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Press Information Bureau
Government of India

Ministry of Defence

Thu, 27 Apr 2023

डीआरडीओ द्वारा स्थिति निगरानी पर आयोजित दो दिवसीय राष्ट्रीय सम्मेलन का उद्घाटन विशाखापत्तनम में किया गया

रक्षा अनुसंधान एवं विकास विभाग के सचिव और रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) के अध्यक्ष डॉ. समीर वी कामत द्वारा 27 अप्रैल, 2023 को विशाखापत्तनम में स्थिति निगरानी पर दो दिवसीय राष्ट्रीय सम्मेलन (एनसीसीएम 2023) का उद्घाटन किया गया। सम्मेलन का आयोजन नेवल साइंस एंड टेक्नोलॉजिकल लेबोरेटरी (एनएसटीएल), डीआरडीओ की एक प्रमुख प्रयोगशाला द्वारा, स्थिति निगरानी सोसाइटी ऑफ़ इंडिया के सहयोग से किया गया है। इसका उद्देश्य स्थिति निगरानी के पेशवरों और विशेषज्ञों को एक साथ लाना और उत्पादकता एवं उपलब्धता बढ़ाने के लिए उद्योग से संबंधित कार्य प्रणालियों को प्रभावी ढंग से लागू करने का संदेश फैलाना है।

सम्मेलन में कंपनी-आधारित निदान, 'वियर डेब्रिस एनालिसिस', 'स्थिति निगरानी में आर्टिफिशियल इंटेलिजेंस/मशीन लर्निंग' और 'स्थिति निगरानी के लिए सेंसर और सिग्नल प्रौद्योगिकी जैसे विभिन्न विषयों पर विचार-विमर्श किया गया। इस सम्मेलन में देश भर के उद्योगों, शैक्षणिक संस्थानों और अनुसंधान एवं विकास प्रतिष्ठानों के प्रतिभागियों द्वारा भाग लिया जा रहा है।

सम्मेलन में मुंबई के विश्वसनीयता और निदान केंद्र के मुख्य ज्ञान अधिकारी और निदेशक डॉ तारापद पायने, आईआईटी-गुवाहाटी के प्रोफेसर डॉ. राजीव तिवारी; जीवीपी कॉलेज ऑफ़ इंजीनियरिंग के प्रोफेसर डॉ एडविन विजय कुमार; सीबीएम और टीपीएम के सलाहकार डॉ राणा दत्ता; कैट IV- वाइब्रेशन एनालिस्ट के श्री गंटी सुब्बा राव और सीएमईआरआई, दुर्गापुर के वरिष्ठ प्रधान वैज्ञानिक डॉ कमलकिशोर उके जैसे आमंत्रित विशेषज्ञों की वार्तालाप के अलावा लगभग 30 पेपर प्रस्तुत किए जा रहे हैं।

अपने संबोधन में, डीआरडीओ के अध्यक्ष ने अभियंताओं से तेजी से बदलती प्रौद्योगिकियों से सामंजस्य स्थापित करने और मशीनों एवं संरचनाओं की स्वास्थ्य निगरानी प्रणालियों में बेहतर कौशल क्षमता का निर्माण करने का आग्रह किया। उन्होंने कहा कि स्थिति निगरानी समृद्ध साधन के लिए नहीं है, अपितु यह एक आवश्यकता है। उन्होंने प्रख्यात विद्वानों और पेशवरों से हाल की तकनीकी प्रगति के अनुसार सम्मेलन निगरानी विकसित करने के लिए एक दिशा-निर्देश तैयार करने का आग्रह किया। नौसेना प्रणाली और सामग्री के महानिदेशक श्री एमज़ेड सिद्दीकी ने उपकरणों के प्रभावी रखरखाव के लिए उद्योग 4.0 के लाभों

को प्राप्त करने की आवश्यकता पर ज़ोर दिया। उन्होंने कहा कि यदि डिजाइन चरण में ही पर्याप्त देखभाल की जाती है, तो प्रणाली में विश्वसनीयता, सुरक्षा, उपलब्धता और रखरखाव में वृद्धि के लिए स्थिति निगरानी में सुधार की निरंतर संभावना रहती है।

नेवल डॉकयार्ड (V) के एडमिरल सुपरिंटेंडेंट, रियर एडमिरल संजय साधु ने बताया कि भारतीय नौसेना ने लंबे समय से शिपबोर्ड की संपत्ति की स्थिति निगरानी को अपनाया है और इसे बनाए रखने में अपनी शानदार भूमिका के लिए एनएसटीएल की सराहना की।

स्थिति निगरानी सोसाइटी ऑफ इंडिया के अध्यक्ष श्री पीवीएस गणेश कुमार ने सम्मेलन के उद्देश्यों की व्याख्या की और आशा व्यक्त की कि सम्मेलन में विचार-विमर्श से बेहतर रखरखाव दृष्टिकोण के लिए उपयोगी सुझाव प्राप्त होंगे।

<https://pib.gov.in/PressReleasePage.aspx?PRID=1920458>

THE HINDU

Fri, 28 Apr 2023

Conference on Condition Monitoring Begins at NSTL



DRDO Chairman Samir V. Kamat (centre) and others releasing a brochure at the inaugural of the National Conference on Condition Monitoring at NSTL in Visakhapatnam on Thursday. | Photo Credit: V. RAJU

A two-day National Conference on Condition Monitoring (NCCM-2023), being organised by the Naval Science and Technological Laboratory (NSTL) and the Condition Monitoring Society of India (CMSI), was inaugurated by Samir V. Kamat, Secretary, Department of Defence Research and Development (DDR D), and Chairman, DRDO, at NSTL on Thursday. Addressing the gathering, Mr. Kamat urged the engineers to adapt to the fast-changing technologies in health monitoring systems. He said that condition monitoring was not for luxury, but a necessity. He

hoped that scholars and practitioners would draw a roadmap for evolving condition monitoring based on technological advancements.

