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बुधवार, 09 नवंबर 2022

## फ्यूचर-रेडी फोर्स बन रही है भारतीय सेना', आर्मी कमांडर्स कॉन्फ्रेंस में बोले राजनाथ सिंह

पूर्वी लद्दाख में चीन (China) से चल रहे टकराव के बीच रक्षा मंत्री राजनाथ सिंह (Rajnath Singh) ने भारतीय सेना (Indian Army) से अपनी ऑपरेशनल तैयारियों को उच्चतम स्तर का रखने का आह्वान किया है. रक्षा मंत्री ने सेना के टॉप कमांडर्स को किसी भी खतरे से निपटने के लिए तैयार रखने के लिए भी कहा है. रक्षा मंत्री राजनाथ सिंह ने बुधवार को आर्मी कमांडर्स कॉन्फ्रेंस (7-11) को संबोधित किया. इस दौरान उन्होंने बॉर्डर से लेकर आतंकवादियों से लड़ने के लिए सेना की प्रशंसा की. रक्षा मंत्री ने कहा कि 100 करोड़ से ज्यादा देशवासियों के लिए सेना सबसे भरोसेमंद और प्रेरित करने वाला संगठन है.

### फ्यूचर-रेडी फोर्स बन रही है भारतीय सेना

रक्षा मंत्री ने कहा कि सिविल प्रशासन की मदद करने के लिए सेना हमेशा तैयार रहती है. राजनाथ सिंह ने सेना द्वारा आत्मनिर्भर बनने के प्रयासों की भी तारीफ की. रक्षा मंत्री राजनाथ सिंह को इस दौरान सेना ने एक प्रेजेंटेशन भी प्रस्तुत किया जिसमें दिखाया गया था कि कि तरह भारतीय सेना फ्यूचर-रेडी फोर्स बन रही है. वर्ष में दो बार होने वाला आर्मी कमांडर्स कॉन्फ्रेंस सेना का सबसे उच्च-स्तर का सम्मलेन होता है ताकि सैन्य रणनीति को मिलकर तैयार किया जा सके. इस साल का ये दूसरा संस्करण है. इस दौरान थलसेना प्रमुख, जनरल मनोज पांडे सहित सेना की सभी सातों कमान के कमांडर्स सहित सेना मुख्यालय में तैनात वरिष्ठ सैन्य अधिकारी रक्षा मंत्रालय और डिपार्टमेंट ऑफ मिलिट्री एफेयर्स (डीएमए) के अधिकारियों से भी गंभीर विषयों पर चर्चा कर रहे हैं.

### अंडमान के कमांडर भी ले रहे हैं हिस्सा

अंडमान निकोबार कमान के कमांडर भी कॉन्फ्रेंस में हिस्सा ले रहे हैं. सम्मलेन को रक्षा मंत्री राजनाथ सिंह और सीडीएस जनरल अनिल चौहान सहित नौसेना और वायुसेना के प्रमुख भी संबोधित कर रहे हैं ताकि सेना के तीनों अंगों में ट्राई-सर्विस सिनेर्जी बढ़ाई जा सके.

### किस मुद्दे पर हो रही है कॉन्फ्रेंस?

राजधानी दिल्ली में पांच दिवसीय आर्मी कमांडर्स कॉन्फ्रेंस में इस बार चीन से संबंधों का मुद्दा छाया हुआ है. क्योंकि इस बार के आर्मी कमांडर्स कॉन्फ्रेंस में सेना के वरिष्ठ सैन्य अधिकारियों के अलावा सब्जेक्ट

एक्सपर्ट्स को भी संबोधन के लिए बुलाया है। इस बार दो खास विषयों पर विशेषज्ञों को आमंत्रित किया गया है। पहला विषय है समकालीन भारत-चीन संबंध और दूसरा है टेक्नोलॉजिकल चैलेंज फॉर नेशनल सिक्योरिटी। आपको बता दें कि पूर्वी लद्दाख से सटी एलएसी पर भारत और चीन की सेनाओं के बीच अधिकतर विवादित इलाकों पर डिसइंगेजमेंट तो हो चुका है लेकिन डेमचोक और डीबीओ जैसे पुराने मुद्दों को लेकर तकरार जारी है। इसके अलावा चीन की पीएलए सेना डि-एस्कलेशन और डि-इनडक्शन के लिए भी अभी तैयार नहीं है।

### **लड़ाकू विमानों की संख्या बढ़ाएगा चीन**

एलएसी के करीब ही चीन के 50-60 हजार सैनिक, टैंक, तोप और मिसाइल अभी भी तैनात हैं। एलएसी से सटे इलाकों में चीन अभी भी अपने एयर-बेस मजबूत करने और वहां लड़ाकू विमानों की संख्या लगातार बढ़ा रहा है। हाल ही में आई रिपोर्ट्स की मानें तो पूर्वी लद्दाख से सटे तिब्बत और अक्साई-चिन इलाकों में चीन अपना इंफ्रास्ट्रक्चर मजबूत करने में जुटा है। चीन सीमावर्ती सड़कों को चौड़ा कर रहा है तो अपने सैनिकों के लिए स्थाई बैरक भी तैयार कर रहा है। चीन ने नई बॉर्डर रोड्स का नाम गलवान घाटी में मारे गए अपने सैनिकों के नाम पर रखा है। ऐसे में ऐसा लगता है कि चीन स्थाई शांति के लिए तैयार नहीं है। यही वजह है कि भारतीय सेना इस बात पर गहन चर्चा करना चाहती है कि चीन के साथ कैसे संबंध होने चाहिए। इसीलिए सैन्य कमांडर्स के साथ-साथ एक्सपर्ट्स को इस सम्मलेन में बुलाकर उनकी राय जानी जाएगी।

### **फ्यूचर रेडी फोर्स बनाने पर हो रही है चर्चा**

भारतीय सेना ने एक बयान जारी कर बताया कि पांच दिवसीय सम्मलेन के दौरान भारतीय सेना की टॉप लीडरशिप मौजूदा सुरक्षा परिदृश्य के परिप्रेक्ष्य में सेना की रणनीति तैयार कर रहे हैं। इस दौरान सेना के फ्यूचर रेडी फोर्स बनाने, सैन्य क्षमता बढ़ाने और आधुनिकिकरण पर खासा चर्चा की जा रही है। इसके अलावा सेना में आत्मनिर्भरता बढ़ाने (स्वदेशी हथियार और सैन्य साजो सामान), नई मानव संसाधन नीति और आधुनिक ट्रेनिंग पर गहन चर्चा की जा रही है।

<https://www.abplive.com/news/world/army-commanders-conference-begins-top-military-brass-to-discuss-border-situation-with-china-make-in-india-ann-2255997>



**Press Information Bureau**  
**Government of India**

**Ministry of Defence**

*Wed, 09 Nov 2022*

## **Raksha Mantri Interacts with the Senior Leadership of Indian Army during Army Commanders' Conference**

The Army Commanders' Conference, an apex level biannual event, is being held in New Delhi from 07 to 11 Nov 2022. During the event, Indian Army's apex leadership is comprehensively deliberating upon all aspects of existing security scenarios and challenges for the present security apparatus. In addition, the conference is also focusing on issues pertaining to organisational restructuring, logistics, administration, human resource management, modernisation through

indigenisation and induction of Niche technologies. The main highlight of the third day of the conference was the interaction of the Raksha Mantri, Shri Rajnath Singh, with the senior leadership of the Indian Army, which was preceded by a briefing the “Transformational imperatives for a future ready force” plans of the Indian Army.

