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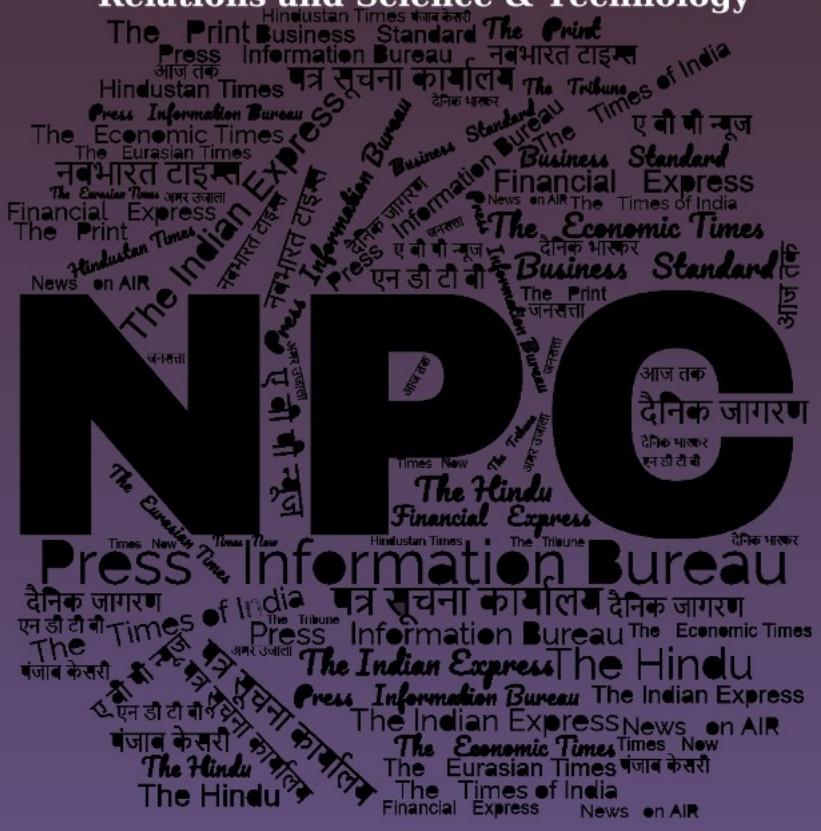

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DRDO News

अग्निवीरों में तनाव झेलने की होगी परख

Source: Dainik Jagran, Dt. 19 Jul 2025

अमित मिश्रा ● नईदुनिया

ग्वालियर: जवानों में तनाव की स्थिति पर व्यापक मंथन के बाद भारतीय सेना ने तय किया गया है कि भर्ती से पहले ही बौद्धिक स्तर और तनाव झेलने की क्षमता की परख कर ली जाए। अग्निवीरों की भर्ती में इस व्यवस्था को लागू भी किया जा रहा है। इसकी जिम्मेदारी भारत सरकार के रक्षा अनुसंधान एवं विकास स्थापना की दिल्ली स्थित इकाई- रक्षा मनोवैज्ञानिक अनुसंधान संस्थान (डीआइपीआर) को सौंपी गई है। डीआइपीआर की टीम द्वारा अग्निपथ योजना के तहत अग्निवीरों की भर्ती में शारीरिक परीक्षा के दौरान अभ्यर्थियों के 15 मिनट के मनोवैज्ञानिक टेस्ट के लिए साफ्टवेयर तैयार किया गया है। अब इससे परीक्षण शुरू किया जाएगा।

रक्षा मनोवैज्ञानिक अनुसंधान संस्थान को सौंपी गई है जिम्मेदारी, मनोवैज्ञानिक परीक्षण के बाद ही मिलेगी अगले चरण की अनुमति

सेना में पहले सिर्फ अधिकारियों का ही होता था मनोवैज्ञानिक परीक्षण : सेना के अधिकारियों के मुताबिक, इससे पहले जेसीओ से लेकर एनडीए, सीडीएस के जरिये सेना में जाने वाले अधिकारियों का ही मनोवैज्ञानिक परीक्षण होता था। यह साक्षात्कार का ही हिस्सा होता है। हालांकि, अग्निवीर भर्ती में मनोवैज्ञानिक परीक्षण का फार्मेट अधिकारियों से अलग है।

अग्निपथ योजना के तहत परीक्षा के लिए आने वाले अभ्यर्थियों का मनोवैज्ञानिक परीक्षण किया जाएगा। उनका बौद्धिक स्तर और तनाव झेलने की क्षमता जानने के लिए यह परीक्षण जरूरी है। कई बार सैनिकों को तनाव का सामना करना पड़ता है, इसलिए यह परीक्षण होगा।

-**कर्नल पंकज कुमार**, निदेशक, सेना भर्ती कार्यालय, ग्वालियर

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MoS Defence visits Abdul Kalam Complex

Source: The Pioneer, Dt. 19 Jul 2025

Minister of State (MoS) for Defence Sanjay Seth visited DRDO's Dr APJ Abdul Kalam Missile Complex in Hyderabad and reviewed the missiles and weapon systems programme being pursued by its various laboratories, officials here on Friday said. He visited the complex on July 16 and 17, the Defence Ministry said.