Participating in the programme, M.Z. Siddique, Director General (Naval Systems & Materials), stressed the need for the use of Industry 4.0 technologies for the maintenance of equipment.

NSTL Director Y. Srinivasa Rao emphasised the need for effective maintenance of systems in defence and civil sectors.

Rear Admiral Sanjay Sadhu, Admiral Superintendent, Naval Dockyard (V), said that the Indian Navy had adopted condition monitoring of shipboard assets for long and lauded the NSTL for its role in achieving this.

V. Bhujanga Rao, former Director General (Naval Systems & Materials), delivered the keynote talk on 'Condition Monitoring in the Industry 4.0 Environment' and brought out the role of 'smart factory' in improving the operational effectiveness of plants.

P.V.S. Ganesh Kumar, president of CMSI, said that the conference would lead to fruitful suggestions for improved maintenance approaches.

<https://www.thehindu.com/news/cities/Visakhapatnam/conference-on-condition-monitoring-begins-at-nstl/article66784919.ece>

नईदुनिया

Thu, 27 Apr 2023

जीवाणु बताएंगे लैंडमाइन का पता, नक्सली होंगे नाकाम, DRDO और रविशंकर यूनिवर्सिटी ने बनाई सेल्फ इंडीकेटिंग बीट्स

बस्तर में हो रही लैंडमाइन की घटनाओं से होने वाली जनहानि रोकने के लिए पंडित रविशंकर शुक्ल विश्वविद्यालय के बायोटेक्नालाजी विभाग के अध्यक्ष डा. केशवकांत साहू ने सेल्फ इंडीकेटिंग बीट्स बनाया है। इसके जरिए जमीन के अंदर लैंडमाइन की मौजूदगी का पता लगाया जा सकता है। जहां पर लैंडमाइन होने का संदेह हो उस जगह पर सेल्फ इंडीकेटिंग बीट्स (छोटी-छोटी गोली) डालने पर 30 से 35 मिनट के अंदर सफेद रंग के बीट्स काले या हरे रंग में बदल जाएंगे। शोध के लिए बस्तर के नक्सल प्रभावित ऐसे क्षेत्रों की मिट्टी पर परीक्षण किया गया जहां पहले आइईडी विस्फोट हुआ था। मिट्टी में पांच ऐसे बैक्टीरिया मिले हैं जो ट्राइ नाइट्रो टालुइन या टीएनटी के प्रति संवेदी हैं।

सोडियम एलजिनेट के साथ इन जीवाणुओं को मिलाकर निष्क्रिय गोलियां बनाई गई हैं। मिट्टी में डालने पर टीएनटी की उपस्थिति पर जीवाणु सक्रिय हो जाते हैं तथा रंग बदलने लगते हैं। इन बैक्टीरिया का उपयोग लैंडमाइन रोकने के साथ-साथ जमीन की उर्वरक क्षमता को कम होने से रोकने पर भी सहायक हैं। इस शोध के लिए भारतीय रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) के लाइफ साइंस रिसर्च बोर्ड की तरफ से 33 लाख रुपये की फंडिंग मिली थी। शोध पूरा होने के बाद इसे डीआरडीओ को भेज दिया गया है। डीआरडीओ की तरफ से इसे पेटेंट करवाने की तैयारी की जा रही है।

तीन साल में शोध पूरा किया

विभागाध्यक्ष डा. केशवकांत साहू ने बताया कि डीआरडीओ की तरफ से तीन साल के लिए फंडिंग दी गई थी। शोध के लिए हमने बस्तर संभाग के सभी जिलों की मिट्टी मंगवाई। नक्सल आपरेशन के तत्कालीन डीजी रहे

डीएम अवस्थी ने लैंडमाइन की जगहों की मिट्टी दी। इन मिट्टियों में हमें 29 प्रकार के बैक्टीरिया (जीवाणु) मिले। इनमें से पांच जीवाणु टीएनटी की उपस्थिति-अनुपस्थिति बताने में सक्षम मिले। लैंडमाइन करने के लिए टीएनटी का उपयोग होता है। जहां पर भी टीएनटी की उपस्थिति होगी, वहां पर सेल्फ इंडीकेटिंग बीट्स डालने पर पता चल जाता है। इस शोध को करने में पीएचडी स्कालर डा. जिप्सी चंद्रा और डा. नेहा पांडेय ने सहायक की भूमिका निभाई है।

डा. केशवकांत बताते हैं कि जो पांच बैक्टीरिया मिले हैं वो टीएनटी उपस्थिति तो बताते ही हैं, साथ ही उनके अवगुणों को रोकने में भी सहायक है। टीएनटी विस्फोट होने के बाद मिट्टी में मिलते हैं, इसके छीटे इधर-उधर भी फैलते हैं। टीएनटी के अंश से मिट्टी की उर्वरक क्षमता कम होती है। उस मिट्टी में उगने वाले पौधे, अनाज में भी प्रभाव पड़ता है। इन बैक्टीरिया का उपयोग कर टीएनटी की खतरनाक क्षमताओं को कमजोर करने में सहायता होती है। पौधों की वृद्धि में भी सहायक होते हैं।

<https://www.naidunia.com/chhattisgarh/raipur-raipur-bacteria-will-tell-the-address-of-landmine-drdo-and-ravi-shankar-university-have-made-self-indicating-beats-8058875>

DRDO on Twitter

DRDO Retweeted

 **A. Bharat Bhushan Babu** 
@SpokespersonMoD

Dr Samir V Kamat, Secretary Dept of Defence R&D and Chairman @DRDO_India inaugurated a two-day National Conference on Condition Monitoring (NCCM 2023) in Visakhapatnam on April 27, 2023.