The Hon’ble Raksha Mantri reasserted the faith of the billion-plus citizens in the Indian Army as one of the most trusted and inspiring organisations in the country. He highlighted the stellar role played by the Army in guarding our borders and fighting terrorism apart from providing assistance to the civil administration whenever called for.

The Raksha Mantri complimented the forces for the high standard of operational preparedness and capabilities which he has always been experiencing first hand during his visits to forward areas. He commended the Army’s efforts to develop niche technologies in collaboration with civil industries, including premier educational institutions and thereby progressing towards the aim of ‘Modernisation through Indigenisation’ or ‘Atam Nirbharta’.

The Hon’ble Raksha Mantri commended the Indian Army for maintaining a high operational readiness towards ensuring security and national sovereignty and commended that “I have full faith and confidence in the Indian Army and its leadership”. He concluded by saying that we ought to be prepared for any operational contingencies and hence the operational readiness should always be at its peak level.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1874679>



*Wed, 09 Nov 2022*

## **Defence Minister Rajanath Singh Interacts with Senior Leadership of Indian Army at Army Commanders’ Conference**

Defence Minister Rajanath Singh has commended the Indian Army for maintaining a high operational readiness towards ensuring security and national sovereignty. Mr. Singh highlighted the stellar role played by the army in guarding Indian borders and fighting terrorism apart from providing assistance to the civil administration.

The Minister said this while interacting with the senior leadership of the Indian Army at Army Commanders’ Conference in New Delhi today. He said that the country ought to be prepared for any operational contingencies and hence the operational readiness should always be at its peak level. He also complimented the forces for the high standard of operational preparedness and capabilities. Mr. Singh lauded the Army’s efforts to develop niche technologies in collaboration with private industries including premier educational institutions and thereby progressing towards the aim of Modernisation through Indigenisation.

The five-day Army Commanders’ Conference is being held in New Delhi where the Indian Army’s apex leadership is comprehensively deliberating upon all aspects of existing security scenarios and challenges for the present security apparatus. In addition, the conference is also



focusing on issues pertaining to organisational restructuring, logistics, administration, human resource management, modernisation through indigenisation and induction of Niche technologies.

<https://newsonair.com/2022/11/09/defence-minister-rajant-h-singh-interacts-with-senior-leadership-of-indian-army-at-army-commanders-conference/>



*Thu, 10 Nov 2022*

## **Indian company Bags \$155.5 Million Export Order for Artillery Guns**

Indian defence firm Kalyani Strategic Systems Limited has won an export order worth \$155.5 million for supplying artillery guns to a friendly foreign country, a first such order to a local company for the 155mm weapon system, people familiar with the development said on Wednesday. The company has neither revealed the name of the foreign customer nor the quantity of guns to be delivered yet. “This order, to a non-conflict zone, is a great testament to the government’s Aatmanirbhar Bharat (self-reliant India) agenda and its sustained push to promote exports of indigenously designed developed and manufactured (IDDM) advanced defence platforms from India,” the company informed the Bombay Stock Exchange on Wednesday.

Kalyani Strategic Systems, a wholly owned subsidiary of Bharat Forge, will execute the order over the next three years. The firm was in talks with Saudi Arabia for the possible sale of its Bharat 52, a 155mm/52-calibre artillery gun, HT has learnt. The development comes at a time when India has sharpened its focus on getting a toehold in foreign markets, set a target of achieving defence exports worth \$5 billion by 2025, and taken a raft of policy measures to boost the indigenous defence manufacturing sector. It also comes on the back of the Philippines ordering BrahMos missiles and Armenia choosing to buy Pinaka multi-barrel rocket launchers from India. India has clocked defence exports worth ₹30,000 crore since 2014, with the first six months of the current financial year alone accounting for export orders worth ₹8,000 crore, officials said. India’s defence exports reached their highest level in 2021-22, with the figure hitting ₹13,000-crore mark and the private sector accounting for 70% of the exports, an outcome of the government’s policies to boost the export of military hardware to friendly foreign countries.

India has also imposed a phased import ban on 411 different weapons and systems during the last two years to provide a boost to the indigenous defence manufacturing sector. These weapons and platforms are expected to be indigenised in phases over the next five to six years. In December 2020, the Union Cabinet gave its go-ahead to the sale of Akash missile systems to friendly foreign countries, and also created a high-powered panel for swifter approval to defence exports. “India has a good strategy and action plan in place, backed by forward-looking policies, to ensure self-reliance in defence, and boost the country’s status as a net exporter of weapons in the coming years,” military affairs expert Lieutenant General Vinod Bhatia (retd) had earlier said.

The government granted close to a thousand export authorisations last year, nearly four times the number approved five years before that, and cut down the time for such approvals by a third between 2017 and 2021. Defence minister Rajnath Singh earlier asked the Indian defence industry to step forward and manufacture modern and cost-effective defence products to realise the government's vision of a "New India" that can not only meet its own needs but also fulfil the requirements of other countries.

<https://www.hindustantimes.com/india-news/indian-company-bags-155-5-million-export-order-for-artillery-guns-101668019885550.html>



*Wed, 09 Nov 2022*

## **Defence Export Needs Cohesive Policy Thrust**

India stands at fourth position among 12 countries of the Indo-Pacific in self-reliant defence production, which is based on the reports published by the Stockholm International Peace Research Institute (SIPRI). India's defence exports reached to Rs 13,000 crore in the Financial Year 2021-22 (FY22). While China surged ahead in the list, making rapid stride in the list. It is estimated that the value does include the Rs 2,770 crore contract in January this year to export BrahMoS supersonic missiles to the Philippines. Building upon the breakthrough, Kalyani Strategic Systems Limited, a wholly-owned subsidiary of the Company, has been awarded an export order for a 155mm Artillery Gun platform to be executed over a 3-year timeframe. The total value of the order is \$ 155.50 Million.

This order is to a non-conflict zone, is a great testament of the capabilities shown by the private defence company. The result is defiantly the outcome under the sustained push to promote exports of Indigenously Designed Developed and Manufactured (IDDM) advanced defence platforms from India. Defence minister [Rajnath Singh](#) has emphasized many time that India will target annual defence exports of Rs 35,000 crore by the end of FY 2025. But the most ambitious is the plan where India will strive to be amongst top five countries globally in defence production in the next 25 years.