Seth commended the DRDO scientists for playing a crucial role in building Aatmanirbhar Bharat through realisation of state-of-the-art weapon systems. He exhorted the scientific community to continue strengthening the armed forces to face any challenges in the current scenario.

Seth reviewed the missiles and weapon systems programme being pursued by Defence Research and Development Laboratory (DRDL), Research Centre Imarat (RCI) and Advanced Systems Laboratory (ASL) of missile cluster labs, it said in a statement. The minister visited various work centres of DRDL —Astra Mk I & II, vertically-launched short-range surface-to-air missile and scramjet engine facilities, the ministry said. He was briefed about the status of the projects by Distinguished Scientist and Director General (Missiles and Strategic Systems) U Raja Babu and DRDL Director G A Srinivasa Murthy, it said.

Indigenous beyond visual range air-to-air missile 'Astra' is equipped with state-of-the art guidance and navigation system. Hyderabad-based DRDL, a laboratory of the Defence Research and Development Organisation (DRDO), has taken the initiative in developing a long-duration supersonic combustion ramjet or scramjet powered hypersonic technology.

Earlier in April, the DRDO had conducted scramjet combustor ground testing for more than 1,000 seconds. The Defence Ministry had said that the DRDO had achieved a "significant" milestone in the field of hypersonic weapon technology. Seth also visited various critical work centres of RCI. RCI Director Anindya Biswas apprised him of the progress of the indigenous "navigation/aviation systems, onboard computer division and imaging infra-red seeker facilities", the ministry said.

https://www.dailypioneer.com/2025/india/mos-defence-visits-abdul-kalam-complex.html

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हाइपरसोनिक से कलाम का सपना पूरा

Source: NavBharat Times, Dt. 21 Jul 2025

रंजीत कुमार

मिसाइलों की दुनिया में भारत उस मुकाम तक पहुंच गया है जहां अमेरिका, रूस और चीन पहुंचे हुए हैं। रक्षा शोध एवं विकास संगठन (DRDO) ने आवाज से आठ गुना अधिक गति वाली हाइपरसोनिक क्रूज मिसाइल का सफल परीक्षण किया है, जिसे अगले कुछ सालों के अंदर सेना में शामिल किया जा सकता है। विष्णु प्रॉजेक्ट के तहत भारतीय रक्षा वैज्ञानिकों ने स्क्रैमजेट इंजन आधारित जिस मिसाइल का परीक्षण 12 से 14 जुलाई के दौरान किया, उसका कोई औपचारिक नाम नहीं है, इसे फिलहाल Extended Trajectory Long Duration Hypersonic Cruise Missile (ET-LDHCM) कहा जा रहा है।

कलाम का पहलू। स्क्रैमजेट इंजन पर आधारित हाइपरप्लेन की परिकल्पना डॉ. एपीजे अब्दुल कलाम के कार्यकाल में की गई थी। तब इसे एक दिवास्वप्न बताया गया था। लेकिन पिछले दो दशकों के अथक प्रयासों के बाद अब भारतीय रक्षा वैज्ञानिक इसे साकार कर रहे हैं।

पृथ्वी-अग्नि से अलग। हाइपरसोनिक मिसाइलें आवाज से पांच गुना अधिक मारक गति (mach-5) से हमला करती हैं, जबकि पृथ्वी मिसाइल या मध्यम दूरी तक मार करने वाली अन्य मिसाइलें इससे कम गति वाली यानी सुपरसोनिक कही जाती हैं। भारत ने सबसे अधिक मारक गति वाली ब्रह्मोस सुपरसोनिक क्रूज मिसाइल (mach-2.8) बनाई है, जो कि दुनिया में सबसे तेज गति वाली क्रूज मिसाइल मानी जाती है। इसी मिसाइल ने ऑपरेशन सिंदूर के दौरान पाकिस्तान के नौ वायुसैनिक अड्डों को तहसनहस कर अपनी जबर्दस्त विध्वंसक ताकत दिखाई थी।