 Rajnath Singh and 5 others

8:38 AM · Apr 28, 2023 · 5,386 Views



Press Information Bureau
Government of India

Ministry of Defence

Thu, 27 Apr 2023

Army Commanders Conference Takes Key Decisions

The latest edition of Army Commanders Conference which was organised for the first time in a hybrid model from 17-21 April 23 saw deliberations over wide-ranging Strategic, Training, Human Resource Development, and Administrative aspects and took key decisions in shaping the Army for the future.

The Army Commanders and other senior functionaries took stock of the current / emerging security scenarios and reviewed the operational preparedness and readiness of the Indian Army.

The forum reviewed the pan-India, quantified progress on the ongoing transformational initiatives in the key domains of Force Structuring & Optimisation, Modernisation & Technology Infusion, Processes & Functions, Human Resources Management, and Jointness and Integration as part of “Year of Transformation” announced in January 2023.

Progress on efficient implementation of the Agnipath Scheme was deliberated upon in detail.

The Apex leadership also identified specific areas and actionable points for promoting jointness and integration with other Services and government agencies.

A number of welfare measures and initiatives were decided to be implemented for troops as well as veterans during the conference.

With rapid migration towards net centricity, which entails an increased reliance on modern communication systems, the forum reviewed the requirement to safeguard the networks and decided to operationalise **Command Cyber Operations and Support Wings (CCOSW)** in the immediate future.

In order to augment the capabilities of the forces by **absorption of Niche Technologies** and equipment, it was decided to **nominate Lead Directorates and 'Test Bed' Formations** to evolve optimal employment philosophies and scaling to facilitate better exploitation Pan Army.

Training initiatives to optimise on infrastructure, time and resources to maintain an effective and lethal fighting force were widely deliberated upon. In the **TES entry scheme** for entry of officers, it was decided to **transit from the existing 1+3+1 years Technical Entry Scheme (TES) model for to 3 + 1 TES model from Jan 2024 onwards**. This change will also accrue benefits of the availability of more number of officers in the units and address officers' shortages.

Simulator training is also planned to be given a significant push through procurement of 435 simulators at an estimated cost of 791 crores this year.

The work for **construction of Thal Sena Bhawan at Delhi Cantt** which commenced in Mar 2023, was highlighted. The work once completed in 2025 will not only address the shortage of office spaces but enhance the operational and functional efficiency of the Army HQ by bringing all the directorates under one roof. The state of the art building will incorporate a robust, technologically advanced architecture and will be smart, green and future-ready project.

In order to harness the indomitable spirit and never say die attitude of the soldiers who are Battle and Physical Casualties, it was decided to **identify and train selected motivated soldiers for Paralympic Events** by training them at Army Sports and Mission Olympic Nodes in nine sporting events.

The welfare of soldiers is an abiding responsibility of the leadership and the organisation. In a significant step towards welfare of specially abled children of those **soldiers who die in harness**, it was decided to **double the sustenance allowance to such children through AGIF**.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1920110>



Thu, 27 Apr 2023

Navy Ships to be Fitted with Indigenous Naval Anti-Drone System

Soon the Indian Navy's surface warships will get their first indigenously developed anti-drone systems. The Naval Anti-Drone System (NADS) which has been developed by Defence Research and Development Organisation with the support of the Indian Navy is being manufactured by Bharat Electronics Limited (BEL).

In 2021, a contract was signed between Indian Navy and Defence PSU BEL for the supply of the indigenous Naval Anti drone system which is expected to provide an effective way to counter the increased threat to the strategic installations of the Indian Navy. Similar contracts have been signed with the Indian Army and Air Force too. This drone technology developed in India under the 'Atmanirbhar Bharat' initiative will help the Indian Armed forces in tracking and tackling the fast emerging aerial threats.

More about NADS

According to the information available in the public domain these anti-drone systems are equipped with both hard and soft kill capabilities and they can detect and jam micro drones.

These machines use a laser based kill mechanism for destroying the enemy target.

They operate with Radars, Electro-optical/infrared (EO/IR) sensors and radio frequency (RF) detectors. These help to detect and jam the micro drones.

The RF/global navigation satellite system (GNSS) detects the frequency which is being used by the controller, and then the signals are jammed.

The NADS as reported earlier have earlier been deployed to help provide cover for the Republic Day parade, Independence Day Celebrations at Red Fort and in 2020 during the Ahmedabad for the Modi-Trump roadshow. This system provides 360 degree coverage and both the mobile and static versions of NAD will be supplied to the Indian Navy within a short time following the signing of the contract.

<https://www.financialexpress.com/business/defence-navy-ships-to-be-fitted-with-indigenous-naval-anti-drone-system-3065816/>

ThePrint

Thu, 27 Apr 2023

With Eye on China & Pakistan, Army to Raise New Cyber Operations and Support Wings

With cyber warfare a key focus, especially with China and Pakistan investing heavily in it, the Army has decided to raise Command Cyber Operations and Support Wings (CCOSW) to help the forces counter enemy capabilities.

The Army has also decided to nominate Lead Directorates and 'Test Bed' formations within itself to absorb and validate niche technologies like loitering munitions, swarm drones and electronic warfare, among others.

These were among the key decisions taken by Army commanders during their annual conference held from 17-21 April. The conference saw Army commanders conduct a full review of security preparedness along the borders with Pakistan and China, besides deciding on key issues related to shaping the Army for the future.

A statement released by the Army Thursday said with rapid migration towards net centricity, which entails an increased reliance on modern communication systems, the forum reviewed the requirement to safeguard networks and decided to operationalise CCOSW in the immediate future.