### **The global arms export**

Ironically, while India relied heavily on the defence import, there was hardly any direction or set benchmark target for the defence export until the launch of Defence Production Policy. The Defence Production Policy (DPrP) 2018 came out of bolt. In a first, DPrP set the direction to achieve 35,000 crore (\$5 billion) by 2035. The world of defence export is heavily based on the cutting-edge research and development for the ever-changing nature of conflicts which demand next generation technological base. That is more towards the scale of production based on precision in-line set up to be able to deliver on time. It is important to note that the Indian defence industry is still in the phase that primarily aims to cater the Indian Armed Forces.

Despite the constraints, it is pertinent to highlight those exports reached a high of Rs 13,000 crore in 2021-22. While the number is derived on low-base, it is still a significant growth by any yardstick. But the larger question is about the next cycle of growth in defence export. Simply to

put it straight, to achieve the \$ 5 billion export mark, India needs a three-fold increase for meeting the DPrP-2018 export target.

### **How the global arms industry works?**

The majority of defence purchase is confined among few global entities which make the 80 percent of total sales worldwide. According to the Sweden-based Stockholm International Peace Research Institute (SIPRI), U.S., Russia and France accounted for 69 percent of the global exports at 39 percent, 19 percent and 11 percent respectively. Again, while China is still not in the top, it is reaching fast. According to the senior defence analyst, the reason that China is still catching up, is due to its own domestic demand and the constant upgradation under the modernization drive. Along, there is no doubt that China has almost achieved the industrial capabilities to match the scale of production with full range of military platforms and systems across the domains. Overall, China's share in global arms is about 6 percent and it does include heavy platforms/equipment, including combat jet.

In the ranking, India stands at the bottom with Czechia and Jordan where the private sector companies accounted for 70 per cent of these exports. About 50 Indian companies in the private sector have contributed to defence exports. Some of the major export destinations for defence products have been Italy, Maldives, Sri Lanka, Russia, France, Nepal, Mauritius, Sri Lanka, Israel, Egypt, UAE, Bhutan, Ethiopia, Saudi Arabia, Philippines, Poland, Spain and Chile etc. The major defence items being exported are Personal Protective items, Offshore Patrol Vessels, ALH Helicopter, SU Avionics, Bharati Radio, Coastal Surveillance Systems, Kavach MoD II Launcher and FCS, Spares for Radar, Electronic System and Light Engineering Mechanical Parts etc. In the first tranche, India has cleared 156 defence equipment for exports including the indigenous Light Combat Aircraft Tejas, artillery guns, battle tanks and missiles, anti-tank mines and explosives.

### **Defence export policy**

The defence export has taken off but how does the policy work around the process? Ministry of Commerce & Industry already has an overall Export Policy in the form of Foreign Trade Policy (FTP), which, inter-alia, includes various export promotion schemes, duty/ tax exemptions and other facilitative measures. According to the Ministry of Defence, therefore, there may not be a need for having a separate Defence Export Policy. So, the policy revolves around supporting industry in Testing and Certification. In case of private entities, it offers the military infrastructure and labs under DRDO. While this is a god step in the direction, the export of military equipment does demand international certification and testing. That poses challenges in the final cost evaluation in the competitive global market.

### **Lines of Credit for Defence**

The Ministry of External Affairs has been granting various Lines of Credit to the friendly foreign countries. While this remains underutilized, there are some good examples where industry has worked around. Recently, India handed over 12 High Speed Guard Boats to Vietnam. The boats have been constructed under the Government of India's \$ 100 million Defence Line of Credit to Vietnam. The initial five boats were built in the Larsen & Toubro (L&T) Shipyard in India and the other seven in Hong Ha Shipyard. Senior civil and military officials of India and Vietnam were present during the handing over ceremony.

### **Use of Offset Policy**



Offset is an important mechanism available to the domestic industry to enhance export capability. The Offset Policy may be reviewed and aligned towards final integration of weapons/systems in India and promoting export of such systems from India. The Policy may also be reoriented towards acquisition of critical technologies required for high end weapons/platforms so that the same can be leveraged for export. The jump in exports to the US could possibly be due to the MoD pressing upon the US companies to make up the chronic shortfall in fulfilling their annual offset targets for previously imported equipment. Revenue earned by the Indian companies would diminish once these offset contracts are completed.

### **Issue No Objection Certificate**

Presently export of defence equipment and weapons is regulated by two Departments. For items contained in the SCOMET list of Foreign Trade Policy of DGFT, export licences are granted by DGFT based on the Inter-Ministerial Working Group set up in DGFT. Ministry of Defence is one of the members in the Inter-Ministerial Working Group. For military stores, No Objection Certificate (NOC) is issued by the Department of Defence Production. The procedure for issuing the NOC in case of military stores has not been put in the public domain due to non-availability of list of military stores. That requires a cohesive approach, said an industry veteran. Such compliance is necessary but it needs to be brought under the umbrella, he added. It takes time. With further push, India might achieve its objective towards defence export.

<https://www.financialexpress.com/defence/defence-export-needs-cohesive-policy-thrust/2797913/lite/>

## **THE ECONOMIC TIMES**

*Wed, 09 Nov 2022*

### **BEL Signs MoU with Aerosense Tech to Leverage Complementary Strengths**

Defence public sector undertaking Bharat Electronics Ltd (BEL) has signed a memorandum of understanding (MoU) with Aerosense Technologies Pvt Ltd for co-operation in the development and marketing of drones and soft kill aerial anti-drone. The MoU aims at leveraging the complementary strengths and capabilities of BEL and Aerosense Technologies Pvt Ltd, said a joint statement from the companies. The tie-up would enable the two companies design and develop drones and soft kill aerial anti-drone systems. Besides, the two would explore marketing and sale of drone-based solutions for applications in defence and civilian domains for the domestic and export markets.

<https://economictimes.indiatimes.com/news/defence/bel-signs-mou-with-aerosense-tech-to-leverage-complementary-strengths/articleshow/95407190.cms>

*Wed, 09 Nov 2022*

## **India to Receive 36th Rafale Jet from France by Mid-December**

India will receive the last Rafale fighter jet from France by December 15, completing the delivery of all the 36 aircraft as part of the deal between the two countries. Senior defence officials told India Today that the aircraft was used for developing the India-specific enhancements in the Rafale fleet of the Indian Air Force (IAF). India signed a deal for 36 Rafale planes and 35 of these have already been delivered from France. They are stationed at Ambala, Haryana and Hasimara in West Bengal. The 36th aircraft was provided to the Indian side by France with all its spares and other parts replaced as it was being used for developmental activities. The first batch of Rafale jets arrived in India on July 29, 2020.

The Indian Air Force also started upgrading the planes to the highest standards and equipped them with all the India-specific enhancements. The Rafale is a 4.5 generation aircraft with long range air to air and air to ground missiles along with advanced radar and electronic warfare capabilities. The French firm Dassault Aviation is also involved in the maintenance of the aircraft whose serviceability is over 75 per cent. The Rafale was inducted swiftly into the Indian Air Force at the peak of the conflict with China and had started operating over Ladakh within a week of its arrival in the country. The IAF quickly started operating the long range Meteor air to air missiles as well as the Scalp air to ground missiles. The IAF also added the HAMMER missile to the Rafale's arsenal as it was required for carrying out precision attacks at shorter distances.