दर्जनों मिलाइलों का विकास। हाइपरसोनिक मिसाइलों की खासियत यह है कि इसे दुश्मन की कोई भी हवाई रक्षा प्रणाली आसमान में मार कर गिरा नहीं सकेगी। DRDO के प्रॉजेक्ट विष्णु के तहत विभिन्न किस्मों की ऐसी दर्जन मिसाइलों का विकास किया जा रहा है, जो हाइपरसोनिक गति वाली होंगी। इनमें विमान से लॉन्च करने, युद्धपोत से छोड़ने और जमीन से लॉन्च करने वाली किस्में शामिल हैं।

जल-थल-नभ तीनों में अजेय। हाइपरसोनिक मिसाइलों को यदि युद्धपोतों पर तैनात किया जाए तो यह दुश्मन के पोतों के लिए काल बन सकती हैं क्योंकि इसके हमले को बीच आसमान में रोकने वाली कोई काट नहीं है। इसी तरह इसे विमान से छोड़ा जाए तो दुश्मन के इलाके में काफी भीतर तक मार की जा सकती है। जमीन से भी दुश्मन के ठिकानों पर अचूक मार की जा सकती है। इस तरह जल-थल-नभ में यह हाइपरसोनिक मिसाइल दुश्मन के लिए काफी विनाशकारी साबित होगी।

सैनिकों की जान का बचाव। दुश्मन के इलाके में भीतर मार करने के लिए लड़ाकू विमानों को जोखिम मोल लेते हुए दुश्मन के

वायु क्षेत्र में जाना होता है। लेकिन उन्हीं ठिकानों को लंबी दूरी की बैलिस्टिक मिसाइलों से भी ध्वस्त किया जा सकता है। इसमें अपने किसी सैनिक के शहीद होने का खतरा नहीं रहता है। जाहिर है, भविष्य के युद्ध में मिसाइलों का अधिक से अधिक इस्तेमाल होगा जैसा कि हम इस्राइल ईरान युद्ध में पिछले महीने देख चुके हैं।

पलट सकता है पासा। भारत ने पृथ्वी (350 किमी), अग्नि-1 से अग्नि-5 (1500, 2000, 3000, 4000, 5000 से अधिक किमी तक मार करने वाली मिसाइलें) तैनात की हैं। लेकिन इन्हें एंटी मिसाइल प्रणाली से बीच आसमान में रोका जा सकता है, जबकि नई पीढ़ी की विष्णु हाइपरसोनिक मिसाइलों से युद्ध का पासा ही पलटा जा सकता है। ब्रह्मोस मिसाइलों ने भी ऑपरेशन सिंदूर के दौरान पाकिस्तानी सेना की कमर तोड़ दी थी, लेकिन नई विष्णु मिसाइलें तो दुश्मन की संपूर्ण मिसाइल रक्षा प्रणाली को बेकार साबित कर देंगी।

हवा के ऑक्सिजन से ईंधन। नवीनतम भारतीय हाइपरसोनिक मिसाइल की एक खासियत यह है कि ये स्क्रैमजेट इंजन से संचालित होती हैं, जो हवा से ऑक्सिजन लेकर अपना ईंधन बनाते हैं। ये मिसाइलें 11 हजार किमी. प्रतिघंटे की गति से 1500 किमी. दूर तक वार कर सकती हैं। इन पर 2000 किलो का परमाणु या पारंपरिक बम रखा जा सकता है।

हाइपरसोनिक का जमाना। हाल के रूस-यूक्रेन और इस्राइल-ईरान युद्धों में जिस तरह बैलिस्टिक मिसाइलों ने अपना दमखम दिखाया है, उसके मद्देनजर आने वाले सालों में सैन्य ताकतों द्वारा लंबी दूरी की तेज मारक गति वाली मिसाइलें हासिल किए जाने पर जोर बढ़ेगा। लेकिन जिन देशों के पास हाइपरसोनिक मिसाइलें होंगी वे दुश्मन सेना पर आसानी से हावी हो सकेंगी। हालांकि चीन भी हाइपरसोनिक मिसाइल चला सकता है, जिसे लेकर अमेरिकी रक्षा हलकों में तो चिंता है ही, भारतीय सेना भी अपने स्तर पर सजग है।

बदलेगा शक्ति संतुलन। ऐसी स्थिति में यदि भारतीय सेना के पास हाइपरसोनिक मिसाइल आ जाए तो इससे चीन की सेना में भी खौफ पैदा होगा। खासकर, पाकिस्तान की सेना के लिए तो ये मिसाइलें मौत का पैगाम ही साबित होंगी। हाइपरसोनिक क्रूज मिसाइल के भारतीय सेना में शामिल हो जाने से दक्षिण एशिया में शक्ति संतुलन काफी हद तक भारत के पक्ष में झुक सकता है।

(लेखक सामरिक मामलों के जानकार हैं)

