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समाचार पत्रों से चयनित अंश

Newspapers Clippings

डीआरडीओ समुदाय को डीआरडीओ प्रौद्योगिकियों, रक्षा प्रौद्योगिकियों, रक्षा नीतियों, अंतर्राष्ट्रीय संबंधों और विज्ञान एवं प्रौद्योगिकी की नूतन जानकारी से अवगत कराने हेतु दैनिक सेवा

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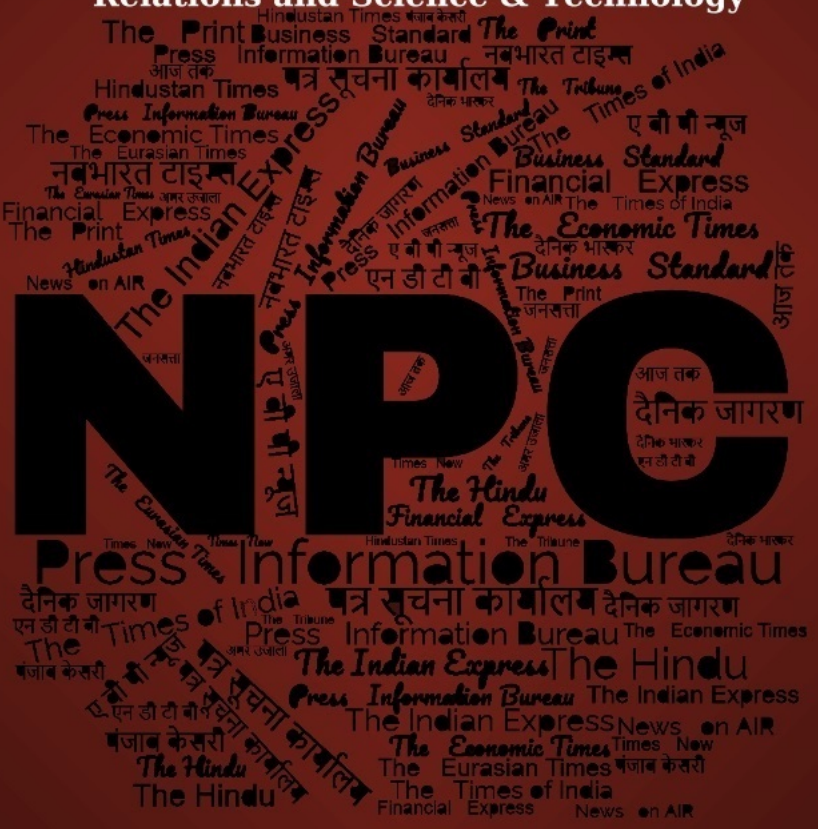

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नई तकनीको को उपयोगी बनाना भावी इंजीनियर्स के लिए चुनौति: टेसी थॉमस

Source: Jansatta, Dt. 03 Aug 2025

भारत की 'मिसाइल महिला' के नाम से मशहूर टेसी थामस ने शनिवार को कहा कि तेजी से डिजिटल बनती दुनिया में नई तकनीकों को अपनाना और उन्हें नैतिक, सबके लिए उपयोगी और टिकाऊ बनाना भविष्य के इंजीनियरों, वैज्ञानिकों, उद्यमियों और नेताओं के लिए एक अहम चुनौती है।

रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) की पूर्व महानिदेशक (वैमानिकी प्रणाली) एवं प्रतिष्ठित वैज्ञानिक थामस ने भारतीय प्रौद्योगिकी संस्थान (आइआइटी), दिल्ली के 56वें दीक्षांत समारोह को संबोधित करते हुए यह टिप्पणी की।

थामस ने विद्यार्थियों से कहा कि ऐसे समय में जब दुनिया तेजी से डिजिटल हो रही है, नई तकनीकों को अपनाना और यह सुनिश्चित करना कि वे तकनीकें नैतिक, समावेशी और टिकाऊ हों, भविष्य के इंजीनियरों, वैज्ञानिकों, उद्यमियों और नेताओं के लिए एक बड़ी चुनौती है। चाहे वह कार्बन-मुक्ति हो, जल संरक्षण हो, डिजिटल समानता हो, जैव-नवाचार हो या कोई इंजीनियरिंग चमत्कार हो, इसे समाज के लिए अपना योगदान बनाएं। उन्होंने कहा कि आइआइटी शिक्षा ने आपको सिस्टम बनाने के लिए तैयार किया है और प्रौद्योगिकी के प्रभुत्व वाले विश्व में लोगों के भरोसे को संभालने के लिए प्रशिक्षित किया है।

दीक्षांत समारोह में कुल 2,764 विद्यार्थियों को डिग्रियां और डिप्लोमा दिए गए, जिनमें 530 पीएचडी डिग्रियां शामिल थीं जो अब तक की सबसे अधिक संख्या है। कुल 2,764 स्नातक विद्यार्थियों में से 735 छात्राएं हैं। लगभग 20 देशों के 43 अंतरराष्ट्रीय विद्यार्थियों को भी डिग्री प्रदान की गई। बीस वर्षीय चंदन गोदारा, सिविल इंजीनियरिंग में बीटेक के सबसे कम उम्र के स्नातक और 63 वर्षीय गोपाल कृष्ण तनेजा पीएचडी डिग्री प्राप्त करने वाले सबसे उम्रदराज विद्यार्थी रहे।

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Army formalises induction of hardy, double-humped camel for logistics in Ladakh

Source: The Tribune, Dt. 04 Aug 2025

After almost a decade of trails and evaluation, the Army has formalised the induction of Bactrian camels, the hardy, short and double-humped species found in Ladakh, for patrolling and ferrying loads to remote posts in high altitude areas.

A few weeks ago, the **Defence Institute of High Altitude Research (DIHAR)** in Leh handed over 14 trained and deployable Bactrian camels, along with standard operating procedures and health records for training and management, to the Army's 14 Corps. The Indo-Tibetan Border Police are also examining the use of Bactrian camels.

While an extensive network of roads has been developed in Ladakh, the last-mile connectivity to remote posts is through porters and pack animals. Drones as well as mechanical mules are also being introduced for logistics.

At high altitudes, the use of mechanical platforms like drones are affected by weather conditions, environmental factors and visibility, which animals to some extent can offset. For example, a drone may not be able to fly in fog, whereas men and animals can move on ground, a scientist said. Also, drones and other radio-controlled equipment are more susceptible to enemy counter-actions.

Following requirements projected by the Army, research was initiated in 2016 by DIHAR, a Defence Research and Development Organisation (DRDO) laboratory, in collaboration with the Remount and Veterinary Corps, to study the feasibility and suitability of employing Bactrian camels for load carrying, patrolling and other logistics in eastern Ladakh.

During the study, suitable training on various command and behavioural measures and experimental studies on physical measurement, adaptation physiology and load-carrying endurance on different topography and altitude were undertaken.

