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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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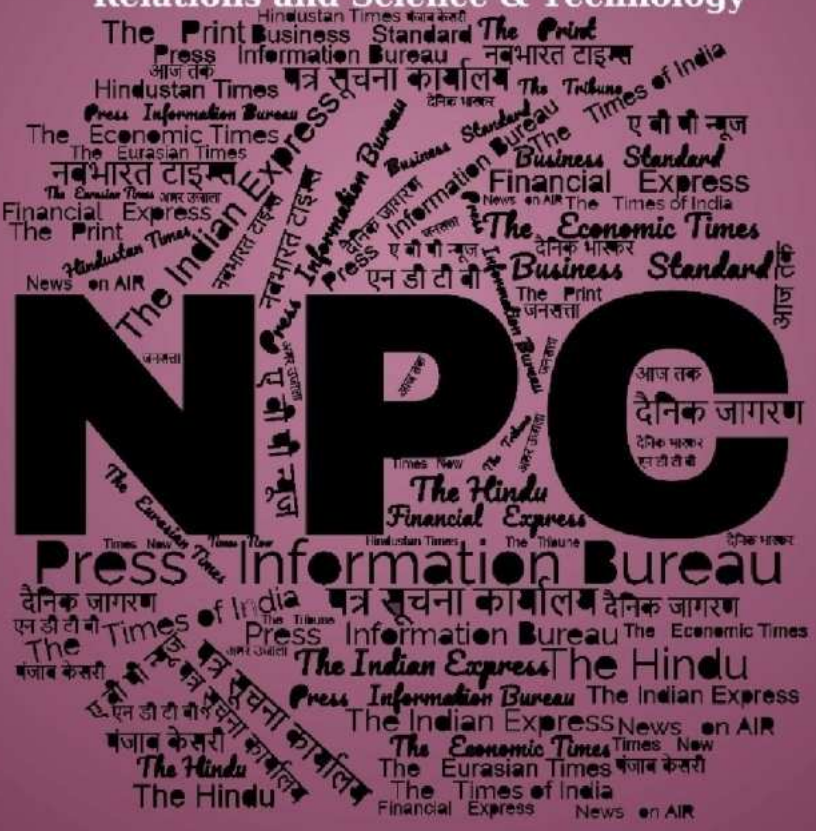

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DRDO News

Space dominance key to future warfare, says CDS; DRDO chief urges whole-of-nation push to close gaps with rivals

Source: The Times of India, Dt. 24 Apr 2026

Emphasising that space is a strategic domain today, Chief of Defence Staff (CDS) General Anil Chauhan said on Thursday that “if we fail in space, we will be forced to fight blind. However, if we dominate in space, we will fight with foresight”.

Making a virtual statement at Indian DefSpace Symposium titled “Strengthening India's Defence and Space Industry Synergy” here, Gen Chouhan said, “Technology is no longer just an enabler. It's reshaping the very calculus of power. In this emerging paradigm, space is no longer a support function. It's a strategic field that influences defence, escalation control and war-fighting outcomes.”

Amid media reports that Iran has integrated China's BeiDou navigation satellite system to boost the accuracy of its missiles and drones targeting US and Israeli assets, CDS said, “Space has evolved into a derivative capability, where services generated by one nation can be leveraged by multiple actors, state as well as non-state alike. This fundamentally affects the application of military force, as is evident in the Iran-US-Israel conflict...This democratisation of space capability is both an opportunity and a strategic vulnerability.”

At the event, DRDO chairman Samir V Kamat called for a “whole-of-nation” approach to close India's capability gap with rivals whose space programmes are expanding at an alarming pace. He, however, stressed that catching up will be a “Herculean challenge” without greater investment and collaboration.

While Isro remains the lead agency for the civilian space programme, Kamat said DRDO has been entrusted with addressing military aspects of space after the formation of the Defence Space Agency. Kamat made it clear that while some “space technologies can still be sourced from abroad, several areas remain restricted and require indigenous development”.

https://timesofindia.indiatimes.com/india/space-dominance-key-to-future-warfare-says-cds-drdo-chief-urges-whole-of-nation-push-to-close-gaps-with-rivals/articleshow/130478507.cms

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Military pushes for private participation in space, more Indian satellites. 'Can't rely on single entity'

Source: The print, Dt 23 Apr 2026

The country's top military leadership Thursday pushed for more Indian satellites as space emerges as not just an enabler but a domain that will decide the outcome of future battles.

They emphasised on the need for the private sector to come forward to bolster future space capability as the country cannot rely on any single agency like the Indian Space Research Organisation (ISRO).

They emphasised the increasing centrality of space in modern warfare and the need for collective strengthening of India's defence and space ecosystems.

"Future space capability will not be built by government agencies alone. It will be co-developed with industry, start-ups, and technology innovators. We must move from using space as a programme to treating it as a continuous operational asset," Chief of Defence Staff (CDS) Gen Anil Chauhan said at the DefSpace Symposium 2026, organised by the Indian Space Association (ISpA).

He added, "We must pursue strategic partnerships without compromising our strategic autonomy. We must build space architecture that is resilient, artificial intelligence-enabled, quantum secure, cyber hardened, rapidly replenishable, and unquestionably sovereign to us. Anything less will leave us in a reactive mode."

DRDO chief Dr. Samir V Kamat said space is not just an enabler, but a domain which is going to decide the outcome of future battles. He also underscored the need for collaboration for the DRDO to catch up to the challenges."…this can be done only if we work in a whole-of-nation approach. There are areas where technologies can be sourced externally, but there are other areas where sovereign capabilities are essential, and these are the areas where DRDO is focusing," he said.