<https://www.indiatoday.in/india/story/rafale-jet-arrival-france-to-india-mid-december-2295340-2022-11-09>

*Thu, 10 Nov 2022*

## **Navies of India, US, Japan, Australia begin Malabar exercise near East China Sea**

The high-profile Malabar exercise involving navies of India, US, Japan and Australia commenced in Japan on Wednesday off the coast of Yokosuka Island near the East China sea. The four navies are part of the Quad combine. The exercise is taking place in the backdrop of China adopting an aggressive posture in the region and criticizing the formation of the Quad claiming it will lead to militarization of the Indo-Pacific and other regions. Indian war ships Shivalik and INS Kamorta are taking part in the 10-day high-voltage exercise hosted by the Japan Maritime Self-Defense Force (JMSDF), officials said here. The opening ceremony of the exercise was attended by Commander of Indian Navy's Eastern Fleet Rear Admiral Sanjay Bhalla, Commander in Chief of Self Defense Fleet of Japanese Navy Vice Admiral Yuasa

Hideki, Commander of US Navy's Seventh Fleet Vice Admiral Karl Thomas and Commander of Australian Fleet Rear Admiral Jonathan Earley. "The multilateral exercise Malabar between the navies of India, Japan, US and Australia began today with an opening ceremony hosted by the JMSDF onboard JS Hyuga at Yokosuka," said a spokesperson of the Indian Navy. The exercise will feature a number of complex drills involving several frontline warships and other assets of the four navies. Following India's invitation, Australia participated in the Malabar exercise in 2020, effectively making it a drill by all four member nations of the Quad or Quadrilateral coalition. Australia participated in last year's exercise as well. The Malabar exercise started in 1992 as a bilateral drill between the Indian Navy and the US Navy in the Indian Ocean. Japan became a permanent member of the exercise in 2015. This annual exercise was conducted off the coast of Guam in 2018 and off the coast of Japan in 2019. In 2020, the exercise was hosted in two phases in the Bay of Bengal and the Arabian Sea. Last year, the mega wargame took place off the coast of Guam in the Western Pacific.

<https://www.dailypioneer.com/2022/india/navies-of-india--us--japan--australia-begin-malabar-exercise-near-east-china-sea.html>



*Wed, 09 Nov 2022*

## **Ex Malabar 2022: Focus on Enhancing Interoperability in Indo-Pacific Region**

Amidst the ongoing war between Russia and Ukraine and recent missile tests carried out by North Korea, the 26<sup>th</sup> edition of Ex-Malabar with navies of QUAD member states – India, Japan, the US and Australia got underway in Yokosuka of Japan. The QUAD members share similar values of free, open and fair Indo-Pacific, the focus of the drill is on further enhancing interoperability and tactical capabilities in the future editions of Malabar. Ahead of the commencement of the multilateral exercise Malabar, Indian Navy chief Admiral R Hari Kumar met up with the Navy chiefs of Japan Maritime Self-Defence Force, the Royal Australian Navy, and the US Navy. The four chiefs exchanged views deepening of relations as well as interoperability in multilateral drills like Malabar. The Indian Navy Chief Admiral R Hari Kumar is visiting Japan from November 5-9 and he witnessed the IFR and the opening ceremony of Malabar exercise.

The multilateral naval exercise comes soon after the conclusion of the International Fleet Review (IFR) and the 18th Western Naval Pacific Symposium (WPNS), which was also hosted by Japan. South Korea and Pakistan both participated in both IFR and WPNS. China which was invited for both events declined to participate in IFR but was present in the WPNS.

### **Ex-Malabar**

In the multilateral exercise which started on Nov 8 will go on till December 18 two ships including INS Shivalik and Kamorta have been deployed and also a P-8I aircraft and MARCOS (Marine Commandos). From Japan side five warships and a surveillance aircraft have been deployed while the US has sent its Ronald Reagan aircraft carrier, a P-8A long range

surveillance aircraft and special operation force personnel and two other ships. The Royal Australian Navy has sent two warships and a P-8A aircraft along with Special Forces. The four QUAD member countries will undertake replenishment at sea, Anti-Submarine Warfare and anti-air warfare exercises, among others.

The drill started between the four navies with an opening ceremony which was hosted by the Japan Maritime Self Defence Force (JMSDF) onboard JS Hyuga at Yokosuka, and the Indian delegation which had commanding officers and crews of both the indigenously warships was led by RAdm Sanjay Bhalla, FOCEF. While the Japanese side was led by VAdm Yuasa Hideki Commander in Chief, Self Defense Fleet JMSDF, RAdm Jonathan Earley, Commander Australian Fleet and VAdm Karl Thomas Commander, US Navy Seventh Fleet with their crew and personnel from their respective navies participated in the opening ceremony.

### **IFR & WPNS hosted by Japan: Free and Open Ocean**

There were ten countries which participated in the “search and rescue” exercise as part of IFR including the Pakistan navy which was invited by Japan over the weekend. The IFR was conducted from Nov 6-7, 2022 and INS Shivalik and Kamorta participated. Besides the JMSDF, other navies participating included India, Indonesia, Malaysia, New Zealand, Pakistan, Singapore, Australia, Brunei, Canada, Thailand, and the US. There were more than 30 warships and five surveillance aircraft. Due to poor weather conditions in the Philippines the UK navy was unable to participate. And after skipping IFR, China, which is the full member, joined the Western Pacific Naval Symposium (WPNS) in Yokohama. Since India holds the ‘observer’ status at the WPNS, Navy Chief Admiral Kumar participated. There were around 27 countries which participated in the symposium. Pakistan too holds the ‘observer status’.

Around 11 countries including India, Canada, Australia, Japan, Indonesia, Pakistan, Malaysia, the Republic of Korea, Singapore, Thailand and the US participated in IFR’s search and rescue exercise – which included fire-fighting and medical evacuation drills. And India was part of a group which had Indonesia, Japan and Malaysia navies. According to reports this is the first time in 20 years Japan hosted the IFR in commemoration of 70<sup>th</sup> anniversary of the establishment of the JMSDF this year. Japanese PM Fumio Kishida inspected the fleets at the IFR on board JMSDF carrier JS Izumo. With the US Navy present in regional waters and its bilateral drills with South Korea, “North Korea is definitely expected to react and show more aggression and will justify its missile tests in the Korean peninsula,” said a senior officer. China is already unhappy with the drill taking place in the region.