A few Bactrian camels were also sent to Army units for extensive field trials on patrolling and load-carrying aspects as well as battle inoculation tests at forward locations under different operational conditions. Scientists said it is not just the load-carrying ability that was examined but also how the animals trained and adapted to battlefield conditions like gunshot and blast sounds, smoke and fear psychosis.

DIHAR's studies revealed these animals are well adapted to hypoxia and extreme cold and can be trained for carrying out two-man patrols as well as ferry substantially more load than mules and ponies. They can carry 150-200 kg on gravel tracks at altitudes up to 14,000 feet as compared to 60-80 kg by mules and ponies, while also requiring lesser nutritional and husbandry maintenance.

In fact, DIHAR had transported three desert camels from Rajasthan to Leh to carry out comparative analysis between the two types of animals. Desert camels are widely used by the Border Security Force in Rajasthan and Gujarat.

Scientifically known as Camelus Bactrianus, the Bactrian camels are natives of Central Asia and in the olden days were used as an effective means of transport for trade along the Silk Route connecting Central Asia to Tibet and Ladakh in India. They are short in height, generally under six feet and are characterised by twin humps on their back.

After the trade route was closed, some of these camels were abandoned by the traders and they lived in the wilderness of Ladakh. Listed as endangered species, only a few hundred such camels are surviving in Ladakh and these are now primarily used for tourism, mostly in the Nubra valley, offering rides to tourists.

https://www.tribuneindia.com/news/defence/army-formalises-induction-of-hardy-double-humped-camel-for-logistics-in-ladakh/

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Defence News

भारत को स्पेन से दो महीने पहले मिला एयरबस-295 परिवहन विमान

Source: Dainik Jagran, Dt. 03 Aug 2025

लंदन, प्रेट्र : भारत को स्पेन से मिलने वाला 16 एयरबस सी-295 सैन्य परिवहन विमानों का अंतिम विमान शनिवार को मिल गया। यह देश की रक्षा क्षमताओं को मजबूत करने में महत्वपूर्ण साबित होगा। सी-295 पांच से दस टन क्षमता वाला परिवहन विमान है। यह वायु सेना के पुराने एवरो विमानों का स्थान लेगा। इसकी डिलीवरी दो महीने पहले की गई है।

स्पेन में भारतीय राजदूत दिनेश के पटनायक ने वायुसेना के वरिष्ठ अधिकारियों के साथ सेविले में एयरबस डिफेंस एंड स्पेस असेंबली लाइन पर 16 एयरबस सी-295 सैन्य परिवहन विमानों में से अंतिम विमान प्राप्त किया। 11 घंटे तक की उड़ान क्षमता वाला यह विमान

- पांच से दस टन परिवहन क्षमता, 11 घंटे तक भर सकता है उड़ान
- वायु सेना के पुराने एवरो विमानों का लेगा स्थान, 16 विमानों में से अंतिम

एक बहुमुखी सामरिक परिवहन विमान है। भारत ने सितंबर 2021 में वायु सेना के लिए 56 सी-295 एमडब्ल्यू परिवहन विमानों की खरीद के लिए एयरबस डिफेंस एंड स्पेस स्पेन के साथ अनुबंध किया था। कुल 56 विमानों की डिलीवरी की जानी है, जिनमें से 16 विमानों की डिलीवरी सीधे एयरबस द्वारा स्पेन से की जानी थी और शेष 40 का निर्माण भारत में किया जाएगा।

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Spain delivers last of 16 C-295 transport aircraft to India

Source: The Tribune, Dt. 03 Aug 2025

India on Saturday received the last of its 16 Airbus C-295 military transport aircraft from Spain, marking an important milestone in strengthening its defence capabilities, the Indian Embassy in Spain said.

The C-295, a transport aircraft of 5-10 tonne capacity with contemporary technology, is set to replace the ageing Avro aircraft of the IAF.

Indian Ambassador to Spain Dinesh K Patnaik, along with senior Indian Air Force officials, received the last of the 16 Airbus C-295 military transport aircraft at the Airbus Defence and Space assembly line in Seville, the Indian mission posted on social media.

“The delivery, two months ahead of schedule, marks an important milestone in strengthening India’s defence capabilities,” it added.

The aircraft, with a flight endurance of up to 11 hours, is a versatile and efficient tactical transport aircraft.

India signed a contract with Airbus Defence & Space, Spain, for acquisition of 56 C-295MW transport aircraft for IAF in Sep 2021.

Under the C-295 programme, a total of 56 aircraft are to be delivered, of which 16 were to be delivered directly by Airbus from Spain, and the remaining 40 will be manufactured in India.

Spain fulfilled that commitment on Saturday by handing over the last of the 16 aircraft.

Prime Minister Narendra Modi and his Spanish counterpart, Pedro Sanchez, had jointly inaugurated the TATA Aircraft Complex for manufacturing C-295 aircraft at TATA Advanced Systems Limited (TASL) Campus in Vadodara, Gujarat, in October last year.

TASL is responsible for making these 40 aircraft in India. This facility becomes the first private sector Final Assembly Line (FAL) for military aircraft in India. It will involve the full development of a complete ecosystem covering the lifecycle of the aircraft.

Pak inducts ‘state-of-the-art’ attack copter

- Pakistan on Saturday inducted “state-of-the-art” Z-10ME attack helicopter into its Army Aviation service as part of efforts to modernise the armed forces.
- The induction ceremony in Multan was presided over by army chief Field Marshal Asim Munir.
- “This all-weather platform is capable of precision strike operations day and night. Equipped with advanced radar systems and cutting-edge electronic warfare suites, the Z-10ME significantly enhances capability to engage diverse aerial and ground threats,” the army said.

https://www.tribuneindia.com/news/world/spain-delivers-last-of-16-c-295-transport-aircraft-to-india/

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3 Indian warships in Philippines, 1 in war games with Singapore

Source: The Times of India, Dt. 03 Aug 2025

As part of the Navy's ongoing operational deployment to Southeast Asia with an eye firmly on China's aggressive behaviour in the Indo-Pacific, three Indian warships have reached the Philippines while another is exercising with the Singapore Navy.

The deployments of stealth frigate INS Satpura for the bilateral "Simbex" exercise with the Singapore Navy as well as guided-missile destroyer INS Delhi, anti-submarine warfare corvette INS Kiltan and fleet tanker INS Shakti to Manila "is a testimony to the Indian Navy's commitment to strengthen partnerships in the Indo-Pacific", according to officers.

Leading the three warships in Manila, Eastern Fleet commander Rear Admiral Susheel Menon said India and the Philippines shared the commitment towards maintaining stability and enhancing maritime security in the region, emphasizing the importance of such deployments in promoting understanding, trust and cooperation among friendly maritime forces.

The warships will undertake a bilateral naval exercise with the Philippines, which will focus on joint manoeuvres and communication protocols to improve preparedness, build mutual trust and strengthen operational synergy in the maritime domain.