Lt. Gen. Zubin A Minwalla, Deputy Chief of Integrated Defence Staff (Operations) said that the new path for India should be based on speed, agility and intelligent integration of private industry, as relying upon a 'sole agency is suboptimal'.

https://theprint.in/defence/military-pushes-for-private-participation-in-space-more-indian-satellites-cant-rely-on-single-entity/2912428/

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मिशन सुदर्शन चक्र का 'अर्जुन', जिसके सामने हाइपरसोनिक मिसाइल बेबस, चीन का DF-17 भी होगा फेल, S-400 से एडवांस

Source: News 18, Dt. 24 Apr 2026

ईरान जंग ने हवाई हमले के खतरों और उसकी विनाशक क्षमता को एक बार फिर से चर्चा के केंद्र में ला दिया है. दोनों पक्षों की तरफ से अभी तक किसी तरह की जमीनी कार्रवाई नहीं की गई है, लेकिन विनाश इस हद तक हुआ कि पूरी दुनिया में उथल-पुथल मची हुई है. अमेरिका और इजरायल ने ईरान पर मिसाइल एवं फाइटर जेट से हमला कर इंफ्रास्ट्रक्चर को ध्वस्त कर दिया है. बिल्डिंग्स से लेकर सड़क और पुल तक को नष्ट कर दिया गया है. वहीं, ईरान ने भी खाड़ी देशों में स्थित अमेरिकी ठिकानों पर मिसाइल और बम पटककर उसे व्यापक पैमाने पर नुकसान पहुंचाया है. दिलचस्प बात यह है कि दोनों पक्षों में से किसी ने भी लैंड अटैक यानी जमीनी हमला नहीं बोला. 20वीं सदी में हवाई हमले के जरिये इस स्तर तक विनाश करने के बारे में सोचा भी नहीं जा सकता है, लेकिन 21वीं सदी में युद्ध का तौर-तरीका काफी बदल चुका है. एरियल थ्रेट आज हर देश के लिए चिंता का सबब बन चुका है, ऐसे में इससे बचने के उपाय भी तलाशे जा रहे हैं. मॉडर्न रडार सिस्टम के साथ ही S-400, THAAD और आयरन डोम जैसे एयर डिफेंस सिस्टम हवाई खतरों से बचाने में अहम भूमिका निभा रहे हैं. हालांकि, अभी भी कुछ ऐसे खतरे हैं, जिनसे सुरक्षा का मुकम्मल तरीका अभी तक ईजाद नहीं हो सका है. हाइपरसोनिक ऑब्जेक्ट इनमें से एक है. तमाम तरह के एयर डिफेंस सिस्टम के अमल में आने के बावजूद अभी तक हाइपरसोनिक मिसाइलों को डिटेक्ट या उन्हें इंटरसेप्ट करने का तरीका डेवलप नहीं हो सका है. अब रक्षा अनुसंधान एवं विकास संगठन (DRDO) इस दिशा में गंभीरता से काम कर रहा है. DRDO ऐसा रडार सिस्टम डेवलप करने में जुटा है जो हाइपरसोनिक मिसाइल के प्लाज्मा शील्ड को भेदकर उसे डिटेक्ट करने में सक्षम होगा. यह रडार भविष्य में नेशनल एयर डिफेंस सिस्टम 'मिशन सुदर्शन चक्र' (Mission Sudarshan Chakra) को मजबूत करने में अहम भूमिका निभाएगा और देश का एयरस्पेस अभेद्य किला बन जाएगा.

भारत अब हाइपरसोनिक मिसाइलों के खिलाफ अपनी रक्षा क्षमता को एक नए स्तर पर ले जाने की तैयारी में है. देश एक अत्याधुनिक रडार सिस्टम विकसित कर रहा है, जो हाइपरसोनिक गति से उड़ने वाले लक्ष्यों के चारों ओर बनने वाली प्लाज्मा शील्ड को भेदकर उन्हें ट्रैक कर सकेगा. 'इंडियन डिफेंस रिसर्च विंग' की रिपोर्ट के अनुसार, यह परियोजना भारत के रक्षा अनुसंधान ढांचे में उच्च प्राथमिकता पर है और इसे Defence Research and Development Organisation (DRDO) की Electronics and Radar Development Establishment (LRDE) के नेतृत्व में आगे बढ़ाया जा रहा है. हाइपरसोनिक मिसाइलें मैक 5 (ध्वनि की गति से पांच गुना यानी कम से कम 6000 KMPH की रफ्तार) से अधिक गति से चलती हैं. यह आधुनिक युद्ध में सबसे जटिल और खतरनाक हथियारों में गिनी जाती हैं. इनकी सबसे बड़ी चुनौती यह है कि जब ये वायुमंडल में इतनी तेजी से यात्रा करती हैं कि उन्हें इंटरसेप्ट करना असंभव हो जाता है. हवा में प्लाज्मा का आवरण बन जाता है. यह प्लाज्मा शील्ड एक तरह की इलेक्ट्रोमैग्नेटिक बाधा की तरह काम करती है, जो पारंपरिक रडार सिग्नलों को अवशोषित कर लेती है या फिर इसे बिखेर देती है. इससे रडार के लिए इसे डिटेक्ट कर पाना काफी मुश्किल हो जाता है.