This, sources in the defence establishment say, was necessary because cyberspace has emerged as an important component of the military domain, both in grey zone warfare as well as conventional operations.

"The expansion of cyber warfare capabilities by our adversaries has made the cyber domain more competitive and contested than ever before. The Indian Army today is rapidly migrating towards net centricity, which entails an increased reliance on modern communication systems at all levels," one source tells ThePrint.

Sources add that the CCOSW will assist formations to undertake mandated cyber security functions to strengthen the Army's cyber security posture. The Army in its statement also said that to augment the capabilities of the forces by absorption of niche technologies and equipment,

it was decided to nominate Lead Directorates and ‘Test Bed’ Formations to evolve optimal employment philosophies and scaling to facilitate better exploitation pan Army.

Sources explain that a large number and variety of niche tech-enabled equipment are being inducted into the Indian Army. These include a variety of tactical/mini/micro/logistics drones or UAVs, drone swarms, loitering weapons systems, and electronic warfare and anti-drone equipment, among others.

“Owing to the emergent induction of these capabilities, force structures are required to optimally exploit them,” says the source quoted earlier.

Another key change decided upon related to the technical entry scheme for officers.

Currently, a five-year Technical Entry Scheme (TES) model exists for officers’ entry to the Army as BTech graduates. As part of this model introduced in 1999, one-year military training is imparted to these recruits at the Officers Training Academy (OTA), Gaya.

Thereafter, a three-year BTech degree is imparted to them at the Cadet Training Wings (CTWs), followed by one year at the three Engineering Colleges of the Indian Army, namely the College of Military Engineering (CME) in Pune, the Military College of Telecommunication Engineering (MCTE) in Mhow and the Military College of Mechanical & Electronics Engineering (MCEME) in Secunderabad.

It has now been decided to institute a four-year (3+1 model), with three years of training focused on technical training at the Cadet Training Wings (CTWs), followed by one year of basic military training at the Indian Military Academy (IMA) in Dehradun.

A decision has also been made to provide a significant push to simulator training through procurement of 435 simulators at an estimated cost of Rs 791 crores later this year.

<https://theprint.in/defence/with-eye-on-china-pakistan-army-to-raise-new-cyber-operations-and-support-wings/1542112/>



Thu, 27 Apr 2023

Indian Army to Set CCOSW: What is Cyber Warfare and where does India Stand?

By Saket Tiwari

To strengthen its online networks and defend them against China and Pakistan’s growing efforts to target India in the virtual world, the Indian Army is getting ready to create command cyber operations and support wings (CCOSW). The decision to operationalise CCOSW was made during the Army Commanders Conference, which analysed the present and emerging security scenarios and evaluated the operational preparedness of the Indian Army, according to a statement released by the Ministry of Defence on April 27, 2023.

The move is being made as the Indian Army attempts to update its communication infrastructure and defend its networks from new security threats.

What is cyber warfare?

There is substantial disagreement among specialists as to whether actions exactly constitute cyberwarfare. Although the US Department of Defence (DOD) claims that using computers and the internet to wage war in cyberspace poses a threat to national security, it is unclear why certain actions are considered to constitute cyberwarfare while others are just classified as cybercrime. However, one of the generally recognised definitions of cyber warfare is that it aims to advance the objectives of one nation-state over another. Cyberwarfare has the ability to harm civilian and governmental infrastructure, which might interfere with vital systems and cause harm to the country or casualties.

India: Reality and needs

India falls into the third tier of nations in terms of its ability to wage cyberwar. The size of the nation's digital economy, the sophistication of its intelligence and security activities, and the degree to which cyber facilities were linked with military operations all played a role in how this post was allotted. The US is the lone top-tier nation on this list, followed closely by China and Russia. According to Shravishtha Ajaykumar, Associate Fellow at the Centre for Security, plan and Technology, unlike the other nations mentioned, India still doesn't have a complete, contemporary, and up-to-date cyber warfare plan. India has a National Cybersecurity Policy from 2013 and is in the process of finalising a National Cybersecurity Strategy for 2020. However, neither active espionage nor armed war is included under these.

India established its Defence Cyber Agency (DCA) in May 2021. The DCA collaborates closely with the National Security Council, the Defence Research and Development Organisation (DRDO), the National Technological Research Organisation, and the Research and Analysis Wing (R&AW) of India. These businesses have frequently been the subject of cyberattacks, but with the addition of the DCA, their protection level has increased. The DCA seeks to block any attempts to get access to vital military facilities by attacking their authorities.

India solely addresses cybersecurity issues and attacks in these capacities; cyberwarfare is not covered. That is, rather than the deployment of technology in real combat, the focus at the moment is the significance of civic and military data.

India has to change its existing perception of cybersecurity from one that may be used to deliberately hurt in times of conflict to one that can be used as a sort of espionage, Shravishtha Ajaykumar argued.

<https://www.news9live.com/knowledge/indian-army-to-set-ccosw-what-is-cyber-warfare-and-where-does-india-stand-au2114-2119906>



Thu, 27 Apr 2023

India, UK Begin Two-Week Joint Military Exercise 'Ajeya Warrior'

Military troops of India and the United Kingdom (UK) kick-started the seventh edition of 'Ajeya Warrior 2023', a two-week joint military exercise on Thursday at UK's Salisbury Plains, as part

of efforts to consolidate the overall military ties. The soldiers of the 2 Royal Gorkha Rifles from the UK and Indian Army troops from the Bihar Regiment are participating in the military exercise. The Indian Army contingent arrived at Brize Norton on Wednesday in an Indian Air Force C-17 aircraft with indigenous weapons and equipment.