INS Satpura, in turn, is participating in the 32nd edition of the Simbex exercise, marking yet another chapter in the strong and enduring maritime partnership between the Indian Navy and the Republic of Singapore Navy (RSN).

"The exercise involves execution of a comprehensive array of advanced naval operations. These include air defence exercises, cross-deck helicopter operations, precision targeting with surface and aerial platforms, complex manoeuvring drills and VBSS (visit, board, search, and seizure) operations," an officer said.

After the $375 million contract to supply three anti-ship coastal batteries of BrahMos supersonic cruise missiles to the Philippines in Jan 2022, India has also stepped up discussions on arms exports to other Asean countries like Indonesia and Vietnam. Apart from Brahmos missiles, which have been developed jointly with Russia, India also plans to sell the indigenous Akash air defence missile systems, which can intercept hostile aircraft, helicopters, drones and subsonic cruise missiles at a range of 25 km, to countries like Philippines, Indonesia and Vietnam.

https://timesofindia.indiatimes.com/india/3-indian-warships-in-philippines-1-in-war-games-with-singapore/articleshow/123068645.cms

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Delay hits Scorpene retrofit to boost stealth, endurance

Source: The Times of India, Dt. 04 Aug 2025

India has once again missed the boat to enhance the underwater operational endurance and stealth of its latest Scorpene or Kalvari-class conventional submarines, with the already delayed air independent propulsion (AIP) system developed by DRDO still not ready for integration with the vessels.

The first Scorpene submarine to be built at the Mazagon Docks (MDL) with French collaboration, INS Kalvari, which was commissioned in Dec 2017, will now complete her ongoing maintenance refit at the Mumbai naval dockyard without being retrofitted with the AIP plug as was originally planned, defence ministry sources told TOI.

"The fuel cell-based AIP system developed by DRDO's Naval Materials Research Lab, which has L&T as the prime industry partner, is still not yet operationally available. Hopefully, it should be ready by the time the second Scorpene (INS Khanderi) comes for her scheduled normal maintenance refit in mid-2026," a source said.

The Navy after a long delay has inducted six diesel-electric Scorpene submarines, constructed by MDL in collaboration with the French Naval Group under Project-75 for over Rs 23,000 crore, with the sixth INS Vagsheer being commissioned in Jan this year.

There is major concern about the continuing delay in the indigenous AIP project, which was originally slated for completion by June 2017 after being sanctioned in 2014 at an initial cost of Rs 270 crore.

Amid the delay, MDL and Naval Group signed an agreement for the integration of the indigenous AIP energy system plugs on the Scorpenes only on July 23. Under it, each submarine will undergo a complex project called "jumboisation", involving precision cutting of the hull, safe insertion of the AIP plug and then rejoining the structure to ensure the vessel is fully operational again.

Unlike nuclear-powered submarines, which have unlimited underwater endurance, diesel-electric boats must surface or snorkel every couple of days to get oxygen to recharge their batteries. Those fitted with AIP, however, can stay submerged for around two weeks to significantly boost their stealth and combat capabilities.

With Pakistan on course to induct eight Yuan or Hangor-class conventional submarines with AIP from China in a major capability jump, India's depleting conventional underwater combat arm has become a major worry. China, of course, now has the world's largest navy, which includes over 50 diesel-electric and 10 nuclear submarines.

Apart from the six French-origin Scorpenes, India has seven very old Russian Kilo-class and four German HDW diesel-electric submarines at present. It also has two operational SSBNs (nuclear-powered submarines armed with nuclear ballistic missiles) in INS Arihant and INS Arighaat, with the third to be commissioned as INS Aridhaman this year, as reported by TOI earlier.

The long-pending projects to build three additional Scorpenes for Rs 38,000 crore and six new-generation diesel-electric submarines, with both AIP and land-attack cruise missiles, for Rs 70,000 crore under Project-75-India at MDL, are also yet to be finalised and inked.

https://timesofindia.indiatimes.com/india/delay-hits-scorpene-retrofit-to-boost-stealth-endurance/articleshow/123082184.cms

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After Operation Sindoor, army overhaul: Drones to be in action at battalion level

Source: The Indian Express, Dt. 04 Aug 2025

The Indian Army is set to undergo a significant organisational overhaul that will include integrating Unmanned Aerial Vehicles (UAVs) and counter-UAV as standard weapon systems at the battalion level across most of its arms, The Indian Express has learnt. The transformation will also involve establishing light commando battalions, creating integrated brigades, and developing specialised artillery regiments and batteries tailored for future warfare, sources told this newspaper.

These plans, under discussion for several months, have gained pace after Operation Sindoor in May, following the Pahalgam terror attack. Some of the changes will be drawn from lessons obtained during this operation, the sources said.

One of the initiatives is to incorporate UAVs and counter-UAV systems into infantry battalions, as well as armoured and artillery regiments. While current battalions possess drones, they are often utilised as secondary systems in addition to established weapons and tasks. As a result, personnel are diverted from primary responsibilities to operate the UAVs.

The new objective is to create a dedicated outfit within each unit that will be tasked primarily with operating drones. Each arm has been directed to draw up a structure that allows a select number of personnel to focus and train on this front, the sources said. In the infantry, for instance, plans are underway to introduce several surveillance drones at the platoon and company levels.

This will require reassigning approximately 70 personnel from various sections and modifying the responsibilities of some others — an infantry unit comprises 36 fighting sections across four companies and other supporting platoons, each managing various tasks and weapons.

Additionally, the Army is raising 30 light commando battalions, called Bhairav, each comprising about 250 personnel. These battalions will be specially trained and deployed in designated areas to enhance strike capabilities with teams trained for specific missions. They will operate under various commands with specific operational roles, and be trained and equipped accordingly.

Sources said multiple infantry regimental centres have been instructed to start raising these battalions, and initial units are expected to be ready for operational deployment within a month.

Lessons from May

Op Sindoor in May revealed the increased use of military drones in new-age operations. Inducting a variety of drones as standard weapons at battalion levels will enable better training, procurement and maintenance.

The Army will also establish Rudra brigades, which will consist of an all-arms brigade along with UAVs and other logistical elements. This will involve restructuring existing infantry, armoured and artillery brigades, which will allow Rudra brigades to function independently across various sectors as integrated units for future warfare.

Likely to be deployed for conventional and hybrid operations, the logistics and network-centric operations for each such brigade will be tailored to specific missions and operational areas.

For the Regiment of Artillery, establishing two batteries with an increased number of guns each, as well as adding a third drone battery equipped with surveillance and combat drones, are being considered. Currently, each artillery regiment consists of three batteries, each with six guns.

Additionally, Divyastra artillery batteries are being created with next-generation long-range guns and loitering munitions capable of conducting surveillance and identifying and engaging targets in depth areas. They will be equipped with anti-drone systems for self-defence and area protection.

The armoured and mechanized infantry are also undergoing reorganisation.