नया रडार सिस्टम नेशनल एयर डिफेंस प्रोग्राम 'मिशन सुदर्शन चक्र' की ताकत को बढ़ाने में सहायक होगा. (फाइल फोटो/Reuters)

हाइपरसोनिक थ्रेट के सामने मॉडर्न रडार फिसड्डी

विशेष रूप से X-बैंड और S-बैंड जैसे उच्च आवृत्ति (High Frquency) वाले रडार इस समस्या से अधिक प्रभावित होते हैं. नतीजतन मौजूदा रडार सिस्टम या तो लक्ष्य को ठीक से पहचान नहीं पाते या फिर घोस्ट सिग्नेचर उत्पन्न करते हैं, जिससे सटीक

ट्रैकिंग और इंटरसेप्शन मुश्किल हो जाता है. यही वजह है कि हाइपरसोनिक खतरों से निपटना कन्वेंशनल एयर डिफेंस सिस्टम के लिए बेहद चुनौतीपूर्ण बन गया है. यह चुनौती और बढ़ जाती है जब बात हाइपरसोनिक ग्लाइड व्हीकल्स (HGVs) की होती है. ये पारंपरिक बैलिस्टिक मिसाइलों की तरह निश्चित रास्ते पर नहीं चलते, बल्कि वायुमंडल की ऊपरी लेयर्स में स्किप करते हुए अपनी दिशा बदलते रहते हैं. इस अनिश्चितता के कारण इनका पूर्वानुमान लगाना और इंटरसेप्ट करना और भी कठिन हो जाता है.

https://hindi.news18.com/news/nation/drdo-develop-ultra-modern-radar-system-that-detect-intercept-hypersonic-missile-mission-sudarshan-chakra-s-400-thaad-10400477.html

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Defence News

China in mind, India and Japan move to deepen defence ties

Source: The Indian Express, Dt. 24 Apr 2026

As Japan relaxed restrictions on its arms exports, India on Thursday welcomed the move and said that both sides have committed to “increase practical cooperation in the interest of their national security”.

This assumes significance at a time when both India and Japan are facing the challenge of a belligerent China in the Indo-Pacific neighbourhood. Both countries cooperate bilaterally and multilaterally at the strategic defence and security landscape, including at the Quad grouping.

Japan relaxed decades-old restrictions on its arms exports, and this is seen as a major departure from the pacifism that has characterised its post-World War II defence policy. Restrictions that limit arms exports to just five categories – rescue, transport, warning, surveillance and minesweeping – will be lifted.

This means Japan can now sell lethal weapons to the 17 countries with which it has defence agreements, including the US and the UK.

“In an increasingly severe security environment, no single country can now protect its own peace and security alone,” Japanese Prime Minister Sanae Takaichi wrote on X on Tuesday.

On Thursday, Ministry of External Affairs spokesperson Randhir Jaiswal said, “India welcomes Japan’s Review of the Three Principles on Transfer of Defence Equipment and Technology. Defence and Security Cooperation forms an important pillar of the India-Japan Special Strategic and Global Partnership.”

“As part of the Joint Declaration on Security Cooperation between India and Japan, both sides have committed to increase practical cooperation in the interest of their national security and continued economic dynamism. This includes promotion and facilitation of technological and industrial collaboration between the government entities and private sector stakeholders for resilience in sectors critical to national security,” he said.

Japanese PM Takaichi also said there was “absolutely no change in our commitment to upholding the path and fundamental principles we have followed as a peace-loving nation for over 80 years since the war.”

“Under the new system, we will strategically promote equipment transfers while making even more rigorous and cautious judgments on whether transfers are permissible,” she wrote.

https://indianexpress.com/article/india/china-in-mind-india-and-japan-move-to-deepen-defence-ties-10652840/

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Army Chief Upendra Dwivedi inducted into US Army War College International Hall of Fame

Source: DD News, Dt. 24 Apr 2026

Chief of Army Staff General Upendra Dwivedi was inducted into the International Hall of Fame at the US Army War College (AWC), Carlisle Barracks, in the United States, the Indian Army said on Friday. He is the third Indian Army Chief to receive the honour, after Gen V. K. Singh and Gen Bikram Singh.

In a post on X, the Indian Army said, “General Upendra Dwivedi, COAS, visited the Army War College (AWC), Carlisle Barracks, USA, where he was inducted into the International Hall of Fame — the third Indian Army Chief to receive this honour, after General V. K. Singh and General Bikram Singh.”

“The COAS addressed faculty and international student officers on leadership, professional military education and evolving security dynamics. A USAWC Distinguished Fellow himself, General Upendra Dwivedi is an alumnus of the prestigious college and toured key facilities and participated in academic engagements, including panel discussions, reviewing advanced study projects of the Scholars Programme and interacting with distinguished members of the institution,” it added.

Earlier this week, India’s Ambassador to the US Vinay Mohan Kwatra hosted General Dwivedi at India House ahead of his official engagements in Washington. The Indian Embassy said the visit

follows recent trips by the Chiefs of the Naval and Air Staff, underscoring continued high-level military exchanges between India and the United States.

Describing defence cooperation as a key pillar of the India-US comprehensive global strategic partnership, the embassy said such engagements are expected to further strengthen bilateral ties and support a shared vision for a free, open and prosperous Indo-Pacific region.

Earlier, General Dwivedi was accorded a formal Guard of Honour at Fort Shafter during his visit to US Army Pacific. He also held detailed discussions with Gen Ronald P. Clark and other senior US military officials, focusing on strengthening defence cooperation and advancing shared strategic priorities in the Indo-Pacific.

https://ddnews.gov.in/en/army-chief-upendra-dwivedi-inducted-into-us-army-war-college-international-hall-of-fame/

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Navy Chief Admiral: Boost forces' coordination for Indo-Pacific security

Source: The Pioneer, Dt. 24 Apr 2026

Navy chief Admiral Dinesh K Tripathi stressed the importance of coordination and interoperability among the Army, Navy, Air Force and Coast Guard to address emerging security challenges in the Indo-Pacific.

