science and Technology and Prof Brian M. Stoltz of California Institute of Technology, designed a novel catalytic method that can generate useful chiral compounds. Prof Hong explains, "Chiral molecules have played a key role in modern chemistry, especially in medicinal chemistry. Their development can provide an effective synthetic way to design pharmaceutical products."

Image: Tetrasubstituted chromanones are useful for drug design, but an effective strategy for their generation has been lacking until now.

To begin with, the scientists focused on designing novel chiral "ligands," which are molecules that act as catalysts by binding to metals and can, in this case, facilitate the generation of chiral products called chromanones. Previous studies have already reported different types of reactions that can produce chromanones, but they had focused on trisubstituted chromanones (with three functional groups or substituent atoms in the molecule). In this study, the scientists designed chiral ligands called "pyridine-dihydroisoquinoline (PyDHIQ) ligands." They used these ligands in a catalytic reaction called "asymmetric conjugate addition," wherein these ligands act as a catalyst by binding to palladium metal, generating tetrasubstituted chromanones (those with four functional groups). Not only did this reaction using the novel ligands generate useful chiral compounds with numerous bioactivities in a single step, but the products also had a good yield and high enantioselectivity--making the process efficient and cost-effective.

The scientists then tested these ligands in reactions with various different sources, which resulted in the efficient generation of tetrasubstituted chromanones. This was the first method for the synthesis of highly enantioselective chromanone products containing tetrasubstituted stereocenters. Prof Hong says, "Ligand design is the most important concept of this research. We have introduced a new 'moiety' called the dihydroisoquinoline moiety in the ligand structure, which helped to create an optimal steric environment to generate tetrasubstituted chromanones."

The development of novel drugs and useful compounds is an important aspect of advancements in the field of medicine. This study offers a novel one-step strategy to develop bioactive compounds, which have a myriad of applications in drug development. Prof Hong optimistically concludes, "Our newly developed catalytic reaction paves the way for synthesizing novel drugs and natural products."

https://www.eurekalert.org/pub_releases/2020-06/gios-ndl062920.php

livemint

Tue, 30 June 2020

Launch of Gaganyaan will not be affected by Covid-19: Govt

The training of astronauts has now been resumed and the launch is scheduled to take place as planned, before the 75th anniversary of India's independence in 2022, says Minister of State for Department of Space

By Neetu Chandra Sharma

Launch of India's first human space mission "Gaganyaan" will not be affected by covid-19 pandemic and preparations are carrying on in the right direction, the Centre said on Monday.

"Even though because of the covid-19 pandemic, the training of four Indian astronauts in Russia had to be halted, yet the opinion of Chairman, Indian Space Research Organisation (ISRO) and the scientific team is that there had been kept a "cushion" both in the training programme and launch deadline," Union Minister of State, Atomic Energy and Space, Dr Jitendra Singh said on Monday. He was briefing about the important achievements of Indian Space Research Organisation (ISRO) and the Department of Space over the last one year and some of the important missions planned for the future,

"The training of astronauts has now been resumed and the launch is scheduled to take place as planned, before the 75th anniversary of India's independence in 2022," he said.

Elaborating on the cabinet's decision to encourage private participation in ISRO activities, Singh said that a regulatory body called "Indian National Space Promotion & Authorization Centre (IN-SPACe)" is to be established. "This will help provide a level playing field to private players and encourage their participation," he said.

The Chandrayaan-3 Lunar mission is planned for launch next year. This mission will involve a lander, rover and a propulsion system to carry the modules to move but it would not have orbiter as the previous orbiter is fully operational.

"Besides enhancing the capacity and resources of our space missions, increased participation of private players will also discourage the brain drain of talented space scientists and experts who were otherwise moving out of India in search of a break," said Singh.

The covid-19 pandemic is evolving in India continuously and impacted majority of government programs and initiatives.

The prevalence of the disease on long term basis shows that it will re-shape all aspects of life and in the new normal, the priorities are going to be different, the government has said, adding that at least 80% of the covid cases are asymptomatic, so the best medicine is the prevention.