Currently, there is a reconnaissance platoon responsible for navigating and leading units to their targets alongside three squadrons/ companies in Armoured/ Mechanized Infantry battalions. The recce platoons will be enhanced with surveillance and strike drones. Discussions are also underway to have two expanded squadrons/ companies instead of three, converting the third into a drone-based squadron/ company or integrating attack drones as part of tank squadrons.

Plans are also being discussed to modify engineer regiments by introducing a drone section in each company for mine detection, reconnaissance and area mapping — and bolstering Army

Aviation Corps with more UAVs for reconnaissance, surveillance and data collection, thereby reducing the reliance on helicopter hours and pilot effort. There are also moves to enhance the repair capabilities of Corps of Electronics and Mechanical Engineers (EME) in order to improve drone repair capabilities within corps zone workshops.

Sources said the initiative will increase the demand for specialised and trained manpower. They said the aim is to incorporate drones among other new generation equipment as standard issue items for the combat arms so that they can be procured on a regular basis. The initiative will also help create a supply chain for procurement, instead of purchases on an ad hoc basis through the special financial powers of top Army brass or as emergency procurement.

https://indianexpress.com/article/india/after-operation-sindoor-army-overhaul-drones-to-be-in-action-at-battalion-level-10167947/

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टैंक, बख्तरबंद गाड़ियों को मुश्किल इलाको में ले जाना होगा आसान

Source: NavBharat Times, Dt. 02 Aug 2025

■ NBT रिपोर्ट, नई दिल्ली

भारतीय सेना ने अपनी ऑपरेशनल और लॉजिस्टिक क्षमता बढ़ाने के लिए 212 टैंक ट्रांसपोर्टर लेने के लिए कॉन्ट्रैक्ट साइन किया है। एक्सिसकेड्स एयरोस्पेस एंड टेक्नॉलजीज प्राइवेट लिमिटेड के साथ 223.95 करोड़ रुपये का कॉन्ट्रैक्ट साइन किया गया है।

यह कंपनी भारतीय सेना को 50 टन वाले टैंक ट्रांसपोर्टर ट्रेलर सप्लाई करेगी। ये नए ट्रेलर हाइड्रॉलिक/न्यूमैटिक लोडिंग रैम्प और मूव करने योग्य एक्सल जैसी आधुनिक तकनीकों से लैस हैं। जिससे टैंकों और अन्य बख्तरबंद गाड़ियों को मुश्किल इलाकों में भी तेजी और आसानी से ले जाया जा सकेगा। इनसे सेना की ऑपरेशनल क्षमता में बड़ा इज़ाफा होगा और लॉजिस्टिक सिस्टम भी मजबूत होगा। भारतीय सेना के पास मौजूद T-90 और T-72 टैंक का वजन 35 से 40 टन के बीच है। इन ट्रांसपोर्टर ट्रेलरों का इस्तेमाल इनकी मूवमेंट को और तेज बनाया जा सकेगा। पूर्वी लद्दाख में जब भारतीय सेना ने टैंकों को पहुंचाना था तो ये एयरफोर्स के बड़े ट्रांसपोर्ट एयरक्राफ्ट C-17 ग्लोब मास्टर के जरिए पहुंचाए गए थे। ये टैंक तब एयर बेस पर उतरे थे लेकिन फिर टैंकों को फ्रंट लाइन पहुंचाना था। तब यहां से ट्रेलर की मदद से टैंकों को लाइन ऑफ एक्चुअल कंट्रोल यानी LAC के पास तक पहुंचाया गया था ।

- सेना ने किया 212 मॉडर्न 50 टन टैंक ट्रांसपोर्टर ट्रेलर लेने का कॉन्ट्रैक्ट
- इन ट्रांसपोर्टर ट्रेलरों का इस्तेमाल इनकी मूवमेंट को और तेज बनाया जा सकेगा।
- लॉजिस्टिक सिस्टम भी मजबूत होगा

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Trump's move casts shadow over US arms deals in India

Source: The Tribune, Dt. 02 Aug 2025

US President Donald Trump's imposition of tariffs and penalties on India is expected to rebound on American defence firms bidding for multi-billion-dollar projects in India, sources said.

For now, New Delhi is holding off on approving any major defence deals with the US until tempers cool, they added.

Barring a few exceptions, most military procurement projects — including fighter jets, transport aircraft, specialised vehicles and anti-tank systems — fall under the 'Make in India' initiative. This means any US company securing a contract must partner with an Indian firm and establish manufacturing facilities locally, marking a strategic shift in India's defence acquisition policy.

Ministry of External Affairs spokesperson Randhir Jaiswal stated, "We have a strong defence partnership with the US, which has been strengthening over the last several years." He added that the relationship has potential to grow further under the India-US 'COMPACT' arrangement for the 21st century.

Among the major deals in the pipeline is India's procurement of six additional Boeing P-8I long-range maritime surveillance aircraft. These aircraft, capable of anti-submarine warfare, were officially confirmed during the Modi-Trump meeting. A joint statement noted that terms for the P-8I deal were agreed upon and the contract is nearing finalisation.

India had earlier procured 12 P-8I aircraft, and the US State Department cleared the additional sale in May 2021. The P-8I platform was used to monitor the LAC during the military standoff with China.

Another significant American offering is the Stryker armoured fighting vehicle. India is exploring variants with amphibious capabilities and integration of the Javelin anti-tank missile. A demonstration for the Indian Army is expected this year. The Army has projected a need for a large number of wheeled armoured fighting vehicles. The US has proposed setting up a global manufacturing base for the Stryker in India.

Talks are also underway to co-produce the Javelin missile in India. A long-term agreement is being negotiated, with Bharat Dynamics Limited (BDL) having signed a memorandum with Raytheon and Lockheed Martin to explore joint manufacturing opportunities.

The largest potential deal on the table is the Indian Air Force's tender to procure and manufacture 114 multi-role fighter jets. US giants Boeing and Lockheed Martin have expressed interest — a deal that would require shifting production lines to India and involve billions of dollars in investment and revenue.

In another joint venture, Lockheed Martin and Tata Advanced Systems Limited (TASL) are bidding to manufacture 80 C-130J special operations aircraft in India. The IAF currently operates a fleet of 12 such aircraft. A dedicated 'Tata Lockheed Martin Aerostructures Limited' facility in Hyderabad already manufactures parts for the global C-130J supply chain. As for rotary-wing platforms, the Indian Army has the option to procure 11 more Apache AH-64E attack helicopters, while the IAF is seeking additional Chinook heavy-lift helicopters — both manufactured by Boeing.

https://www.tribuneindia.com/news/india/trumps-move-casts-shadow-over-us-arms-deals-in-india/

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Indian Coast Guard organises Seminar on Coastal Security

Source: Press Information Bureau, Dt. 01 Aug 2025

Indian Coast Guard (ICG) Headquarters (Eastern Seaboard) conducted a seminar on 'Strengthening Coastal Security through Surveillance, Technology, and Inter Agency Coordination' from 31 July to 01 August 25 at Visakhapatnam. The objectives of the seminar include holistic assessment of the coastal security mechanism, identification of issues encountered by coastal states and stakeholders, and a brainstorming to derive measures to address existing shortcomings.