Admiral Tripathi was on a two-day visit to the Andaman and Nicobar Command (ANC), during which he reviewed the operational preparedness and discussed measures to strengthen jointmanship and enhance synergy among the services.

During the visit from April 21 to 22, Admiral Tripathi held detailed interactions with senior officers and was briefed on ongoing operational activities and initiatives, officials said on Thursday. Discussions focused on strengthening operational synergy, improving readiness and deepening integration among the services, they said.

Highlighting the strategic significance of the islands, Admiral Tripathi reiterated the pivotal role of ANC in ensuring maritime security, enhancing surveillance and maintaining rapid response capability in the region, particularly given its proximity to critical sea lanes of communication.

He also interacted with personnel and commended their professionalism, dedication and high State of operational readiness in safeguarding the nation's maritime frontiers.

Earlier in January, Chief of Defence Staff General Anil Chauhan visited the Andaman and Nicobar Islands and inaugurated the upgraded runway at the Indian Air Force's Car Nicobar air base.

The apron spaces were expanded to enable faster deployment and support long-range missions.

https://dailypioneer.com/news/slug-lite/navy-chief-admiral-boost-forces-coordination-for-indo-pacific-security?year=2026

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Pakistan tests Taimur anti-ship missile with 600-km range: How it could be part of PAF's plan to target Indian Navy ships

Source: The Economic Times, Dt. 24 Apr 2026

The Pakistan Navy carried out a successful live firing of the Taimoor air-launched cruise missile just ahead of operation Sindoor anniversary, demonstrating an indigenous system designed to strike surface vessels at ranges of up to 600 km. Officials said the missile completed its mission with precision, marking a step in Pakistan's ongoing efforts to develop domestic defence capabilities.With a reported strike range of up to 600 km against surface vessels, the missile adds to the range of capabilities that could shape naval operations near Karachi and Gwadar.Pakistan's President, Prime Minister, Chief of Defence Forces and service chiefs commended the scientists and engineers involved in the programme, reports PTI.

Parallel maritime developments

The missile test comes alongside other recent developments. The Pakistan Navy earlier conducted a live firing of an indigenous ship-launched anti-ship missile and inducted the MILGEM-class corvette PNS Khaibar into service. These steps point to efforts to expand maritime strike options across different platforms.

Missile design and features

The Taimoor missile has been developed by Global Industrial and Defence Solutions, a state-run Pakistani defence organisation, as part of the Ra'ad family of cruise missiles. The programme reflects efforts to expand indigenous, modular military capabilities.Designed for stand-off precision

strikes against surface targets, the subsonic missile features low-observable characteristics and can fly at low altitudes using terrain-following and sea-skimming profiles. Taimoor is described as a non-nuclear export variant of the Ra'ad-II air-launched cruise missile, with a reported range of up to 600 km. It is intended for deployment from platforms such as the JF-17 Thunder, indicating a shift from older Mirage aircraft.

Operational implications

With the introduction of an air-launched anti-ship missile Pakistan is reportedly planning to add an additional challenge to India's maritime operations in the Arabian Sea. Such systems allow launch from stand-off distances from air within its own territory, which may influence deployment patterns and operational planning during naval engagements.

Context within existing regional capabilities

India maintains a larger naval fleet with aircraft carriers, destroyers, frigates and layered air-defence systems. Platforms such as INS Vikramaditya and INS Vikrant operate with escort vessels equipped with interception systems, including Barak-8. The Taimoor is reportedly being developed as an addition to Pakistan's existing range of anti-ship weapons but doesn't by itself alter the overall balance against India.

Operation Sindoor

Separately, Navy Chief Admiral Dinesh K Tripathi said that India's deployment of a carrier battle group during Operation Sindoor led to the Pakistan Navy remaining closer to its ports or near the Makran coast. He added that the operation resulted in economic effects, including fewer merchant ships travelling to Pakistan and increased insurance costs for vessels. Operation Sindoor was carried out by Indian security forces on May 7, targeting sites described as terror infrastructure in Pakistan in response to the April 22 Pahalgam attack. More than 100 individuals identified as terrorists were reported killed during the operation.

https://economictimes.indiatimes.com/news/defence/pakistan-tests-taimur-anti-ship-missile-with-600-km-range-how-it-could-be-part-of-pafs-plan-to-target-indian-navy-ships/printarticle/130484852.cms

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Will a potential Su-57 deal lead to IAF opting for Russian MUM-T model over US? Manned-Unmanned Teaming combat EXPLAINED

Source: The Week, Dt: 24 Apr 2026

It was reported earlier this month that the Indian Air Force (IAF), which has been facing a severe fighter squadron shortage, has not given up on the Russian fifth-generation Su-57 offer, despite official claims of not actively pursuing a deal. Delays in key indigenous programmes, particularly the fifth-generation Advanced Medium Combat Aircraft (AMCA), have prompted India to look for stop-gap measures, including the Russian stealth fighter jet.Su-57 two-seater aircraft are central to the Russian Manned-Unmanned Teaming (MUM-T) concept.

The IAF's shortage—operating around 30 squadrons, well below the sanctioned strength of 42—has opened discussions on the possibility of India developing MUM-T collaborations as a way around it. Many air forces around the world have plans to deploy unmanned UAVs—including kamikaze drones and others—to accompany and complement their next generation of fighter aircraft.

Understanding Manned-Unmanned Teaming

As the name indicates, Manned-Unmanned Teaming or MUM-T involves combining conventional human-operated vehicles with unmanned platforms for enhanced effectiveness on the battlefield. Greater situational awareness and decision-making capability can be ensured by MUM-T operations, alongside a reduction in the loss of personnel.