Ajeya Warrior is a biennial training event with the UK which is conducted alternatively in both countries. The last edition was held at Chaubatia, Uttarakhand in October 2021.

During the exercise, both armies will engage in various activities testing their operational acumen in various simulated situations and refining tactical drills which would help in developing interoperability between the two armies.

According to the ministry of defence, the aim of the military exercise is to "build positive military relations, imbibe each other's best practices and promote the ability to operate together while undertaking company-level sub-conventional operations in urban and semi-urban environments under UN mandate".

"The scope of this exercise involves a Command Post Exercise (CPX) at the battalion level and company level field training exercise (FTX)," it added.

The exercise is yet another significant milestone in defence cooperation between India and the UK and will further foster the bilateral relations, the statement added.

The military exercise will be conducted from April 27 to May 11.

<https://www.hindustantimes.com/india-news/ajeya-warrior-2023-india-uk-army-india-uk-begin-two-week-joint-military-exercise-ajeya-warrior-101682616055315.html>

ThePrint

Thu, 27 Apr 2023

American GE Working with India on Jet Engines for LCA, AMCA

US GE is open to the transfer of technology to India for the indigenous manufacture of engines for light combat aircraft LCA Mark2 by 2028 as it does not want to lose a big market o Europe.

Speaking to ANI, American Congressman Ro Khanna said, "Let's make sure the GE Engines deal gets completed with India so we don't lose out to Europe." He stated that India and US need to be stronger on defence. He said that India wants jet engines and the first thing is to make sure that deal gets done before Prime Minister Narendra Modi's visit to the US.

On the commercial side, Air India announced the biggest-ever purchase by an Indian airline of aircraft and jet engines, including 400 single-aisle and 70 twin-aisle planes powered by engines built by GE and CFM International, a 50-50 joint company between GE and Safran Aircraft Engines. The blockbuster deal, ranking near the top of all deals worldwide, signalled the recovery of commercial aviation after years of Covid shutdown. GE also announced agreements that deepen the company's investment in India's military. One expands GE's most significant

partnership within the Indian armed forces — its work with Hindustan Aeronautics Limited (HAL), the government’s aerospace and defense manufacturing firm.

HAL continues to assemble the GE F404 family of engines that have powered each generation of the Tejas, the light combat aircraft (LCA) that evolved from that project.

“We need to be stronger on defence, and this is a key time. India has realized that the Soviet military equipment doesn’t work as well. They realize Soviet Union is moving towards China, and they have really been open to building a strong relationship with America,” Ro Khanna said.

“They want these jet engines, and the first thing is to make sure that deal gets done, hopefully before the Prime Minister’s visit. And many of us are working on that,” he added.

Speaking about Prime Minister Modi’s visit to the US, he said, “It’s going to be a historic trip.” He said that they are working to ensure that Prime Minister Narendra Modi gets to make an address at the US Congress. He further said, “The co-chairs will be requesting the speaker to issue that invitation.”

Earlier in February, Defence Research and Development Organisation (DRDO) chairman Samir Kamat said that GE-414 engines are going to be used in the LCA Mark2. He said that the discussions are ongoing regarding the GE and India is awaiting clearance by the US.

Speaking to ANI, Samir Kamat said, “The GE-414 engines are going to be used in the LCA Mark2. The discussions with GE are underway and they are keen on it. We are just awaiting clearance by the US government.”

Kamat said the engines would be manufactured indigenously once the clearance comes through from the US government. He said that the matter was discussed during National Security Adviser Ajit Doval’s visit to the United States.

“The matter was discussed during our NSA (Ajit Doval’s) recent US visit. The US government said it was open to it (indigenous manufacture of engines). Hopefully, in the next 3-6 months, an announcement of the transfer of technology will happen and these engines would be made in the country itself,” he said.

Kamat added, “The DRDO is going to develop the first tripod-fired very short-range air defence system. Another one, a shoulder-fired version, has also been cleared for the Army.”

In an exclusive interview with ANI, the DRDO chairman said that discussions are ongoing for the manufacture of engines for the Advanced Medium Combat Aircraft (AMCA) Mark 2 with three defence firms in three countries.

“The LCA Mark2 should be ready for induction by 2028. The first flight of the AMCA Phase 1 may take seven years and the induction can take 10 years from now. We cannot predict the timeline of the AMCA Mark 2 with a new engine until we sign an engine deal for co-development with another OEM (Original Equipment Manufacturer). We have been holding discussions with Safran France, GE from the US, and Rolls Royce from the UK,” the DRDO chief said.

<https://theprint.in/world/american-ge-working-with-india-on-jet-engines-for-lca-amca/1542355/>

India Deploys INS Tarkash, Third Naval Ship for Sudan Evacuation Operation: FS Kwatra

India has deployed the third naval ship INS Tarkash for evacuation operations being carried out in conflict-ridden Sudan, said Foreign Secretary Vinay Mohan Kwatra on Thursday.

The Foreign Secretary made the above remarks while addressing a media briefing of the Ministry of External Affairs on Operation Kaveri, launched by the Government of India to rescue the stranded Indians in conflict-ridden Sudan.

"I'm informed that the third ship, INS Tarkash, has also reached Port Sudan today as part of our efforts," Kwatra said.

Apprising the media persons about how the rescue operation is going in Sudan, the Foreign Secretary said, "Two naval ships have also been positioned as part of Government of India efforts. INS Sumedha was the first one to dock, took up, picked up roughly 300 odd Indians yesterday, brought them to Port Jeddah and is today back in Port Sudan to fetch the next group of Indians and bring them to safe harbours."

Kwatra said that the Government of India is making several efforts to rescue the Indians from Sudan including setting up of control room in India and in Sudan as well.