As on Monday, the country recorded 5,49,839 cases and 16,502 deaths. Currently, there are 2,10,120 active cases in the country and all are under active medical supervision according to Union Health Ministry. The coronavirus cases are increasing everyday but the positive part for the country, is the recovery rate of patients.

The gap between recoveries and active cases is 1,11,602 as of today. So far, as many as 3,21,722 patients have been cured of covid-19. The recovery rate continues to steadily improve. It has reached 58.67% amongst Covid-19 patients today, the Union Health Ministry said in a statement.

During the last 24 hours, a total of 12,010 covid-19 patients have been cured. As far as the testing infrastructure is concerned, India now has 1047 diagnostic labs dedicated to covid-19. This includes 760 in the government sector and 287 private labs. The 11 labs that have been inducted in the last 24 hours are all operated by the government. The Indian Council of Medical Research has started conducting over 2 lakh tests everyday.

The vaccine efforts are also on worldwide to fight the virus.

"Every country in the world is working towards making a vaccine on war footing. It is become a global goal. Indian laboratories, both private and public are taking a wide variety of approaches to develop vaccines against covid-19," said Dr Balram Bhargava, Director-General ICMR and Secretary, Department of Health Research, Union Health Ministry.

"The leading vaccine manufacturers in India are using well-defined vaccine development platforms, which were successfully used for other vaccines in the past for potential covid-19 vaccines," said Bhargava, adding that in many cases, they are collaborating with the academic institutions in India and abroad where the R&D has been and is being done to develop the vaccine prototype.

Bhargava said that the company will manufacture the vaccine for clinical trials and subsequent vaccination program. Several vaccines where Indian laboratories (private or public) are involved are at the advanced stages of development and one has already entered the clinical trial.

The government has also been ramping up the healthcare infrastructure in the country. As of Sunday, the COVID related health infrastructure has been strengthened with the availability of 1055 dedicated Covid Hospitals with 1,77,529 isolation beds, 23,168 ICU beds and 78,060 oxygen supported beds; 2,400 dedicated covid Health Centres with 1,40,099 Isolation beds, 11,508 ICU beds and 51,371 oxygen supported beds have also been operationalized, the union health ministry said in a statement.

https://www.livemint.com/news/india/launch-of-gaganyaan-will-not-be-affected-by-covid-19-govt-11593439090706.html

INDIA TV

Tue, 30 June 2020

ISRO new launchpad in Tamil Nadu to save fuel, increase payload capacity

ISRO is one step closer to setting up the spaceport, as local officials expect the Tamil Nadu government to pass an order that will allow Isro officials to enter the property and start work. Tamil Nadu had begun the land acquisition process for the spaceport in December 2019. Around 2,300 acres of land has been earmarked across three villages — Mathavankurichi, Padukapathu and Pallakurichi for setting up the space station

New Delhi: ISRO (Indian Space Research Organisation) is set to come up with the country's second spaceport in Tamil Nadu's Kulasekarapattinam and this launchpad will be having a strategic advantage over the launch pads in Sriharikota. With the new spaceport, small satellite launch vehicles (SSLV) can fly straight to the south pole without burning fuel to swerve around Sri Lanka on the way. On Saturday, ISRO Chief K Sivan had said the land acquisition for India's second rocket launch centre at Kulasekarapattinam in Tamil Nadu's Tuticorin is progressing and further work will progress after this is done.

With the Central government announcing the opening up of the space sector for the private sector, Sivan, who is also the Secretary in the Department of Space, said many start-up companies have expressed interest in the space sector while big corporates are yet to come to the front.

During polar missions, big launch vehicles follow a trajectory where they fly in the southeast direction after lift-off from Sriharikota to avoid flying over Sri Lanka, ISRO chief said. Thereafter, the rocket takes a sharp manoeuvre and proceeds towards the south pole.

ISRO's Sriharikota launchpad vs second spaceport in Kulasekarapattinam

- The dogleg manoeuvre that results in the rocket deviating from a straight flight path requires more fuel that eats into the rocket's payload capacity. When launched from

Kulasekarapattinam, this manoeuvre is not required thereby saving the rocket's fuel as well as improving the payload capability.