It may be noted that the coastal security construct has evolved considerably over the past decade, with an ever increasing need for collaborative efforts by all stakeholders to ensure the nation's coastal security. The seminar sought to achieve synergy in the efforts of these stakeholders.

The seminar was organised under the Chairpersonship of Dr. Rajendra Kumar, Secretary (Border Management), Ministry of Home Affairs. Apart from ICG representatives, senior dignitaries and representatives from the Intelligence Bureau, Customs, Narcotics Control Bureau, Coastal Security Police of various states, Ports, Fisheries departments, and other relevant agencies also participated.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2151456

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Exceptional back-end support by different departments of MoD to the Armed Forces was key to Operation Sindoor's success: Raksha Mantri

Source: Press Information Bureau, Dt. 01 Aug 2025

To bolster the security structure and safeguard national interests in today's uncertain times, Raksha Mantri Shri Rajnath Singh has called for enhancing the synergy between civil and military personnel, terming the exceptional back-end support provided by different departments of Ministry of Defence (MoD) to the Armed Forces as key to Operation Sindoor's success. He was addressing the 84th Armed Forces Headquarters (AFHQ) Civilian Services Day event at DRDO Bhawan, New Delhi on August 01, 2025.

Raksha Mantri asserted that a war is fought not just by the military, but the entire country, and in today's rapidly-changing security scenario, there is a need to move ahead with dynamism and innovative spirit while making constant improvements according to the evolving needs. "We cannot leave scope for even the slightest negligence or mistake," he added.

Emphasising that a robust administrative system is integral for a strong military power, Shri Rajnath Singh commended the AFHQ Civilian Services for playing an important role in strengthening the country's security system during war as well as peace time. "AFHQ Services acts as an institutional memory for the Ministry of Defence (MoD). It provides consistency, domain expertise and uniformity in the administration, while playing a key role in policy continuity and establishing civil-military synergy. It is a strong pillar of a modern and integrated national defence system," he added.

Raksha Mantri laid stress on capacity development, urging the AFHQ officials to assess and embrace the best practices being adopted by their counterparts in other Ministries and countries in the fields of training and capability enhancement. “Emerging technologies, new challenges and changing global scenario indicate that training should not be just a formal process, but a continuous cycle of development. Skill upgradation, ethical orientation and behavioural excellence need to be added as integral parts of training,” he said.

Shri Rajnath Singh added that training components must not be limited to technical proficiency, but also include value orientation, which can connect actions with national interests. This would make AFHQ a value-based institution along with an administrative structure, he said.

As part of the event, Raksha Mantri launched a redeveloped website of Office of Joint Secretary & Chief Administrative Officer (www.caomod.gov.in), which will provide all relevant information about the office to the employees and general public. The employees would be able to get the latest orders and updates such as promotion, transfer, status of medical allowance, salary slips and Form-16 etc. Through the website, the employees can also apply for various training courses and workshops of Defence Headquarters Training Institute.

Shri Rajnath Singh also released a book ‘Viksit Bharat@2047: Karmikon Ke Vichar’ and a magazine ‘Samvad’. The ‘Viksit Bharat@2047’ book comprises 40 articles written by employees of various ranks posted in Service Headquarters and Inter Service Organisations. The articles are on various topics related to Viksit Bharat such as digitisation, New Education Policy 2020, Artificial Intelligence, Aatmanirbharta in defence, Green Energy, and Poverty Alleviation. The 32nd issue of the ‘Samvad’ magazine contains travelogues, essays, articles, poems etc by the employees.

Raksha Mantri also presented awards to AFHQ personnel for their achievements in various fields such as sports, and some of the children of the employees who excelled in academics.

Chief of Defence Staff General Anil Chauhan, Chief of the Army Staff General Upendra Dwivedi, Chief of the Air Staff Air Chief Marshal AP Singh, Defence Secretary Shri Rajesh Kumar Singh, Secretary (Ex-servicemen Welfare) Dr Niten Chandra, Secretary, Department of Defence R&D and Chairman DRDO Dr Samir V Kamat and Financial Advisor (Defence Services) Dr Mayank Sharma and other senior officials of MoD were present on the occasion.

AFHQ Day is celebrated on 1st August in recognition of the role of civilian personnel functioning shoulder-to-shoulder with the Service personnel, primarily in the three Integrated Service Headquarters, HQ IDS and 24 Inter-Service Organisations of MoD. The purpose of observing AFHQ Day is to foster esprit de corps of the civilian employees of AFHQ cadres who play the role of a bridge between Service Headquarters and MoD.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2151255

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वाइस एडमिरल संजय वात्स्यायन ने संभाला नौसेना के उप प्रमुख का भार

Source: Jansatta, Dt. 02 Aug 2025

नई दिल्ली में राष्ट्रीय युद्ध स्मारक पर नौसेना स्टाफ के 47वें उप प्रमुख के रूप में कार्यभार संभालने के समारोह के दौरान वाइस एडमिरल संजय वात्स्यायन (दाएं) और वाइस एडमिरल आर स्वामीनाथन (बाएं)।

जनसत्ता ब्यूरो
नई दिल्ली, 1 अगस्त।

वाइस एडमिरल संजय वात्स्यायन ने शुक्रवार को नौसेना के नये उप प्रमुख (वाइस चीफ आफ नवल स्टाफ) के तौर पर प्रभार संभाला। उन्हें गनरी और मिसाइल प्रणालियों का विशेषज्ञ माना जाता है।

नए पदभार को ग्रहण करने से पहले वाइस एडमिरल वात्स्यायन नई दिल्ली स्थित एकीकृत रक्षा स्टाफ मुख्यालय तथा नौसेना मुख्यालय समेत विभिन्न महत्त्वपूर्ण परिचालन, स्टाफ और प्रशिक्षण नियुक्तियों को संभाल चुके हैं। नौसेना ने 'एक्स' पर पोस्ट किया, 'वाइस एडमिरल संजय वात्स्यायन, एवीएसएम, एनएम ने एक अगस्त 2025 को नौसेना के 47वें उप प्रमुख के तौर पर कार्यभार संभाला।' इसमें कहा गया है कि भारतीय नौसेना में एक जनवरी 1988 को शामिल हुए फ्लैग ऑफिसर वात्स्यायन गनरी एवं मिसाइल प्रणालियों के विशेषज्ञ हैं।

उन्होंने वाइस एडमिरल कृष्णा स्वामीनाथन का स्थान लिया, जिन्होंने गुरुवार को वाइस एडमिरल संजय जे सिंह से आइएनएस शिकरा में एक औपचारिक परेड में पश्चिमी नौसेना कमान के फ्लैग ऑफिसर कमांडिंग-इन-चीफ के रूप में कार्यभार ग्रहण किया।

अधिकारियों ने बताया कि फ्लैग ऑफिसर कमांडिंग-इन-चीफ के रूप में पदभार ग्रहण करने पर वाइस एडमिरल स्वामीनाथन ने राष्ट्र की सेवा में सर्वोच्च बलिदान देने वाली वीरों को मुंबई में नौसेना डाकयार्ड में गौरव स्तंभ पर श्रद्धांजलि दी।

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Pushpendra, Sanjay new vice-chiefs of Army & Navy

Source: The Asian Age, Dt. 02 Aug 2025

The Army and Navy have got new vice-chiefs. Lt. Gen. Pushpendra Singh, a hardened soldier and veteran of "Operation Pawan" in Sri-Lanka, among others, took charge as the new vice-chief of the Army Staff.