In terms of aerial battlefields, MUM-T generally means the integration of Unmanned Aerial Vehicles (UAVs) with a fleet of manned aircraft. The unmanned UAVs used in MUM-T operations are referred to as Collaborative Combat Aircraft (CCA) drones or "Loyal Wingmen". They are a "disparate array of unmanned aerial systems (UAS) spanning various sizes and capabilities, from agile micro-UAVs for reconnaissance missions to larger and more robust platforms for striking targets and conducting electronic warfare operations. The flexibility of the CCA concept allows for tailored solutions to meet specific mission requirements," a report by UA Navigation said.

The US and Russian models of MUM-T

The US and Russian air forces depend on two different schools of MUM-T autonomy as things stand. The US Air Force is developing a more AI-driven model, while the Russians entrust their human pilots to hold the key to the formation. The United States deploys its single-seat F-35 for MUM-T, while Russia uses the twin-seated Su-57. The "mission commander" in the rear seat of the fighter jet will be entrusted with the simultaneous control of four to eight giant stealth drones called S-70 Okhotnik-B that are part of the formation.

https://www.theweek.in/news/defence/2026/04/24/will-a-potential-su-57-deal-lead-to-iaf-opting-for-russian-mum-t-model-over-us-manned-unmanned-teaming-collaborative-combat-explained.html

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Self-reliance, the key to defence

Source: The Economic Times, Dt. 24 Apr 2026

Self-reliance, the key to defence

Sahil Luthra, founder and managing director of VTDS, is building India's next defence manufacturing venture

As India rapidly pushes self-reliance in defence manufacturing, Sahil Luthra, founder and managing director of Vijayan Trishul Defence Solutions (VTDS), represents a new generation of entrepreneurs stepping into a sector once dominated by large legacy players. With a clear focus on indigenous innovation and strategic manufacturing, Luthra is working to position VTDS as a contributor to India's evolving defence ecosystem.

Based in New Delhi, Luthra founded Vijayan Trishul Defence Solutions in 2024. The company is focused on producing next-generation small arms, ammunition and other mission-ready defence solutions designed for the Indian Armed Forces and law-enforcement agencies.

Sahil Luthra, founder and managing director, VTDS, presenting a memento to Union Defence Minister Rajnath Singh

Indigenous innovation

At VTDS, Luthra's vision aligns closely with the government's Make in India and Atmanirbhar Bharat initiatives, focusing on building indigenous manufacturing capacity while reducing dependence on imported defence equipment. The company is also working toward establishing manufacturing infrastructure within India's emerging defence industrial corridors, reflecting its long-term growth ambitions.

Industry observers view Luthra as part of a rising wave of defence entrepreneurs blending innovation, agility and private sector efficiency with national security priorities. His approach combines strategic partnerships, research-driven development and long-term commitment.

With a clear focus on indigenous innovation and strategic manufacturing, Luthra is working to position VTDS as a contributor to India's defence ecosystem

Recently, VTDS participated as a sponsor at Times Samman 2026, Lucknow, to honour India's defence personnel. Luthra was present alongside senior leaders, including Defence Minister Rajnath Singh and Uttar Pradesh Chief Minister Yogi Adityanath.

While still early in its journey, VTDS reflects Luthra's larger ambition: To help build a modern, self-reliant defence manufacturing ecosystem in India. For him, it is not merely about business, but about contributing to the country's security and technological future.

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11th Joint Defence Committee meeting between India & Egypt held in Cairo

Source: Press Information Bureau, Dt. 23 Apr 2026

The India-Egypt Joint Defence Committee (JDC) held productive discussions towards enhancing bilateral defence cooperation during its 11th meeting in Cairo from April 20 to 22, 2026. The Indian delegation was led by Joint Secretary (International Cooperation) Shri Amitabh Prasad and included senior representatives from the Ministry of Defence and the Defence Forces. The Egyptian delegation was headed by senior officials of the Defence Forces and the Ministry of Defence.

Both sides undertook a comprehensive review of the progress made since the previous JDC meeting and charted out a forward-looking roadmap for defence engagement. They agreed on a bilateral defence cooperation plan 2026-27 focussing on expanding Structured Military interaction mechanisms, strengthening Joint training exchanges, enhancing maritime security cooperation, increasing scope & complexity of military exercises and promoting collaboration in defence production & technology.

The Indian delegation made a presentation on fast growing manufacturing capabilities of the Indian Defence Industry, highlighting the fact that its production has crossed US $20 billion and India is exporting products valuing around US $4 billion to over 100 countries. The two sides agreed to work together to develop a defence industry cooperation plan. The Defence Industry collaboration is emerging as a key pillar of India-Egypt defence ties with both sides exploring opportunities for co-development and co-production in the field of defence manufacturing.

The inaugural Navy-to-Navy Staff Talks were held on the sidelines of the meeting. The stellar role played by the Indian Navy in promoting freedom of navigation in the Indian Ocean region was presented and the key role played by India’s Information Fusion Centre in promoting maritime security was highlighted.

The Indian delegation also called on the Commander of the Egyptian Air Force (EAF) Lieutenant General Amr Abdel Rahman Saqr. The delegation thanked the EAF Commander for the close co-operation between the Air Forces of the two countries.

The Indian delegation also laid a wreath at the HeliPolis War Memorial and paid homage to Indian Bravehearts who made the supreme sacrifice during World War I and II.

A major milestone in India-Egypt defence partnership was the signing of the MoU on cooperation in the field of defence signed in September 2022 during the visit of Raksha Mantri to Egypt. The bilateral ties were elevated to Strategic Partnership in 2023. The 11th meeting reaffirmed the close relationship between the two countries and reinforced their mutual commitment towards regional security and stability.