<https://www.financialexpress.com/defence/ex-malabar-2022-focus-on-enhancing-interoperability-in-indo-pacific-region/2797955/lite/>

## **THE ECONOMIC TIMES**

*Wed, 09 Nov 2022*

### **Foreign Secretary Vinay Kwatra Meets Senior Pentagon Official, Discusses Bilateral Defence Ties**

Foreign Secretary Vinay Kwatra met US Under Secretary of Defence for Policy Colin Kahl and the two senior officials discussed initiatives to further advance the bilateral defence

cooperation and underlined the importance of the 'India-US Major Defence Partnership' which has helped in shaping the future of the Indo-Pacific region. Kwatra, currently on an official visit to the US, met Deputy Secretary of State Wendy Sherman on Monday and discussed Indo-US ties and ways to further advance their bilateral security and regional cooperation, the situation in the Indo-Pacific region and Ukraine. During the meeting on Tuesday Kahl and Kwatra discussed initiatives to advance bilateral defence cooperation ahead of the next 2+2 Ministerial meeting in New Delhi, a media release said.

"It was a pleasure meeting w/Indian Foreign Secretary @AmbVMKwatra this afternoon. We discussed a range of bilateral initiatives to advance the US-India defence partnership and promote a #FreeandOpenIndoPacific @DeptofDefence @INDOPACOM," Kahl tweeted. "The two leaders exchanged views on developments related to mutual security interests, including in the Indian Ocean Region and Europe," said Pentagon Spokesman Lt. Col. David Herndon. "The conversation spanned a range of issues including deepening Navy-to-Navy cooperation, particularly in the undersea domain; expanding information sharing and logistics cooperation to facilitate operational coordination between the US and Indian militaries; and accelerating India's indigenous defence production through bilateral defence industrial cooperation and partnership in emerging defence domains," Herndon said.

Since its inception in 2018, the 2+2 Ministerial has allowed the US and India to work toward building an advanced, comprehensive defence partnership that is poised to meet the challenges of the 21st century. The US has a very close partnership and defence relationship with India and the two countries will continue to work together to further develop that relationship, the Pentagon has said earlier. The US recognised India as a "Major Defence Partner" in 2016, a designation that allows India to buy more advanced and sensitive technologies from America at par with that of the US' closest allies and partners, and ensures enduring cooperation into the future. India, the US and several other world powers have been talking about the need to ensure a free, open and thriving Indo-Pacific in the backdrop of China's rising military manoeuvring in the region. Kwatra arrived in Washington DC from New York on Sunday night.

<https://economictimes.indiatimes.com/news/defence/foreign-secretary-vinay-kwatra-meets-senior-pentagon-official-discusses-bilateral-defence-ties/articleshow/95405837.cms>



*Wed, 09 Nov 2022*

## **Pentagon Admits Arms Supply to Kyiv Creating Additional Pressure on US' Defence Industries**

The US administration has admitted that its military aid to Ukraine is depleting the American arsenal and adding more pressure on US' defence industries and defence industrial base. The US administration has indicated that this is not just the case for the USA but the case for other western nations as well. US Under Secretary of Defense for Policy Colin Kahl was speaking with Washington based defence writers, whilst admitting this fact, as per a report from TASS. "There's no question that it has put pressure on our own stockpiles, it has put pressure on our defense industrial base. That's been true of our allies," the US Under Secretary of Defense for



Policy said. "I will say, [US Defense] Secretary [Lloyd] Austin has been laser focused since the beginning in making sure that we were not taking undue risk, that is that we weren't drawing down our stockpile so much that it would undermine our readiness and our ability to respond to another major contingency elsewhere in the world," he added.

### **Is arms supply to Ukraine affecting Taiwan?**

Colin Kahl said that the Russia-Ukraine war has shown the US that its defence industrial base needs to be more nimble and resilient. "I am comfortable that the support we have provided to Ukraine has not put the United States in a dangerous position as it relates to another major contingency somewhere in the world, but it has revealed that we have work to do to make our defense industrial base more nimble, more responsive, more resilient," said the US Under Secretary of Defense for Policy. Back in August, NY Times had reported that Stinger missiles US is supplying to Ukraine has created a situation where US does not have enough Stinger missiles to supply to Taiwan.

In May, Washington Post had reported that delivery of Howitzers to Taiwan was being delayed due to a strained US supply chain. On 5th November, US national security advisor Jake Sullivan visited Ukraine to meet with the Ukrainian President Volodymyr Zelensky. They discussed how the US can increase Ukraine's capabilities to ensure that the war-torn nation can defend its civilian infrastructure.

<https://www.republicworld.com/world-news/russia-ukraine-crisis/pentagon-admits-arms-supply-to-kyiv-creating-additional-pressure-on-us-defence-industries-articleshow.html>



*Wed, 09 Nov 2022*

## **UK to Provide 1,000 More Surface to Air Missiles to Ukraine**

The UK has provided approximately 1,000 additional surface to air missiles to help counter the Russian threat to Ukrainian infrastructure.

- UK has provided approximately 1,000 additional surface to air missiles to help counter the Russian threat to Ukrainian infrastructure
- The Defence Secretary made the announcement while visiting training sites alongside the Secretary General of NATO and JEF Defence Ministers
- The UK has now trained over 7,400 recruits from the Armed Forces of Ukraine (AFU), and over 60 AFU Junior leaders

The Defence Secretary Ben Wallace has announced that the UK will shortly complete the delivery of approximately 1,000 additional surface to air missiles to the Armed Forces of Ukraine (AFU). This comes in response to Ukrainian requests for more air defence capabilities, and the missiles will play a vital role in the provision of air defence for Ukraine and the protection of its critical infrastructure which is being continually targeted by Russia. The missiles can be used in conjunction with existing Armed Forces of Ukraine capabilities. The

equipment consists of launchers and missiles and is capable of shooting down air targets, including Russian drones and cruise missiles.

**Defence Secretary Ben Wallace said:**

This commitment of hundreds more surface to air missiles continues our defensive support for Ukraine against Russian aggression - and will help Ukraine counter the threat from illegal targeting of critical national infrastructure. The announcement comes as Defence Secretary has today visited two training sites where over 7,400 Ukrainian recruits have been trained by UK forces alongside eight partner nations. At the sites being used for training, the Defence Secretary welcomed the NATO Secretary General Jens Stoltenberg in the morning, and his counterparts from the Joint Expeditionary Force (JEF) nations this afternoon, some of whom were able to see their own military personnel conducting the training.

Currently 1,900 Ukrainian recruits are in the UK taking part in the training programme and will soon return to their home country. When they complete the training, they are provided with items including combat clothing, body armour and ear defence, waterproofs and sleeping bags. Recruits are also issued with a fully stocked individual First Aid Kit after learning how to use tourniquets, field dressings and chest seals during training. Recruits leaving the UK will now be provided with extreme cold weather kits, announced by the Prime Minister today, including 25,000 set of extreme cold weather clothing, 20,000 sleeping bags and 150 insulated tents.

The announcement comes in response to Ukrainian requests for more cold weather equipment. Ukraine's troops continue to battle to liberate their country from Russian forces as winter rapidly approaches, when temperatures can sink to minus 20°C and below in parts of the country. Heavy duty sleeping bags and roll mats, combined with heated accommodation and personal winter clothing, will help to prevent cold-related injuries and ensure troops can operate effectively and efficiently.