- When rockets are launched from Kulasekarapattinam, this manoeuvre is not required as there is no landmass along the flight path in the southward direction. In polar missions, the PSLV from Sriharikota must perform a dogleg manoeuvre to avoid flying over Sri Lanka, to protect it from rocket debris.
- The new spaceport is expected to launch smaller satellites weighing 500kg into low-earth orbit less than 2,000km above the earth's surface in an SSLV. The Satish Dhawan Space Centre in Sriharikota, spread over 145sqkm, has two launch pads for PSLV and GSLV flights.

On the ground at Kulasekarapattinam, ISRO is one step closer to setting up the spaceport, as local officials expect the Tamil Nadu government to pass an order that will allow ISRO officials to enter the property and start work.

Tamil Nadu had begun the land acquisition process for the spaceport in December 2019. Around 2,300 acres of land has been earmarked across three villages — Mathavankurichi, Padukapathu and Pallakurichi for setting up the space station.

India presently has one rocket port at Sriharikota in Andhra Pradesh with two launch pads.

On the rationale for opening up the space sector for the private sector, Sivan said the global space sector market size is about $350 billion and India's share is less than three per cent and the share will not improve if the ISRO remains the sole player.

https://www.indiatvnews.com/news/india/isro-new-launchpad-tamil-nadu-kulasekarapattinam-sriharikota-indian-space-research-organisation-630072

COVID-19 Research News

TIMESNOWNEWS.COM

Tue, 30 June 2020

India's first COVID-19 vaccine 'COVAXIN' gets DCGI approval for clinical trials

COVAXIN, India's first vaccine candidate against novel coronavirus, developed by vaccine maker Bharat Biotech gets the approval of DGCI for Phase I and II clinical trials

By Salome Phelamei

Hyderabad: COVAXIN, India's first vaccine candidate against the novel coronavirus, developed by Bharat Biotech in collaboration with the Indian Council of Medical Research (ICMR) - National Institute of Virology (NIV), has received approval from the Drug Controller General of India (DGCI) to conduct Phase I and 2 human trials. According to the vaccine maker, human clinical trials of the experimental COVID-19 are scheduled to start across the country in July 2020.

The SARS-CoV-2 strain was isolated in NIV, Pune and transferred to Bharat Biotech. The indigenous, inactivated vaccine has been developed and manufactured by Bharat Biotech's BSL-3 (Bio-Safety Level 3) High Containment facility located in Genome Valley, Hyderabad, India, the firm said in a release on Monday.

India's first COVID-19 vaccine 'COVAXIN' gets DCGI approval for clinical trials

The Drug Controller General of India - CDSCO, Ministry of Health & Family Welfare, granted permission to initiate Phase I and II human trials after the company submitted results generated from preclinical studies, demonstrating safety and immune response.

"We are proud to announce COVAXIN, India's first indigenous

vaccine against COVID-19. The collaboration with ICMR and NIV was instrumental in the development of this vaccine. The proactive support and guidance from CDSCO have enabled approvals to this project. Our R&D and Manufacturing teams worked tirelessly to deploy our proprietary technologies towards this platform," said Dr Krishna Ella, Chairman and Managing Director, Bharat Biotech, announcing the vaccine development milestone.

The company accelerated its objective in completing the comprehensive preclinical studies. Results from these studies have been promising, showing extensive safety and effective immune responses.

"Our ongoing research and expertise in forecasting epidemics has enabled us to successfully manufacture a vaccine for the H1N1 pandemic. Continuing our focus on creating the only BSL-3 containment facilities for manufacturing and testing in India, Bharat Biotech is committed to advancing vaccine development as a matter of national importance to demonstrate India's strength in handling the future pandemics," said Mrs Suchitra Ella, Joint Managing Director.