"PM Narendra Modi addressed a high-level meeting in which he personally reviewed and directed the officials of the Government of India to take suitable measures to assist and bring back these stranded Indians," Kwatra said.

The Foreign Secretary also said, "As part of our efforts, two C-130 aircraft of Indian Air Force have been mobilised and are constantly positioned in Jeddah, and have been there since April 19. We have also set up a control room in Jeddah and a control room in Port Sudan. So we have two control rooms working along with our embassy. So there's a full triangulation of efforts between the control room in Jeddah through our consulate and mission in Riyadh, through the control room team in Port Sudan, which is the north-eastern coast of Sudan, and our embassy in Khartoum City."

"And of course, each of these three hubs is coordinating their efforts and direction, to bring back the stranded Indians, with the headquarters in Delhi," he added.

Foreign Secretary Kwatra also informed about the current situation and ceasefires in Sudan. He said that ceasefires have been declared several times and many of them were not honoured.

"There has been feedback of sporadic firing going on. The situation on the ground remains highly volatile," Kwatra said.

Setting aside speculations on how many Indians might be stranded in Sudan, Kwatra said, "Our estimate is that approximately that there are 3500 Indians. These are approximate numbers."

He also said, "More specifically, I think 3000-odd have already registered online. And roughly an additional 300 are in touch with the Mission embassies. The government of India's focus in this entire effort has been to advise and assist the standard Indian nationals."

The Foreign Secretary also said that External Affairs Minister S Jaishankar also reached out to foreign ministers of other key partners whose nationals were also stuck in Sudan.

"These included Foreign Ministers of the US, UAE, Saudi Arabia, Egypt, and last night also had a conversation with the UK foreign ministers. This is over and above. His meetings with the UN Secretary-General in New York on April 20 focused exclusively on the situation in Sudan, with a view to making an assessment that would help the Government of India's efforts to bring back the standard Indians there," Kwatra said.

Sudan has been witnessing violence due to the fighting between the army and para-military forces.

A 72-hour ceasefire was imposed to pacify the skirmish as more than 400 people have died in Sudan, Khaleej Times reported.

<https://economictimes.indiatimes.com/news/india/india-deploys-ins-tarkash-third-naval-ship-for-sudan-evacuation-operation-fs-kwatra/articleshow/99810446.cms>

The Statesman

Thu, 27 Apr 2023

Bangladesh Army Chief Arrives in India to Promote Defence Ties

Bangladesh Army Chief, Gen S M Shafiuddin Ahmed arrived today on a three-day visit to India.

During the visit, he will hold meetings with India's senior military and civilian leadership during which the two sides discuss avenues for enhancing India-Bangladesh defence relations.

India and Bangladesh share the historical legacy of cooperation and support during the Liberation War of 1971. The active engagement on the defence side includes high-level exchanges at the level of Service Chiefs, the conduct of the inaugural Annual Defence Dialogues by the Defence Secretaries, Tri-services and Service-specific Staff Talks. Exchange visits of Bangladesh Mukti Jodhas and Indian war veterans take place every year in December to mark the Victory Day celebrations in Dhaka and Kolkata.

The Bangladesh Army Chief commenced his visit by paying tributes to the fallen heroes of the Indian Armed Forces by laying a wreath at the National War Memorial. The visiting General was accorded a Guard of Honour at the South Block Lawns after which he called on Gen Manoj Pande, Chief of the Army Staff.

The two Army Chiefs discussed various issues pertaining to enhancing and strengthening interoperability, training, anti-terrorism collaboration and overall bilateral cooperation as part of the comprehensive strategic partnership between the two nations.

The Bangladesh Army Chief later called on Gen Anil Chauhan, Chief of the Defence Staff, Admiral R Hari Kumar, Chief of the Naval Staff, Air Marshal AP Singh, Vice Chief of the Air Staff, Defence Secretary and the Foreign Secretary. He was also briefed on the Indian indigenous defence equipment manufacturing eco-system by the Department of Defence Production (DDP) and the Army Design Bureau.

An "Implementing Arrangement" for UN Peacekeeping Operations and Training Cooperation between the Centre for United Nations Peacekeeping (CUNPK), India and Bangladesh Institute of Peace Support Operations Training (BIPSOT), Bangladesh was signed between both Armies during the visit.

<https://www.thestatesman.com/india/bangladesh-army-chief-arrives-in-india-to-promote-defence-ties-1503176148.html>



Thu, 27 Apr 2023

Rajnath, Iranian Defence Minister Discuss Situation in Afghanistan

Defence Minister Rajnath Singh and his Iranian counterpart Brigadier General Mohammed Reza Gharaei Ashtiyani on Thursday exchanged views on regional security issues, including peace and stability in Afghanistan.

In their meeting in the national capital, the two ministers also discussed the development of the International North South Transport Corridor (INSTC) for transport links to Afghanistan.

The talks took place hours after Ashtiyani, Iran's Minister of Defence and Armed Forces Logistics, arrived here to attend a meeting of the defence ministers of the Shanghai Cooperation Organisation (SCO) on Friday.

In a tweet, Singh said: "Had a wonderful interaction with Iran's Defence Minister, Brigadier General Mohammad Reza Gharaei Ashtiyani."

"The meeting took place in a cordial and warm atmosphere. Both the leaders emphasised on the age-old cultural, linguistic and civilizational ties between the two countries, including people-to-people connect," the defence ministry said.

It said both the ministers reviewed the bilateral defence cooperation and exchanged views on regional security issues, including peace and stability in Afghanistan.

"Further, the two ministers discussed the development of the International North South Transport Corridor to ease logistic problems to Afghanistan and other countries in Central Asia," it said in a statement.