**Brigadier Justin Stenhouse, Commander of the UK's basic training for Ukrainian recruits said:**

We have equipped more than 9,000 Ukrainian recruits to ensure they have the necessary personal protective equipment, including helmet, body armour and webbing, to aid them in fighting against Russian aggression. The effort to support this from across the entire logistic community has been hugely impressive and no small undertaking. The Ukrainian recruits, many of whom have little to no military experience, have shown exemplary courage, resilience, and a desire to learn which is deeply humbling to observe. Our instructors have done an excellent job in training these recruits to live and fight using their new equipment and transforming them from civilians to soldiers in just five weeks.

<https://www.gov.uk/government/news/uk-to-provide-1000-more-surface-to-air-missiles-to-ukraine>

*Wed, 09 Nov 2022*

## **China Unveils Wing Loong-3 Intercontinental Military Drone with Self-Defence Mechanism at Zhuhai Air Show**

China has unveiled its latest military drone model – Wing Loong-3, the first model in the family to reach intercontinental range while equipped for aerial self-defence – at a major air show. The Wing Loong-3 UAV (unmanned aerial vehicle), which also features a stronger strike capability, made its debut at the 14th China International Aviation and Aerospace Exhibition in Zhuhai in Guangdong province on Tuesday. The event, known as Airshow China, will run until Sunday. The latest version in the Wing Loong drone series can fly a maximum range of 10,000km (6,200 miles) at medium altitude and has a 12.2-metre (40 feet) long main body and a 24-metre wingspan that enable it to fly long range while carrying heavy loads, according to Chinese state media.

Footage of the Wing Loong-3 on display in Zhuhai shows it is equipped with the PL-10E fourth-generation air-to-air strike missile, which Chinese analysts deem a significant improvement on the Wing Loong-1 and 2 models. Yue Gang, a retired PLA colonel, said carrying PL-10E missiles meant the Wing Loong-3 could hit targets such as helicopters and UAVs, which “gives it a self-defence capability and improved its survivability”. Compared with previous Wing Loong models, Yue said its larger size enables it to achieve long-range, heavy-loading and multitask performance. Song Zhongping, a former PLA instructor, said its long endurance and heavy loads allowed the Wing Loong-3 to have a stronger strike capability.

“And carrying the PL-10E missiles enables it to have a certain ability to counter air targets, which is not available to the previous UAVs of the Wing Loong family,” he added. Zhou Yi, chief designer of Wing Loong-3, told state broadcaster CCTV that the advanced drone was capable of carrying out intercontinental operations, including long-distance surveillance or reconnaissance, striking time-sensitive targets and carrying out long-duration air patrols. “Its entire payload is completely ahead of the existing mid-altitude long-endurance UAVs in terms of weight, quantity or type,” Zhou said. “In addition to military tasks, it can play a helpful role in a wide range of civilian missions, such as atmospheric measurement, signal relay and emergency rescue,” he said.

The manufacturer, Aviation Industry Corporation of China (Avic), said it is working to establish a mass production capacity. Wing Loong series UAVs have been exported to at least 11 countries, including in Africa and the Middle East, and have reportedly played an active role in conflicts such as the Libyan civil war. Other new drones in the Wing Loong family – including the Wing Loong-1E and Wing Loong-10A – also made their debuts at Airshow China, state media said. Wing Loong-1E – which is designed to compete with the American MQ-1C Grey Eagle – completed its maiden flight earlier this year.

<https://www.scmp.com/news/china/military/article/3199039/china-unveils-wing-loong-3-intercontinental-military-drone-self-defence-mechanism-zhuhai-air-show>

## North Korea Fires Ballistic Missile toward Sea

South Korea's military says North Korea has fired at least one ballistic missile toward its eastern sea. The South's Joint Chiefs of Staff on Wednesday did not immediately say how far the missile flew. The launch extends a recent barrage in North Korean weapons demonstrations, including dozens of launches last week that the North described as simulated attacks on South Korean and US targets. North Korea has dialled up its weapons demonstrations to a record pace this year as leader Kim Jong Un exploits the distraction created by Russia's war on Ukraine to accelerate arms development and ramp up pressure on the United States and its regional allies. South Korea says the recovered debris of a North Korean missile fired toward the South amid a barrage of sea launches last week was determined to be a Soviet-era anti-aircraft weapon that dates back to the 1960s. South Korea's Defence Ministry said on Wednesday that an analysis of the 3-metre (9.8 foot)-long wreckage fetched from waters near the Koreas' eastern sea boundary on Sunday showed it was one of North Korea's SA-5 surface-to-air missiles. The ministry said a similar missile was used by the Russian military to execute ground attacks during its invasion of Ukraine. Photos released by the South Korean military showed what appeared to be a mangled rocket engine and wires sticking out from a broken rocket body that was still attached with fins. The missile, which was one of more than 20 missiles North Korea fired last Wednesday, flew in the direction of a populated South Korean island and landed near the rivals' tense sea border, triggering air raid sirens and forcing residents on Ulleung island to evacuate.

The South Korean Defence Ministry said it "strongly" condemns the North Korea's firing of the SA-5, which it sees as a violation of a 2018 inter-Korean military agreement on reducing tensions. North Korea fired dozens of missiles last week, including an intercontinental ballistic missile that triggered evacuation warnings in northern Japan, in an angry reaction to a massive combined aerial exercise between the United States and South Korea that the North described as an invasion rehearsal. Some experts say it's possible that North Korea reached into the inventory of some of its older weapons to support the expanded scale of last week's launches, which the North described as simulated attacks on key South Korean and US targets such as air bases and operation command systems. The launches added to North Korea's record pace in weapons testing this year as leader Kim Jong Un exploits the distraction created by Russia's war on Ukraine to accelerate arms development and ramp up pressure on the United States and its regional allies.

"The North Koreans would want to display their range of missile technologies through these tests, but not all launches have to reveal the latest technological advancements," said Soo Kim, a security analyst from California-based RAND Corporation. "It may be in North Korea's interest to hold some of its modern capabilities in reserve and test them at opportune occasions. Kim, again, is playing a longer game, so to reveal all of his cards - the different types of missiles and capabilities his country has acquired - would not work to his favour," she said.

[https://economictimes.indiatimes.com/news/defence/north-korea-fires-ballistic-missile-toward-sea/articleshow/95396376.cms?UTM\\_Source=Google\\_Newsstand&UTM\\_Campaign=RSS\\_Feed&UTM\\_Medium=Referral](https://economictimes.indiatimes.com/news/defence/north-korea-fires-ballistic-missile-toward-sea/articleshow/95396376.cms?UTM_Source=Google_Newsstand&UTM_Campaign=RSS_Feed&UTM_Medium=Referral)

## ISRO Hot-Tests Cryo Engine, ups LVM3/GSLV- Mk3 Payload Capacity

The Indian Space Research Organisation (ISRO) late on Wednesday said that the CE20 cryogenic engine indigenously developed for LVM3 (GSLV-Mk3) has been successfully hot-tested “at an uprated thrust level of 21.8 t for the first time”. “This will enhance the LVM3 payload capability up to 450 kg with additional propellant loading. The major modifications carried out on this test article compared to previous engines was introduction of Thrust Control Valve (TCV) for thrust control,” Isro said. Additionally, the space agency said a 3D-printed LOX (liquid oxygen) and LH2 (liquid hydrogen) turbine exhaust casings were inducted in the engine for the first time.