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RRM Highlights Vital Role of Naval Civilians at Naval Civilian Function 2026 in Delhi

Source: Press Information Bureau, Dt. 23 Apr 2026

Raksha Rajya Mantri Shri Sanjay Seth attended the Naval Civilian Function conducted by the Indian Navy on April 23, 2026 at the Manekshaw Centre, New Delhi. The event was organised to recognise and honour the invaluable contributions of Naval Civilians towards enhancing the operational preparedness and overall effectiveness of the Indian Navy.

Addressing the gathering, RRM lauded Naval Civilians as the 'Neenv ka Pathar' of the Indian Navy, acknowledging their unwavering dedication, professionalism, and commitment. He emphasised that their contributions form a critical pillar in maintaining a combat-ready, credible, and future-ready naval force. Praising the professionalism shown by the meritorious awardees, RRM said that such recognitions are not limited to individual excellence but symbolise the collective efforts of the entire civilian workforce.

The RRM also appreciated the cultural performances presented during the event. Recalling the Pahalgam attack, he expressed pride in the response of the Indian Armed Forces, stating that decisive action ensured that such acts would not be repeated.

On the occasion, the Raksha Rajya Mantri formally inaugurated the iGOT Karmayogi platform, Saksham (NCMIS 2.0) programme and NavKalp initiative. He also underlined the implementation of the Defence Travel System (DTS), enabling cashless air and rail travel for Naval Civilians on official duty. During the event, the 9th edition of Udantika, showcasing organisational achievements, best practices, and knowledge-sharing initiatives, was also released by RRM. Shri Seth reiterated the Government's commitment to resolving all issues concerning Naval Civilians, calling it a crucial responsibility.

During his address, the Chief of Naval Staff Admiral Dinesh K Tripathi highlighted the indispensable role of civilian personnel in strengthening naval preparedness including their role in operational support during Op Sindoor, successful execution of major events such as International Fleet Review (IFR), MILAN, and Indian Ocean Naval Symposium (IONS), and ensuring high operational readiness through logistics and technical support during deployments. Quoting Prime Minister Narendra Modi, he stated that "People's power is the nation's power," underscoring that while platforms, systems, and technologies are essential, the true strength of the Navy lies in its human resources. CNS described Naval Civilians as a vital force multiplier who have consistently contributed to shaping the Indian Navy into a capable and powerful force.

During the event, meritorious and cash awards were presented by the Raksha Rajya Mantri to deserving Naval Civilians in recognition of their outstanding performance and dedication to duty. The awardees, selected from across various commands and units, were honoured for their exemplary

contributions across diverse domains, reflecting professionalism, innovation, and an unwavering commitment to service. The event underscored the Government and Indian Navy's continued commitment to empowering Naval Civilians through progressive initiatives and recognising their integral role in national defence.

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Defence Secretary Inaugurates the Robotic Orthopaedic System and Maternity Operation Theatre at Cantonment General Hospital, Delhi

Source: Press Information Bureau, Dt. 23 Apr 2026

Defence Secretary, Shri Rajesh Kumar Singh inaugurated the Robotic Orthopaedic System and Maternity Operation Theatre at Cantonment General Hospital, Delhi Cantt in the presence of Director General, Defence Estates, Smt. Shobha Gupta and other distinguished guests, on April 23, 2026. The facilities will aid to advanced healthcare services for the residents of the Cantonment and neighbouring municipal areas.

Speaking on the occasion, the Defence Secretary emphasized the importance of modernizing healthcare infrastructure in Cantonments and highlighted the government's continued commitment to ensuring high quality medical services for residents.

The Director General Defence Estates lauded the initiative, noting that such developments will significantly strengthen healthcare delivery systems within cantonment areas and contribute to overall community welfare.

The newly launched Robotic Orthopaedic System represents a major technological upgrade, enabling precision-driven surgical procedures, reduced recovery times and improved patient outcomes. Equipped with a cutting-edge robotic system, the unit is expected to enhance the hospital's capability in handling complex orthopaedic cases with greater accuracy and efficiency. Also, the Maternity Operation Theatre has been designed to provide comprehensive and safe surgical care for expectant mothers.

On the occasion, a brief presentation was also made on the planned upgrades at Cantonment General Hospital which includes a Dialysis Centre, Central Sterile Services Department (CSSD), ICU upgrades, and laboratory expansion over the next three months. Further, over the next one year, facilities such as a Paediatric ICU, Neonatal ICU, CT Scan, MRI, Cancer Screening Unit, High Dependency Unit, Multispecialty Ward, and Surgical ICU are also planned to be developed to further enhance healthcare services.

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Co-develop and co-produce with India in niche tech for secured national interests and global stability & resilience: Raksha Mantri to German industry captains in Munich

Source: Press Information Bureau, Dt. 23 Apr 2026

Raksha Mantri Shri Rajnath Singh has invited the German industry to co-develop and co-produce with India, particularly in the field of niche technologies, as he underscored the need to forge partnerships based on reliability & shared interests, terming them as indispensable in the current shifts in geopolitical alignments, disruptions in supply chains, rapid technological transformations, and increasing global uncertainties. Shri Rajnath Singh was addressing Indian and German Defence Industry leaders during the Defence Investor Summit in Munich on April 23, 2026, the final day of his maiden visit to the European nation.

Raksha Mantri asserted that nations and industries are re-evaluating their dependencies, diversifying their supply chains, and seeking reliable partners who ensure resilience, continuity & mutual trust. He stated that India, in this scenario, offers an expanding market, young & skilled workforce, and a rapidly evolving industrial ecosystem, coupled with stability, predictability, and a commitment to the rule of law. These are the critical factors for long-term investment decisions in an uncertain world, he said.