The INSTC is a 7,200-km-long multi-mode transport project for moving freight among India, Iran, Afghanistan, Armenia, Azerbaijan, Russia, Central Asia and Europe. Singh also held

separate bilateral meetings with defence minister of Kazakhstan Colonel General Ruslan Zhaxylykov and Tajikistan's Colonel General Sherali Mirzo.

"The entire spectrum of defence cooperation with the two countries was reviewed during the meetings, with focus on identifying avenues to expand mutually beneficial collaboration. Issues of mutual interest were also discussed," the ministry said.

<https://www.indiatoday.in/india/story/rajnath-iranian-defence-minister-discuss-situation-afghanistan-2365599-2023-04-27>



Fri, 28 Apr 2023

Shanghai Cooperation Organisation's Defence Ministers Meeting to be held in New Delhi

The Shanghai Cooperation Organisation (SCO) Defence Ministers Meeting will be held in New Delhi today. Defence Minister Rajnath Singh will chair the meeting. Defence Ministers of China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Uzbekistan will be participating in the meeting. India has invited Belarus and Iran, who are currently observers in SCO, to participate in the Meeting. Defence Minister of Pakistan would be participating virtually. The Ministers will discuss matters related to regional peace and security, counter terrorism efforts within SCO and an effective multilateralism.

Yesterday, Defence Minister Rajnath Singh held bilateral meetings with his counterparts from SCO member countries.

During his meeting with China's State Councillor and Minister of National Defence General Li Shangfu, Mr Singh asserted that development of relations between India and China is premised on prevalence of peace and tranquillity at the borders. He reiterated that violation of existing agreements has eroded the entire basis of bilateral relations and disengagement at the border will logically be followed with de-escalation. The two Ministers had frank discussions about the developments in the India-China border areas as well as bilateral relations. Mr Singh added that all issues at the Line of Actual Control need to be resolved in accordance with existing bilateral agreements and commitments.

Defence Minister Singh also held a bilateral talks with Iran's Minister of Defence and Armed Forces Logistics Brigadier General Mohammed Reza Gharaei Ashtiyani. Both the Ministers reviewed the bilateral defence cooperation and exchanged views on regional security issues, including peace and stability in Afghanistan. Further, the two Ministers discussed the development of the International North South Transport corridor to ease logistic problems to Afghanistan and other countries in Central Asia.

Mr Rajnath Singh held talks with Kazakhstan's Defence Minister Colonel General Ruslan Zhaxylykov and Tajikistan Defence Minister Colonel General Sherali Mirzo.

<https://newsonair.com/2023/04/28/shanghai-cooperation-organisations-defence-ministers-meeting-to-be-held-in-new-delhi/>

LAC Violations have Eroded Bilateral Ties: India to China

Defence minister Rajnath Singh on Thursday raised the issue of the lingering border row with China in eastern Ladakh with his Chinese counterpart General Li Shangfu while stressing that the violation of existing agreements had eroded bilateral relations, and the development of India-China ties was based on the prevalence of peace and tranquillity at the borders.

Singh told Li that all issues at the Line of Actual Control (LAC) needed to be resolved in accordance with existing bilateral agreements and commitments, a defence ministry statement said. The two ministers held a bilateral meeting on the eve of the Shanghai Cooperation Organisation (SCO) defence ministers' meeting on Friday.

“The Raksha Mantri categorically conveyed that development of relations between India and China is premised on prevalence of peace and tranquillity at the borders,” the statement said. “He reiterated that violation of existing agreements has eroded the entire basis of bilateral relations and disengagement at the border will logically be followed with de-escalation.”

The two ministers had frank discussions on developments in the India-China border areas as well as bilateral relations, the statement added.

Photos of Singh's meetings released by the defence ministry showed the Indian defence minister shaking hands with his counterparts from Iran, Kazakhstan and Tajikistan. However, the photo of Singh's meeting with his Chinese counterpart did not show them shaking hands, but only seated across the table. Singh and Li did not shake hands when they met for the bilateral talks, said an official familiar with the matter.

The meeting took place days after the India Army and the Chinese People's Liberation Army (PLA) held the 18th round of military talks to ease tensions along LAC in eastern Ladakh.

What is stated (by Singh) is the standard Indian position that the ongoing standoff has impacted bilateral relations which can only improve if the PLA disengages and then pulls back additional forces, said former Northern Army commander Lieutenant General DS Hooda (retd).

“To me this indicates that both sides have probably reiterated their respective positions and there is no substantive move forward. However, it is good that high level political contacts are taking place because ultimately the resolution will come at the political level,” Hooda added.

Singh told his Chinese counterpart that military cooperation between the two countries can progress only if peace and tranquility is established at the border, officials familiar with the talks said, asking not to be named. At the meeting, Singh also said that after disengagement of frontline troops, there should be movement towards de-escalation and expressed hope for a positive response, the officials said.

Singh told Li that India wants to improve relations with China, but that can happen only after peace and tranquillity are restored at the border, they added.

At the latest round of India-China corps commander level talks on April 23, the two sides agreed to maintain security and stability along LAC, stay in close contact and continue dialogue through

military and diplomatic channels, and work out a mutually acceptable resolution of the remaining issues. The talks, however, did not yield an immediate breakthrough.

Li's visit to India is the first visit by a Chinese defence minister after the June 2020 Galwan clash that derailed bilateral ties. Twenty Indian soldiers killed in the seven-hour deadly conflict near Patrolling Point 14 in Galwan Valley. According to India's assessment, PLA's casualties were twice as many as Indian Army's though Beijing officially claimed that only four Chinese soldiers were killed.

The two sides have been locked in a border row in eastern Ladakh for almost three years.