During this test, the engine operated with around 20t thrust level for the first 40 seconds, then thrust level was increased to 21.8t by moving the thrust control valve. Engine and facility performance was normal and required parameters were achieved,” Isro added. The TOI had reported on October 31 that as the LVM3 prepares for its second commercial launch, expected in early 2023, Isro’s efforts on enhancing its weight-lifting capacity is gaining pace with the space agency expected to complete qualification tests for the semi-cryogenic stage (SC120) in a couple of months. Isro spokesperson Sudheer Kumar had then told TOI: “The (LVM3) programme was envisaged to eventually carry at least 10 tonnes to LEO and six tonnes to GTO orbits. We’ll achieve this with an upgrade of the cryo stage with additional propellant loading and induction of the semi-cryo stage that will replace the L110...” Semi-Cryo Work on the semi-cryo engine is almost nearing completion and qualification tests are in progress. Stage and engine development phase is complete and the test stand is getting ready for carrying out tests. “At present sub-system level tests are going on at testing facilities in Mahendragiri and LPSC (Liquid propulsion systems centre),” Kumar had said.

GSLV-Mk3 is a three-stage vehicle with two solid strap-on motors (S200), one liquid core stage (L110) and a high-thrust cryogenic upper stage (C25). While the S200 will remain the same, the SC120 will replace L110 and C25 will be upgraded. The qualification of SC120 is expected to be completed in a few months unless anomalies are found.

<https://timesofindia.indiatimes.com/india/isro-hot-tests-cryo-engine-ups-propellant-loading-capacity/articleshow/95414057.cms>



## क्या अब मेरठ में रोबोट करेंगे मरीजों की सर्जरी? जानें लाला लाजपत राय मेडिकल कॉलेज में क्यों हो रही चर्चा

यूपी मेरठ के लाला लाजपत राय मेडिकल कॉलेज में अलग-अलग विभागों की प्रदर्शनी में रोबोट से होने वाली सर्जरी खासा चर्चा का विषय बना रहा. यहां डिपार्टमेंट ऑफ सर्जरी की तरफ से लगाई गए स्टॉल में बताया कि कई देशों में रोबोट से सर्जरी की गई है. कई बार ऐसा भी हुआ है कि डॉक्टर दूसरे देश में और रोबोट के ज़रिए सर्जरी दूसरे देश में हो गई. आने वाले दिनों में मेरठ के लाला लाजपत राय मेडिकल कॉलेज में भी ऐसा संभव हो सकता है. आने वाले दिनों में हो सकता है कि रोबोट यहां भी सर्जरी करता हुआ नज़र आए. डॉक्टर धीरज बालियान ने बताया कि एम्स एसजीपीजीआई और कई अन्य प्राइवेट अस्पताल में रोबोट सर्जरी हो रही है. डॉक्टर्स के कमांड पर रोबोट काम करता है. रोबोट के ज़रिए बहुत कठिन ऑपरेशन जिन्हें हाथ से करने में दिक्कत होती थी. वो बेहद आसान हो गया. कई कई बार तो हज़ारों मील दूर बैठकर भी रोबोट के ज़रिए सर्जरी हो गई. हार्ट सहित विभिन्न अंगों की सर्जरी रोबोट के ज़रिए संभव हो रही है.

डॉक्टर धीरज बालियान ने कहा कि सरकार के सामने प्रस्ताव रखा जाएगा ताकि मेरठ के लालालापत राय मेडिकल कॉलेज में भी रोबोट से सर्जरी हो सके. उन्होंने बताया कि बड़े-बड़े ऑपरेशन के मरीज़ भी अड़तालीस घंटे के अंदर डिस्चार्ज हो जाते हैं. गौरतलब है कि आज मेडिकल कॉलेज मेरठ में मेडिकल एग्जीवीशन (चिकित्सा प्रदर्शनी) का आयोजन किया गया. प्राथमिक उपचार प्रशिक्षण, प्राथमिक जीवन रक्षा, सांप काटने पर सर्वप्रथम क्या करें एवं दिल का दौरा पड़ने पर उसकी पहचान पर आधारित मॉडल चार्ट चर्चा का विषय रहे.

### अलग विभागों ने लगाए अपने स्टाल

मेडिकल कॉलेज के मीडिया प्रभारी डॉक्टर वीडि पांडे ने बताया कि इस दौरान मेडिकल कॉलेज के प्रीक्लिनिकल, पैराक्लिनिकल एवं क्लीनिकल विभाग विभाग जिनमें एनाटॉमी, फिजियोलॉजी, बायोकेमिस्ट्री, पैथोलॉजी, माइक्रोबायोलॉजी, फार्मैकोलॉजी, फॉरेंसिक मेडिसिन एंड टॉक्सिकोलॉजी, नाक कान गला रोग, नेत्र रोग कम्युनिटी मेडिसिन विभाग, मेडिसिन विभाग, सर्जरी विभाग, बाल रोग विभाग, स्त्री एवं प्रसूति रोग विभाग, अस्थि रोग विभाग, प्लास्टिक सर्जरी, रेडियोथैरेपी दंत रोग विभाग, चर्म रोग विभाग आदि ने स्टॉल लगाया. इन स्टॉलों पर चिकित्सा एवं चिकित्सा शिक्षा के विभिन्न मॉडल, पोस्टर, स्पेसिमेन, ऑडियो विजुअल के माध्यम से मेरठ के प्रतिष्ठित स्कूलों के कक्षा 9, 10, 11 एवं 12 के छात्र छात्राओं को चिकित्सा के क्षेत्र में दिन प्रतिदिन उपयोग होने वाली चिकित्सकीय सुविधाओं एवं रोगियों का उपचार एवं चिकित्सा के प्रति उनकी रुचि जागृत करने के लिए उनको प्रशिक्षित किया गया. चिकित्सा प्रदर्शनी का मुख्य उद्देश्य स्कूली छात्र छात्राओं के अंदर चिकित्सा, उपचार एवं चिकित्सा शिक्षा के प्रति रुचि जागृत करना था जिससे यह छात्र भविष्य में चिकित्सा एवं चिकित्सा शिक्षा को अपना आजीविका (पेशा) या चिकित्सा के क्षेत्र में अपना कैरियर बना सकें.