Vice-Adm. Sanjay Vatsayan, a gunnery and missile systems specialist, on Friday assumed charge as the new vice-chief of the Naval Staff.

A distinguished officer from the 4th Battalion of the Parachute Regiment (special forces), Lt. Gen. Singh was commissioned in December 1987.

As a young officer, he joined his battalion during the Indian Peace Keeping Force operations in Sri Lanka. 4 PARA had been inducted into the island nation in October 1987, participating in key operations in Jaffna and later deploying in Kilinochchi.

Vice-Adm. Vatsayan succeeded Vice-Adm. Krishna Swaminathan, who on Thursday assumed charge as the Flag Officer Commanding-in-Chief (FOCinC), Western Naval Command (WNC).

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Electric propulsion engines to power future Indian warships

Source: The Tribune, Dt. 03 Aug 2025

AJAY BANERJEE
TRIBUNE NEWS SERVICE

NEW DELHI, AUGUST 2

A key aspect of India-UK defence cooperation is to manufacture a more powerful engine for future Indian warships — landing platform docks (LPD).

These warships carry troops and can berth close to shore and unload equipment like tanks and vehicles. The engine — an 'electric propulsion' – will be a first for Indian Navy.

On July 30, Defence Advisor to the UK High Commission in India posted on X, "The UK-India defence partnership is set to go bigger."

"We're deepening collaboration in advanced technologies through programmes like Electric Propulsion Capability Partnership (EPCP)," it said.

An electric propulsion engine uses electricity to power the propeller, driving the vessel forward. A diesel or gas powered generator on board the ship produces electricity. So far, propellers of Indian warships are powered by a diesel or gas engines.

As electric propulsion is more fuel-efficient, it leads to longer operational ranges and reduced logistical requirements. An electric propulsion generates less noise enhancing the stealth capabilities of warships, making them harder to detect by enemy submarines and sonar.

The electric propulsion engine would be under an India-UK 'Electric Propulsion Capability Partnership (EPCP)'. It was mentioned in the 'India-UK Vision 2025' released after Prime Minister Narendra Modi met his counterpart Keir Starmer on July 24.

In November last year, the Indian and UK Defence Ministries signed a Statement of Intent on cooperation on design and development of electric propulsion systems for the Indian Navy.

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Science & Technology News

After NISAR, ISRO gearing up for next U.S. collaboration with BlueBird communications satellite launch

Source: The Hindu, Dt. 02 Aug 2025

The Indian Space Research Organisation (ISRO) is hoping to launch the Block 2 BlueBird communications satellite, developed by the U.S.-based AST SpaceMobile, in three to four months from now, chairman of the space agency V. Narayanan said in Thiruvananthapuram, Kerala, on Friday (August 1, 2025).

This Indo-US collaboration follows on the heels of the NASA ISRO Synthetic Aperture Radar Mission (NISAR) which ISRO successfully launched on July 30 using the Geosynchronous Satellite Launch Vehicle (GSLV).

NISAR mission enters critical 90-day commissioning phase

The BlueBird satellite is to be launched from the Satish Dhawan Space Centre, Sriharikota, on board the LVM3, ISRO's heftiest launch vehicle which was formerly known as the GSLV-Mk III, he said.

The BlueBird satellite is expected to arrive in India in September, he said. Work is also progressing on the mission launch vehicle. Mr. Narayanan said that the satellite, weighing aound 6500 kg, was supposed to have arrived three months ago, but “developmental issues” had caused a delay.

New phase: On the NISAR mission

On whether U.S. president Donald Trump’s trade policies would affect collaboration in science and technology, Mr. Narayanan said he “fully believes that whatever technology contracts that India has signed will be executed.”

First uncrewed mission in December

Mr. Narayanan reiterated ISRO’s plans to have the first of three uncrewed missions planned ahead of the Gaganyaan human spaceflight in December 2025. The remaining two uncrewed missions is expected to be held in 2026.

ISRO had earlier announced plans to have the crewed mission in the first quarter of 2027. Mr. Narayanan said that this schedule will be kept after studying the performance of the uncrewed missions.

On the development of the Gaganyaan programme, he said the human-rating of the launch vehicle has been completed. The development of the orbital module is in an “advanced stage,” he said, adding that the development of crew escape system is nearing completion.

India’s space station

Mr. Narayanan also reiterated ISRO’s plans to complete the construction of India’s space station, Bharatiya Antariksh Station, by 2035.

The 52-tonne facility will be developed in five modules, the first of which is expected to be placed in orbit in 2028.

https://www.thehindu.com/sci-tech/science/after-nisar-isro-gearing-up-for-next-us-collaboration-with-bluebird-communications-satellite-launch/article69882412.ece

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Failure analysis on PSLV-C61/EOS-09 mission completed, report to be submitted to PM soon: ISRO chairman V. Narayanan

Source: The Hindu, Dt. 02 Aug 2025

The failure analysis committee has pinpointed the problem that caused the failure of the Polar Satellite Launch Vehicle-C61/Earth Observation Satellite-09 (PSLV-C61/EOS-09) mission in May 2025, V. Narayanan, chairman, Indian Space Research Organisation (ISRO), said on Friday (August 1, 2025).

The analysis is over and the committee’s report will shortly be handed over to Prime Minister Narendra Modi, Mr. Narayanan said on the sidelines of a programme at the CSIR-National Institute of Interdisciplinary Science and Technology (NIIST) in Thiruvananthapuram, Kerala.

What is the PSLV?

Mr. Narayanan described the problem as a “small” one, but said he can reveal the details only after the report is submitted to the Prime Minister.

The PSLV-C61/EOS-09 had a perfect lift-off from the Satish Dhawan Space Centre, Sriharikota, on May 18 this year. The mission objective was to place the EOS-09 satellite in a sun-synchronous polar orbit. However, the mission failed to achieve its objective, causing an unusual setback for the space agency with the PSLV, often described as its trusted workhorse for its reliability.

Immediately afterwards, ISRO had stated that the “PSLV-C61 performance was normal till second stage. Due to an observation in the third stage, the mission could not be accomplished.”