Bharat Biotech's track record in developing Vero cell culture platform technologies has been proven in several vaccines for polio, rabies, rotavirus, Japanese Encephalitis, Chikungunya and Zika.

https://www.timesnownews.com/health/article/india-s-first-covid-19-vaccine-covaxin-gets-dcgi-approval-for-clinical-trials/613790

The Indian EXPRESS

Tue, 30 June 2020

New research: MMR vaccine can help fight sepsis in Covid patients

The research paper refers to growing evidence that live attenuated vaccines can activate certain immune cells to train leukocytes (the white blood cells of the immune system) to mount a more effective defence against unrelated infections

New Delhi: A new paper suggests that live attenuated vaccines such as MMR (measles, mumps and rubella) may prevent the severe lung inflammation and sepsis associated with Covid-19 infection. The paper is published online in the journal mBio.

A live attenuated vaccine is derived from a disease-causing pathogen, which has been weakened in the laboratory so that it does not cause severe illness when a person is vaccinated with it.

Researchers stressed that this live attenuated MMR vaccine concept is not suggested to be directed against Covid-19, but instead an immune preventive measure against the severe inflammatory symptoms of the virus. (Getty Images)

The new research paper refers to growing evidence that live attenuated vaccines can activate certain immune cells to train leukocytes (the white blood cells of the immune system) to mount a more effective defence against unrelated infections.

The researchers used a live attenuated fungal strain and demonstrated, in the lab, that vaccination with it trained innate protection against sepsis (blood poisoning) caused by a combination of disease-causing fungi and bacteria.

The authors proposed that the protection is produced by cells called MDSCs. They stressed that this live attenuated MMR vaccine concept is not suggested to be directed against Covid-19, but instead an immune preventive measure against the severe inflammatory symptoms of Covid-19.

The research was conducted by Paul Fidel Jr of LSU Health New Orleans, and Mairi Noverr of Tulane University School of Medicine in New Orleans. Dr Fidel said in a statement: "The use of

childhood live attenuated vaccines such as MMR given to adults to induce bystander cells that can dampen or reduce severe complications associated with Covd-19 infection is a low risk – high reward preventive measure during a critical period of the pandemic. These bystander cells are long-lived but not life-long. Anyone who had an MMR vaccination as a child, while likely to still have immune antibodies directed against measles, mumps, or rubella, will not likely still have the immune cells directed against sepsis. So, it could be important to get the MMR vaccination as an adult to protect better against Covid-related sepsis."

https://indianexpress.com/article/explained/mmr-vaccine-can-help-fight-sepsis-in-covid-patients-study-6480723/

R. REPUBLICWORLD.COM

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CanSino's vaccine for Covid-19 gets nod for military use in China

The Chinese military has received the approval for the usage of COVID-19 vaccine candidate developed by its research unit along with CanSino Biologics

By Aanchal Nigam

As the coronavirus contagion continues to tighten its grip on some parts of the world, the Chinese military has received the approval for the usage of COVID-19 vaccine candidate developed by its research unit along with CanSino Biologics. The company even said on June 29 said that its clinical trials proved to be safe and apparently, even efficient. According to an international media agency, Ad5-nCoV is one of the eight vaccine candidates that are currently being developed by the China-based firms while the global deaths have surpassed half a million.

The researchers have even approved the same vaccine candidate into human trials to cure the COVID-19 disease that has now infected over 10.1 million across the globe. Along with the Chinese military, Ad5-nCoV has also been approved by the Canadian government for human testing in the country. Moreover, as per reports, the use of the shot for the Chinese military has been approved on June 25 for a period of one year. The vaccine candidate has been jointly developed by CanSino and the Beijing Institute of Biotechnology in the Academy of Military Medical Sciences.

CanSino reportedly said that the vaccine candidate Ad5-nCoV 'is currently limited to military use only' and noted that its usage cannot be expanded to the public without the approval of Logistics Support Department. According to reports, both the initial phases of clinical testing of the candidate had shown that the vaccine had the potential of preventing diseases that are caused by the novel coronavirus which was originated in China in December 2019.

Sinopharm Group Co is leading the race

Meanwhile, previous media reports had suggested that out of five experimental shots for coronavirus vaccine produced by Chinese pharmaceutical companies that have now reached the stage of human trials, Sinopharm Group Co is leading the race. Sinopharm has been leading the race of developing COVID-19 vaccine by the vastest difference since April 2015 and is now a prominent healthcare name attracting the investors to the sector.

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