Referring to the significant untapped potential under the ReArm Europe and Aatmanirbhar Bharat initiatives, Shri Rajnath Singh reiterated that Indian companies are keen to engage with German companies for co-development and co-production in areas including advanced radar and sensor technology, multi-sensors, AI-enabled Unmanned Aerial Systems, Sonobouys and High Power Low Frequency Underwater Transmitters.

Raksha Mantri highlighted India's transformative journey of becoming a developed nation by 2047 under the visionary leadership of Prime Minister Shri Narendra Modi. This goal, he said, is supported by a clear vision, strong policy direction, and the collective aspiration of 1.4 billion people. "We are one of the fastest-growing and stable major economies in the world, with a strong macroeconomic foundation and a clear policy direction," he added.

Shri Rajnath Singh described India's pursuit of self-reliance as not inward-looking, but about opening new pathways of partnership. "We see self-reliance as the ability to design, develop, and produce in India, in collaboration with trusted partners. We are moving towards a model where India is not merely a buyer of defence equipment, but a partner in design, development, and production. This shift creates new opportunities for global industry. In today's interconnected and interdependent world, partnerships are not optional, they are essential. Our engagement with Germany is rooted in mutual respect and shared interests. It is a partnership that offers mutual benefit, shared growth, and long-term value creation," he said.

Raksha Mantri pointed out that India recognises the significant role of the defence sector in the journey towards becoming a developed nation, and has placed it at the heart of its industrial & technological strategy. “Defence industrial ecosystem encourages collaboration among industry, academia, and research institutions. This leads to the creation of start-ups, the development of niche technologies, and the strengthening of supply chains. In this sense, a strong defence industrial base contributes not only to national security but also to economic resilience and global competitiveness. We aspire to build a strong, modern, and a self-reliant defence industrial base. It is essential for strategic autonomy, and economic future,” he said.

Shri Rajnath Singh told the German industry captains that the Government of India, over the past decade, has undertaken a series of structural reforms to improve the ease of doing business and make India an attractive destination for investment. “Our policies are transparent, predictable, and investor-friendly. We have liberalised our norms, strengthened our regulatory frameworks, and invested heavily in infrastructure,” he said.

On India’s defence industrial sector, Raksha Mantri said: “As a market, India’s defence requirements are substantial and will continue to grow in the coming decades. As a manufacturing base, we offer cost-effective production, a skilled workforce, and access to a large ecosystem of suppliers. As a hub for innovation, our start-up ecosystem, engineering talent, and digital capabilities create fertile ground for co-development of new technologies. Our start-up ecosystem is among the largest in the world, with vibrant centres in cities like Bengaluru, Hyderabad, and Pune. Initiatives such as Start-Up India, Digital India, and Skill India have created an enabling environment for innovation and entrepreneurship. As a partner in global supply chains, collaboration with India can help diversify risks and build resilience. This is not a short-term opportunity. It is a long-term strategic proposition.”

Shri Rajnath Singh appreciated the deepening of India-Germany defence relations through significant industrial partnerships, with a growing focus on co-development and co-production. “Both nations are aligning their industries to create resilient supply chains for defence equipment, particularly in response to geopolitical shifts,” he said.

Raksha Mantri added that India looks forward to a deep and enduring partnership with Germany. If the earlier chapters of India-Germany partnership were written through technology, enterprise, and culture, the next chapter can be written through innovation, capability, and strategic cooperation, he said.

On April 22, 2026, Shri Rajnath Singh visited the TKMS Submarine building facility in Kiel, underscoring the deepening defence engagement between India and Germany. The visit provided an

opportunity to exchange views on advanced maritime capabilities and explore avenues for collaboration in naval technologies, in line with India's defence modernisation priorities.

Earlier, Raksha Mantri held bilateral talks with his German counterpart Mr Boris Pistorius in Berlin, aimed at further strengthening the strategic defence partnership with the European nation. The Defence Industrial Cooperation Roadmap and Implementing Arrangement for Cooperation in UN Peacekeeping Training were inked and exchanged during the meeting.

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Emergency Landing Facility (Elf) Activation at Sultanpur on Purvanchal Expressway

Source: Press Information Bureau, Dt. 23 Apr 2026

The Indian Air Force activated 'Emergency Landing Facility' (ELF) on the Purvanchal Expressway in Uttar Pradesh's Sultanpur District on 22 Apr 26, both by day and night, showcasing its operational capability to bolster its defence readiness. UP State Minister for Panchayati Raj and Minority Welfare Shri Om Prakash Rajbhar, Air Mshl B Manikantan, AOC-in-C, CAC, and other officials were present to witness the IAF aircraft undertake ELF operations.

The operational versatility of the Indian Air Force was demonstrated through the operations by diverse fleet of aircraft, including Jaguar, Mirage-2000, Sukhoi-30 MKI, C-295 and AN-32, alongside Mi-17 V5 helicopter and Garud Commando team. IAF along with UPEIDA and the local civil administration, validated their Standard Operating Procedures for emergency activation of these ELFs, in the shortest possible time frame both by day and by night.

This operation has majorly boosted IAF's capability to undertake unhindered operations even during non-availability of standard runways, showcasing its operational resilience. It has demonstrated the professional flying skills of its aircrew and the capability of its ground crew in activating such expressway airstrips at a short notice. These strategically developed airstrips on national expressways substantially augment operational flexibility and serve as critical force multiplier during emergencies, reinforcing national security and disaster response capabilities.

The collaborative framework between the IAF's operational requirements with UPEIDA's civil infrastructure management and support of the local civil administration, optimizes the operational viability of such highway airstrips. The synergy displayed between the three organisations in the ELF activation, not only strengthens the overall strategic posture of the nation but also enhance the HADR capabilities in the region.