Speaking to the media after the mission, Mr. Narayanan had said that “a fall in chamber pressure in the motor case” had led to the glitch. Subsequently, a failure analysis committee was constituted to track down the problem.

On Friday, Mr. Narayanan said he was “100% confident” about upcoming PSLV missions, of which a number are planned for 2025.

ISRO is planning to have the next PSLV mission in three months’ time, he said. “We are in the process of preparing for the next PSLV launch,” he said.

The PSLV-C61 flight marked the 63rd one of this launch vehicle and the 27th using its ‘XL’ configuration.

https://www.thehindu.com/sci-tech/science/failure-analysis-on-pslv-c61eos-09-mission-completed-report-to-be-submitted-to-pm-soon-isro-chairman-v-narayanan/article69882259.ece

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First LVM3 launch vehicle equipped with semi-cryogenic stage slated to fly in 2027

Source: The Hindu, Dt. 03 Aug 2025

The Indian Space Research Organisation (ISRO) is aiming for a 2027 launch for its first LVM3 launch vehicle equipped with a semi-cryogenic propulsion stage.

“Right now we are on track. The power head tests (on the engine) are progressing with great success. Five to six tests have been completed. We have set the launch target for the first quarter of 2027,” ISRO Chairman V. Narayanan said during a visit to Thiruvananthapuram.

Formerly known as the Geosynchronous Satellite Launch Vehicle Mk III (GSLV Mk III), the three-stage LVM3 had its first experimental flight in December, 2014. It is ISRO’s most powerful rocket to date. The semi-cryogenic stage is designed to make it even more formidable, enhancing payload capability while keeping costs down, Mr. Narayanan said.

Currently capable of lifting 4200 kg payloads to the geosynchronous transfer orbit (GTO), the LVM3 will see significant changes when it is fitted with the semi-cryogenic stage. The L110 core stage, which uses liquid propellant, will be replaced by the semicryo stage which uses a propellant combination of refined kerosene and liquid oxygen (LOX). The propellant loading in the cryogenic upper stage, which uses a Liquid Hydrogen-LOX combination, will increase from 28 tonnes to 32 tonnes.

"The current payload capability of 4200 kg to GTO will increase to 5200 kg with this combination of semi-cryogenic stage and upgraded cryogenic propulsion in the upper stage. The cost of placing the satellite in orbit will come down by 25%," Mr. Narayanan said. The development of the upper stage enhanced to carry 32 tonnes of cryogenic propellant has been completed.

'Very complex engine'

ISRO's semi-cryogenic engine has been in the works for a long time now. Mr. Narayanan described it as a "very complex engine" that uses special materials to withstand high temperatures and oxidiser-rich combustion. Whereas the liquid-fuelled Vikas engine used in the L110 stage gives a nominal thrust of 80 tonnes, the SE2000 semi-cryogenic engine being developed by ISRO is designed to supply 200 tonnes, he said.

Once perfected, the semi-cryogenic engines will see use in ISRO's future launch vehicles as well.

The Liquid Propulsion Systems Centre (LPSC) of ISRO is tasked with developing the semi-cryogenic engine and the stage. Prime Minister Narendra Modi had dedicated the Semi-cryogenic Integrated Engine and Stage Test Facility (SIET) at the ISRO Propulsion Complex (IPRC) at Mahendragiri, Tamil Nadu, in February 2024.

https://www.thehindu.com/news/national/kerala/first-lvm3-launch-vehicle-equipped-with-semi-cryogenic-stage-slated-to-fly-in-2027/article69886681.ece

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India pins HOPEs on Ladakh for human space exploration missions

Source: The Tribune, Dt. 03 Aug 2025

The Indian Space Research Organisation (ISRO) is undertaking a 10-day mission in Ladakh to simulate conditions on Mars as part of its human space flight programme and future planetary explorations.

Located at an altitude of 14,000 feet in the cold, barren terrain of Tso Kar, the project, christened Himalayan Outpost for Planetary Exploration (HOPE), will evaluate the technology and human endurance essential for long-duration missions beyond Earth. India plans to launch astronauts to space by 2027.

"Set in one of Earth's most Mars-like environments, HOPE is designed to simulate planetary conditions for testing human physiological responses, validating mission protocols and evaluating spaceflight technologies. The mission marks a significant milestone in India's preparations for future human spaceflight to low-earth orbit and Moon/Mars class exploration missions," the ISRO posted on X.

Tso Kar Valley has been specifically selected for this mission due to its striking environmental parallels with early Mars, due to high UV flux, low air pressure, cold extremes and saline permafrost. It has a specially designed habitat module for crew living with a diameter of eight meters and a utility module, with a diameter of five meters, for operations and support systems.

Both modules have been interconnected for seamless workflow. Equipped with hydroponics for food, sanitation systems and a self-sustaining kitchen, it will house a crew living in utter isolation for 10 days. In fact, India's highest space observation site, the Indian Astronomical Observatory, is

located at Hanle in south eastern Ladakh as the site is among the most suitable globally for optical, infrared, sub-millimeter and millimeter wavelengths experiments because of the high altitude, dry climate and minimal light pollution.

The Tso Kar Valley has been selected for its striking environmental parallels with early Mars

Importance of mission

Indian Human Spaceflight Programme is a national endeavour led by the ISRO and aims to extend the human presence across solar system, starting with human spaceflight missions to low-earth orbit and achieving Indian crewed lunar landing by 2040.

“This requires undertaking systematic studies to generate necessary Indian subject data for addressing various physiological, psychological and operational challenges associated with human space flight missions. In this regard, ground=based analog missions in environment simulating certain aspects of a typical human space mission provide an opportunity to understand the human health and performance risks,” the ISRO said.

The ISRO’s Human Space Flight Centre (HSFC) is leading this endeavour. An HSFC team led the Ladakh Human Analog Mission (LHAM) in November, 2024, and partnered in the recently concluded 10-day Isolation Study “Anugami” involving ISRO’s Gaganyatri in July, 2025. Continuing this endeavour, HOPE is being undertaken from August 1to 10.

Experiments to be undertaken

In his inaugural address, Dr V Narayanan, Secretary, Department of Space and Chairman, ISRO, stated that this analog mission was more than a simulation, rather it’s a rehearsal for the future. It’s being undertaken in collaboration with an industry partner.

Experiments would be conducted by several partnering national institutions such as Indian Institute of Science and Technology, Bengaluru, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, Indian Institute of Technology (IIT), Hyderabad; IIT, Mumbai and the Institute for Aerospace Medicine, Bengaluru.

Investigators from these institutes would examine epigenetic, genomic, physiological and psychological responses of two analog mission crew members and validate health-monitoring protocols, planetary surface operations and refine sample collection and microbial analysis techniques.