<https://hindi.news18.com/news/uttar-pradesh/meerut-will-robots-now-do-surgery-of-patients-in-meerut-know-why-the-discussion-is-happening-in-lala-lajpat-rai-medical-college-bruk-4870173.html>

## **A Novel Multi-Modal Image Retrieval System by Researchers from Gwangju Institute of Science and Technology**

With the amount of information on the internet increasing by the minute, retrieving data from it is like trying to find a needle in a haystack. Content-based image retrieval (CBIR) systems are capable of retrieving desired images based on the user's input from an extensive database. These systems are used in e-commerce, face recognition, medical applications, and computer vision. There are two ways in which CBIR systems work—text-based and image-based. One of the ways in which CBIR gets a boost is by using deep learning (DL) algorithms. DL algorithms enable the use of multi-modal feature extraction, meaning that both image and text features can be used to retrieve the desired image. Even though scientists have tried to develop multi-modal feature extraction, it remains an open problem. To this end, researchers from Gwangju Institute of Science and Technology have developed *DenseBert4Ret*, an image retrieval system using DL algorithms. The study, led by Prof. Moongu Jeon and Ph.D. student Zafran Khan, was made available online on September 14, 2022 and published in Volume 612 of Information Sciences. "In our day-to-day lives, we often scour the internet to look for things such as clothes, research papers, news article, etc. When these queries come into our mind, they can be in the form of both images and textual descriptions. Moreover, at times we may wish to amend our visual perceptions through textual descriptions. Thus, retrieval systems should also accept queries as both texts and images," says Prof. Jeon, explaining the team's motivation behind the study.

The proposed model had both image and text as the input query. For extracting the image features from the input, the team used a deep neural network model known as *DenseNet-121*. This architecture allowed for the maximum flow of information from the input to the output layer and needed tuning of very few parameters during training. *DenseNet-121* was combined with the bidirectional encoder representation from transformer (BERT) architecture for extracting semantic and contextual features from the text input. The combination of these two architectures reduced training time and computational requirements and formed the proposed model, *DenseBert4Ret*. The team then used Fashion200k, MIT-states, and FashionIQ, three real-world datasets, to train and compare the proposed system's performance against the state-of-the-art systems. They found that *DenseBert4Ret* showed no loss during image feature extraction and outperformed the state-of-the-art models. The proposed model successfully catered for multi-modalities that were given as the input with the multi-layer perceptron and triple loss function helping to learn the joint features.

<https://www.prnewswire.com/news-releases/a-novel-multi-modal-image-retrieval-system-by-researchers-from-gwangju-institute-of-science-and-technology-301671810.html>

## **NASA delays Artemis 1 launch again, this time due to tropical storm Nicole**

After multiple aborted launch attempts, NASA's Artemis 1 mission was scheduled to launch on November 14. But now, the space agency has delayed the launch attempt to November 16 because of tropical Storm Nicole.

The SLS rocket and the Orion spacecraft will remain secured at the launchpad during the storm. NASA is now targeting the Artemis 1 launch to happen during a two-hour window that opens at 1.04 AM EST (11.34 AM IST) on November 16. If all goes according to plan, the Artemis 1 mission should splashdown on Friday, December 11. The space agency is also maintaining a backup launch opportunity on Saturday, November 19.

### **Preparing Artemis 1's SLS rocket and Orion spacecraft for the storm**

According to NASA, the SLS rocket can withstand winds of up to 136 kilometres per hour (74.4 knots). The winds at the launchpad should not exceed this limit according to current weather forecasts. The rocket is also designed to endure heavy rains and all the Orion spacecraft's hatches have been secured to make sure water doesn't enter.

### **Nicole at the Kennedy Space Center**

Nicole, which began as a tropical storm in the southwestern Atlantic, is expected to reach hurricane strength according to a *New York Times* report. The Kennedy Space Center, from where the Artemis 1 mission will launch, is currently on a HURCON III status, meaning that NASA teams are securing facilities, property and equipment at the centre. NASA teams have powered down the Orion spacecraft, and SLS's core stage, interim cryogenic propulsion stage, and boosters. Apart from this, engineers installed a hard cover over the launch abort system window and also retracted and secured the crew access arm of the mobile launcher.

"NASA is continuing to monitor Tropical Storm Nicole and has decided to re-target a launch for the Artemis I mission for Wednesday, Nov. 16, pending safe conditions for employees to return to work, as well as inspections after the storm has passed.

Adjusting the target launch date will allow the workforce to tend to the needs of their families and homes, and provide sufficient logistical time to get back into launch status following the storm," said the agency in a statement. The space center will soon release all non-essential personnel. But NASA's "ride-out" team will remain on standby at a safe location at Kennedy to monitor the conditions of the storm and its effects on the Artemis 1 mission's flight hardware.

<https://indianexpress.com/article/technology/science/nasa-artemis-1-launch-delayed-november-16-8258927/lite/>



**Press Information Bureau  
Government of India**

**Ministry of Defence**

*Wed, 09 Nov 2022*

## **42 International Congress of the Indian National Cartographic Association (INCA)**

The 42 International Congress of the Indian National Cartographic Association (INCA) is being organised by the National Hydrographic Office (NHO), Dehradun from 09 to 11 Nov 22. The Governor of Uttarakhand His Excellency Lt Gen Gurmit Singh, (Retd.) was the Chief Guest for the Inaugural Session on 09 Nov 22. The Chief Hydrographer to the Govt. of India, Vice Admiral Adhir Arora, is the current President of INCA. The personnel of the Naval Hydrographic Department (NHD) working on the cutting edge of cartography have been active in the INCA since its inception in 1979. The NHO had earlier conducted the 37th INCA Congress at Dehradun from 01 to 03 Nov 17.

The INCA was founded in 1979 and has evolved into one of the largest organisations in the field of cartography with more than 3000 life and institutional members. Organisations such as the National Hydrographic Office (NHO), Survey of India, Indian Space Research Organisation, National Thematic Map Organisation and Universities are part of this Association. The body has various branches functioning at different centers across the country to harmonise various aspects of cartography. It is a matter of great pride that numerous cartographers, eminent scientists, planners and professionals have been participating in the Congress over the years.

The focal theme for the 42d INCA Congress is ‘Digital Cartography to Harness Blue Economy’. The deliberation of the Congress will be divided into 07 sub-themes including Space Technologies for Mapping, Cartographic Applications for Sustainable Development, Geomatics in Disaster Management, Mapping for Environmental Planning & Management, Hydrography for Resource Management and Land Resource Mapping and Surveying. All the subjects are of contemporary interest to the cartographer and scientific community. A large number of papers on these subjects would be presented by eminent personnel in the field. The outcome of the Congress is to explore feasibility of utilising cartography as a tool for developmental purposes.

The Congress will be attended by the Surveyor General Shri Sunil Kumar (Joint Secretary) DST, Joint Chief Hydrographer Rear Admiral Lochan Singh Pathania, Director NATMO and prominent scientists from ISRO, SERB, IIRS, NRSA, NATMO and Academicians from Chandigarh University, Shantiniketan University, Jadhavpur University, Banaras Hindu University etc.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1874777>