Despite four rounds of disengagement from Galwan Valley, Pangong Tso, Gogra (PP-17A) and Hot Springs (PP-15), the Indian and Chinese armies still have more than 60,000 troops each and advanced weaponry deployed in the Ladakh theatre. Problems at Depsang in Daulat Beg Oldi sector and Charding Nullah Junction (CNJ) in Demchok sector are still on the negotiating table.

On April 19, Singh expressed confidence in the Indian Army to handle any contingency along the country's border with China even as he said talks would continue for peaceful resolution of the lingering row in the Ladakh sector, and disengagement and de-escalation were the best way forward.

On Thursday, Singh also held bilateral meetings with his counterparts from Iran, Kazakhstan and Tajikistan. SCO has eight member states: India, China, Russia, Pakistan, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan. Iran and Belarus are taking part in the meeting as observer countries. Singh and his Iranian counterpart Brigadier General Mohammad Reza Gharaei Ashtiani reviewed bilateral defence cooperation, and exchanged views on regional security issues, including peace and stability in Afghanistan, the ministry said in another statement. "The two ministers discussed the development of the International North South Transport corridor (a 7,200-km multi-mode route spanning 13 countries) to ease logistics problems to Afghanistan and other countries in Central Asia," it added.

India is set to host the SCO foreign ministers' meeting in May. These meetings will culminate in the SCO Summit to be held in July, the first time India will host the event since joining the grouping in 2017.

<https://www.hindustantimes.com/india-news/indias-defence-minister-raises-border-row-with-china-at-sco-meet-101682620482887-amp.html>



Thu, 27 Apr 2023

US Needs to Show Strategic Patience with India on Russia: Ex-defence Secy Mattis

America needs to show some strategic patience with India on its ties with Russia, a former US defence secretary has said, asserting that New Delhi does not support Moscow's invasion of Ukraine. Former Defence Secretary Jim Mattis said the defence ties between India and the US

have strengthened and grown significantly. "We need to show some patience. They (Indians) are moving in the right direction," he said on Wednesday.

Mattis' remarks came at the first-of-its-kind India-US summit organised by Congressman Ro Khanna in his capacity as the Co-Chair of the Congressional India Caucus.

Noting that India has maintained its strategic independence, he said the Indian government does not support the Russian invasion of Ukraine.

Prime Minister Narendra Modi has been very blunt about that, he said.

"India must keep growing its economy. The alternative is societal unrest, a weaker India," he said. "The last thing India wants to do...to push Russia and China closer together," he said, adding that India being closer to Russia right now is not bad for America.

Unlike its Quad partner countries, India has not yet condemned the Russian invasion of Ukraine and it abstained from the votes at the UN platforms on the Russian aggression.

India has been pressing for an immediate cessation of violence in Ukraine and seeking a resolution of the crisis through diplomacy and dialogue.

India is coming off the Russian sphere of influence. This is not a time to lecture India, but there is an opportunity to work with the country, which is in a tough neighbourhood, Mattis said.

On the one hand, it has a radicalised, nuclear weapon Pakistan as a neighbour, and on the other hand, it has China which is trying to bully it, he said.

He called for the continuation and enabling of the collaboration between US technology and scientists and demanded that obstacles to their movement be removed.

"The National Security Council is leading an effort right now I know on critical and emerging technologies...This is really where we need to go and where we have the opportunity to go and there are some things we can do to really ease the challenges. And collectively, this is what gives us a firm foundation," he said.

<https://www.newindianexpress.com/world/2023/apr/27/us-needs-to-show-strategic-patience-with-india-on-russia-ex-defence-secymattis-2569929.html>

Science & Technology News

THE  HINDU

Thu, 27 Apr 2023

Japanese Team Reviews Lunar Polar Exploration Mission with ISRO

Even as the Indian Space Research Organisation (ISRO) is gearing up for the launch of the Chandrayaan-3 this year, work on another moon mission involving India and Japan, Lunar Polar Exploration (LUPEX), has been gathering steam in the last few days.

The Indo-Japanese LUPEX mission is envisaged to explore the permanently shadowed regions or the dark side of the moon.

A team from Japan Aerospace Exploration Agency (JAXA) is in India and meeting with ISRO scientists and engineers involved in the LUPEX mission.

“With LUPEX members in India. First face-to-face LUPEX working group meeting since 2019. In Working Group1, the results of the landing site analysis were shared, and opinions were exchanged on promising candidate sites.

The status of ISRO’s instruments on the rover was also shared and the future coordination policy was confirmed,” Lunar Polar Exploration@JAXA (LUPEX) tweeted.

It further said that information on antennas on the ground that send and receive commands and telemetry was also shared, and that there were exchange of ideas on methods for estimating where landers and rovers are on the Moon.

The main objective of the mission is to confirm the presence of water in the polar regions of the moon.

The mission is expected to be launched in the next couple of years. The launch vehicle for the mission will be a Japanese rocket, the lander system will be developed by ISRO while the Rover by JAXA, and its landing point will be the south pole of the moon.

Various scientific instruments developed by the two space agencies will also be part of the mission.

“India-Japan space cooperation is currently focusing on lunar exploration, satellite navigation, and earth observation. ISRO and JAXA are specifically working on completing the phase-A study of the joint Lunar polar exploration mission; finalizing the instruments to be accommodated in lander and rover,” stated ISRO in its annual report 2022-23 on the mission.

- The Indo-Japanese Lunar Polar Exploration (LUPEX) mission is envisaged to explore the permanently shadowed regions or the dark side of the moon.
- The main objective of the mission is to confirm the presence of water in the polar regions of the moon.
- The mission is expected to be launched in the next couple of years.

<https://www.thehindu.com/sci-tech/science/japanese-team-reviews-lunar-polar-exploration-mission-with-isro/article66785146.ece>