The valuable data generated through these analog missions organised by the HSFC would form the basis for design of protocols and infrastructure for future Indian Human Exploration Missions by providing key insights into technology performance, crew workflows and environmental adaptation.

https://www.tribuneindia.com/news/india/india-pins-hope-on-ladakh-for-human-space-exploration-missions/

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Here comes NISAR: A reminder that high science requires global collaborations

Source: The Indian Express, Dt. 03 Aug 2025

The launch of the world's first remote sensing satellite, Sputnik 1, heralded the era of remote sensing. Since that epic moment in 1957, hundreds of Earth observation satellites have enhanced the understanding of the planet. The NISAR satellite, launched on Wednesday, will capture details on the Earth's surface, which are stunning even by the high standards set in remote sensing in the past 68 years. The satellite, jointly operated by India's premier space research agency ISRO and NASA, will generate 80 TB of data every day, three times more than any other existing Earth observation systems. It will enhance the understanding of ecosystems and enable the study of natural hazards such as earthquakes and landslides at a time when the chances of such environmental threats are much higher compared to any other period in recent human history. NISAR's radar systems will scan nearly all the planet's land and ice surfaces twice every 12 days, tracking shifts as slight as a centimetre. The satellite will be able to see through clouds, smoke, and even thick vegetation, both during the day and at night, in all weather conditions. The information is likely to be available in a matter of hours, enabling governments and even local communities to frame urgent responses during extreme weather events such as floods and storms. NISAR, therefore, promises to be a game-changer in disaster management.

The satellite's power comes from its two synthetic aperture radars (SARs), which are designed to capture complementary sets of images for the same location at the same time. This will provide a much more detailed view of the Earth compared to what has been possible so far. One of the radars can capture minute details, including the planet's undulations, and study trees even in dense forests — this can help estimate carbon stocks. The other SAR, which has a shorter wavelength, is equipped to capture features such as water bodies or fields and provide data on soil moisture and the maturity stages of crops. This could help agriculture research agencies pass on crucial information to farming communities.

Placing two SARs on one satellite was a major engineering challenge. That's one reason NISAR was more than 15 years in the making. The project was initiated by NASA in 2008. ISRO joined the endeavour four years later. The Indian space agency's contribution was crucial to the mission. It designed and built one of the radar systems, created the data handling and downlinking systems and provided NISAR's launch vehicle, the GSLV-F16. The collaboration was spared the funding

cuts inflicted on NASA by the Trump administration. Its success is a message to the US President that high science is almost impossible without meaningful partnerships between nations.

https://indianexpress.com/article/opinion/editorials/here-comes-nisar-a-reminder-that-high-science-requires-global-collaborations-10164457/

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Intervention by India team before Axiom-4 launch helped identify oxidiser line crack: ISRO chairman

Source: The Indian Express, Dt. 04 Aug 2025

Weeks before it finally took off, the Axiom-4 mission, which carried Group Captain Shubhanshu Shukla and three other astronauts to the International Space Station (ISS), was nearly cleared for launch despite a perceived minor oxygen leak — until an ISRO team insisted on further checks that revealed a potentially dangerous crack in the rocket, ISRO Chairperson Dr V Narayanan told The Indian Express.

The Axiom-4 mission took off for space from NASA's Kennedy Space Center in Florida on June 25 after a series of delays since the initial launch date of May 29.

The first launch was deferred to June 8 due to an electrical issue in the SpaceX Dragon spacecraft — the module where the crew was seated. But on June 8, when the engines were test-fired on ground, an oxygen leak was observed in addition to an anomaly in one of the actuators, used in controlling the direction of the rocket's thrust.

Dr Narayanan told The Indian Express that the oxygen leak was deemed minor and unlikely to affect the launch, but the Indian team — 18 scientists including the ISRO chairman and the director of the Human Space Flight Centre — embedded with the Axiom-4 and NASA teams felt something was amiss and pushed for further checks.

"Initially the team thought that there was a minor leak and the mission could proceed as planned. But, the Indian team insisted that proper checks be carried out even if it meant delaying the mission. And it was good that the tests were carried out because a crack was detected, allowing for repair. It was resolved before the mission took off," Dr Narayanan said.

The crack was in the oxidiser line, which carries liquid oxygen to power the rocket — a serious safety risk, especially for a crewed mission.

The crack and other issues were fixed, but on June 12 NASA announced it was working with Russian space agency Roscosmos to evaluate a leak in the Zvezda module, the Russian-built service module of the ISS that houses key life-support and docking systems. This further delayed the mission until the final launch two weeks.

During the mission, the Indian team was present at both Kennedy Space Center in Cape Canaveral where launch operations took place and at mission control in Houston, Texas, where real-time flight operations are managed — from crew health monitoring and communications to emergency response.

Dr Narayanan described the mission as a significant step forward for ISRO's human spaceflight programme, with astronaut training emerging as its single most valuable takeaway. He said Indian scientists got hands-on exposure to how crewed missions are run — from making real-time

decisions and interpreting telemetry data to monitoring astronaut health and responding to in-flight contingencies.

“It was like a classroom where we learnt a lot by working with the other teams there,” he said. “The experience was important for understanding how human space missions are run at an operational level… The training of the astronaut — especially with someone as experienced as the commander — was a big learning experience for the Indian team.”

Axiom-4 commander Peggy Whitson, a veteran astronaut, holds the record for the most number of days spent in space by an American or a woman — 695 days across multiple missions.

India plans to build a sustained human spaceflight programme, with a space station targeted by 2035 and a human Moon mission by 2040. This will require setting up a permanent astronaut corps and regularly training new astronauts, like NASA and Roscosmos do.

In addition to the training, Dr Narayanan said Shukla’s experience of living in microgravity, staying in an isolated environment and returning to Earth would be invaluable for India’s own programme. ISRO has asked Shukla to document his entire experience in detail.

“This,” Dr Narayanan said, “would become teaching material for his fellow astronauts as well as the other astronauts to come.”

Shukla, who returned to Earth with a splashdown on July 15, is currently undergoing reconditioning in the United States. He is expected to remain in quarantine until the first week of August, after which he will participate in a debriefing with NASA and return home by mid-August.

https://indianexpress.com/article/technology/science/intervention-by-indian-team-helped-fix-key-issue-before-axiom-4-launch-isro-chief-10167979/

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Rs. 1 lakh cr fund to boost private sector R&D: Jitendra Singh

Source: The Indian Express, Dt. 02 Aug 2025

New Delhi: Science and Technology Minister Jitendra Singh on Friday said that a fund of ₹1 lakh crore will boost the private sector to drive India's sovereign technology ambitions.

Singh made these remarks while addressing the ASSOCHAM Conference on “Sovereign Tech for India’s Digital Transformation”.

He said the government has launched the ambitious Research, Development, and Innovation (RDI) Scheme to transform private sector R&D, particularly in sunrise and strategic sectors. Singh said the scheme will provide long-term, low-interest loans and risk capital to support deep-tech, critical technologies, and transformative projects. PTI

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