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Science & Technology

China discovers rare Moon mineral that could revolutionise LED technology on Earth

Source: The Times of India, Dt. 24 Apr 2026

Researchers in China have discovered the 11th new lunar mineral, 'Cerium–Magnesium Change-site,' from the first Moon meteorites recovered in China. This important advancement, announced by the China Geological Survey, represents a major development within extraterrestrial geology. The new mineral is colourless, transparent and brittle, with unusual physical characteristics such as a distinct fluorescence effect and generally small grain sizes (less than 10 micrometres) as noted in a study on Bastille Post. Experts believe that the new mineral provides scientists with an important blueprint for investigation into synthesising materials based on the conditions under which the minerals form (pressure and temperature) on the Moon. Importantly, the new mineral has practical, usable applications that will hopefully lead to innovative industrial use in the future, especially with respect to producing high-efficiency LED technology. Discovery like these offers transformative potential for material science, bridging lunar geological insights with next-generation advancements in optoelectronic technology applications.

Characteristics of the newly discovered rare lunar mineral

According to the study published in Bastille Post, identified from a 44-gram solid, spherical, meteorite with a dark molten shell, Cerium-Magnesium Changesite is a new mineral showing signs of being formed in very distinctive geological environments not yet discovered on Earth. The unusual crystalline form and ratio of rare earth Elements in this new mineral indicate that it has been subjected to geologic processes not found on Earth, providing scientists with a unique opportunity to study the types of events that happen in outer space.

How this mineral could advance LED technology

Due to its fluorescent qualities, the Commission on New Minerals and Mineral Names believes this mineral is a potential source for next-generation LED products. Additionally, the composition and

structure will aid scientists in creating novel formulas to help improve the quality and efficiency of synthetic materials used in present-day electronics.

How lunar mineralogy informs the future of space resource utilisation

The discovery of this mineral provides the opportunity for researchers to create links between the geological history of the Earth and the Moon. By determining how cerium and magnesium react under lunar environmental conditions, scientists will gain insights into the formation of the Moon, which will ultimately assist scientists in developing strategies for space exploration and researching the use of natural resources in space.

https://timesofindia.indiatimes.com/articleshowprint/130462766.cms

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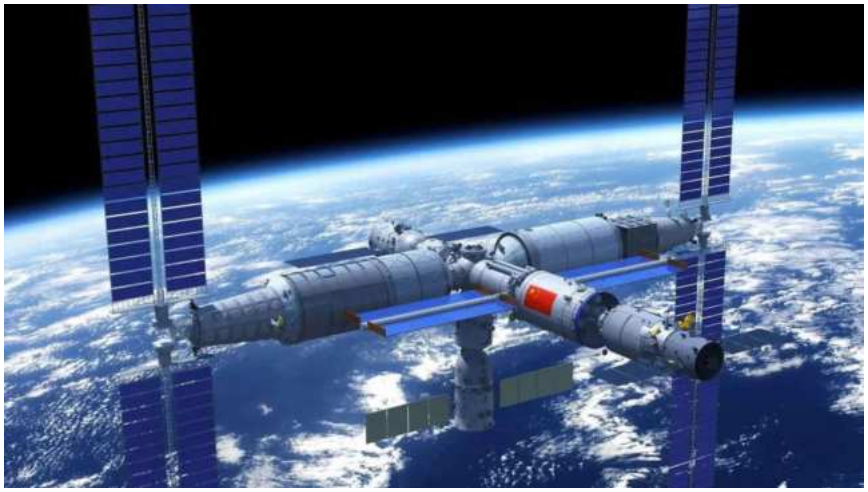
China picks 2 Pakistani candidates for Tiangong space programme

Source: The Times of India, Dt. 24 Apr 2026



Two Pakistani astronauts have been chosen as candidates for an upcoming flight to Tiangong, the Chinese space station, marking another milestone in international cooperation in its manned space exploration programme.

As reported by the China Manned Space Agency (CSMA), Pakistani astronauts Muhammad Zeeshan Ali and Khurram Daud passed several evaluation rounds and are now scheduled to go to China for additional training.

During their training period, these two candidates will receive technical, physiological, and mission-related training before being selected as payload specialists for their mission. If that happens, the astronaut would become the first foreign national to travel to China's space station.

Officials described the development as a major milestone for both China's expanding space ambitions and its growing partnership with Pakistan. It also opens the possibility of Pakistan sending its first astronaut into Earth's orbit, a historic achievement for the country's space efforts.

"*This represents a landmark event for international cooperation aboard the Chinese space station*," the agency said in its statement. It added that the initiative reflects the strengthening

strategic relationship between China and Pakistan, particularly in high-technology sectors such as space exploration.

This decision is one element in China's overall strategy to turn its space programme into a base from which other countries can collaborate. This contrasts with earlier space missions, where only Chinese astronauts were able to take part.

China has emphasised that its human spaceflight programme is open to collaboration with countries around the world. "We welcome all nations to participate in scientific experiments, technological tests, and astronaut training aboard the Tiangong space station," the agency said, highlighting its vision of shared progress in space exploration.

The choice of the two candidates from Pakistan comes after the CMSA and the Space and Upper Atmosphere Research Commission of Pakistan signed a bilateral pact in February 2025. The pact emphasises collaboration in space sciences and astronaut training programmes.

However, as preparations continue, the mission is also attracting significant attention in the international community as a possible game-changer in China's approach to collaborations in space with other nations. If successful, it may open the doors for many more countries to launch their astronauts into Tiangong.

https://indianexpress.com/article/technology/science/china-picks-2-pakistani-candidates-for-tiangong-space-programme-10652429/?ref=science_pg

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