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Defence News

भारत का पहला स्वदेशी ग़ोताख़ोरी पोत निस्तार नौसेना में शामिल

Source: Dainik Jagran, Dt. 19 Jul 2025

विशाखापतनम, प्रेट्र : भारत का पहला स्वदेशी गोताखोरी सहायता पोत निस्तार शुक्रवार को नौसेना में शामिल हो गया। यह रक्षा क्षेत्र में आत्मनिर्भरता की दिशा में बड़ी उपलब्धि है। रक्षा राज्य मंत्री संजय सेठ ने इसे गर्व का क्षण बताया है। 'निस्तार' नाम संस्कृत से लिया गया है और इसका अर्थ है मुक्ति या मोक्ष। इस पोत में अत्याधुनिक गोताखोरी उपकरण लगे हैं। निस्तार को पुराने पोत से बनाया गया है।

जलावतरण समारोह में नौसेना प्रमुख एडमिरल दिनेश के. त्रिपाठी ने कहा, पुराने पोत हमेशा उन्नत रूप में लौटते हैं। इसका पुराना संस्करण 29 मार्च, 1971 को लांच किया गया था। इसने भारत-पाक युद्ध में महत्वपूर्ण भूमिका निभाई थी। अब इसे पुनर्विकसित कर 10,500 टन वजनी बना दिया गया है।

विशाखापतनम में शुक्रवार को आइएनएस निस्तार को भारतीय नौसेना में सम्मिलित किया गया • एएनआइ

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INS Nistar, first indigenously designed and constructed diving support vessel, commissioned

Source: The Hindu, Dt. 19 Jul 2025

The Indian Navy on Friday commissioned INS Nistar, the first indigenously designed and constructed diving support vessel, in the presence of Union Minister of State for Defence Sanjay Seth in Visakhapatnam.

The 118 metre ship, which is the first of two diving support vessels being built by Hindustan Shipyard Limited, is designed to undertake complex deep sea saturation diving and rescue operations — a capability select navies possess across the globe.

In his address, Mr. Seth said the commissioning of INS Nistar firmly reinforces the role of the Indian Navy as the 'first responder' and 'preferred security partner' in the region. Supporting the indigenous shipbuilding industry has been one of the pillars of the government's 'Aatmanirbhar Bharat' campaign. At present, all of the 57 new warships in the pipeline are being constructed indigenously.

The Minister expressed confidence in the capabilities of the armed forces, stating that India stands committed and resolute to tackle any form of misadventure from its adversaries.

Critical support: Navy chief

Speaking on the occasion, Chief of the Naval Staff Admiral Dinesh K. Tripathi termed INS Nistar as not just a technological asset, but a crucial operational enabler. “Nistar will provide critical submarine rescue support to the Indian Navy as well as our regional partners. This will enable India to emerge as a ‘preferred submarine rescue partner’ in this region,” said the Navy chief.

INS Nistar is installed with state-of-the-art diving equipment such as remotely operated vehicles, self-propelled hyperbaric life boat, diving compression chambers. It can undertake diving and salvage operations up to 300 metres depth. It would also serve as the ‘mother ship’ for the deep submergence rescue vessel to rescue and evacuate personnel from a dived submarine in distress well below the surface.

The commissioning of the ship, with a displacement of more than 10,000 tonne, upholds the Navy’s resolve towards continuously strengthening its maritime capabilities in the underwater domain. With participation of 120 MSMEs and incorporating over 80% indigenous content, INS Nistar is a statement to India’s ability to build complex ships at par with international standards.

The commissioning ceremony was attended by senior naval officials, distinguished civilian dignitaries, the crew of erstwhile Nistar and representatives of Hindustan Shipyard Limited.

https://www.thehindu.com/news/national/indigenous-diving-support-vessel-nistar-commissioned-at-vishakapatnam/article69826791.ece

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सैटेलाइट इमेज का दावा, भारत ने पाक के किराना हिल्स पर किया था हमला

Source: NavBharat Times, Dt. 21 Jul 2025

एक्सपर्ट ने कहा, यह बस भारत की एक चेतावनी थी

भारत की ओर से मई में किए गए ऑपरेशन सिंदूर के बाद अब सैटलाइट इमेज से एक बड़ा खुलासा हुआ है। Google Earth की जून में ली गई तस्वीरों का विश्लेषण कर रहे उपग्रह इमेजरी विशेषज्ञ डेमियन साइमन ने किराना हिल्स पर संभावित मिसाइल हमले के संकेत दिए हैं। TOI की रिपोर्ट के अनुसार, यह इलाका पाकिस्तान के सरगोधा जिले में स्थित है और इसे पाकिस्तान के परमाणु हथियारों के भंडारण स्थल के तौर पर जाना जाता है।

साइमन ने एक्स पर शेयर किया कि भारत की ओर से की गई स्ट्राइक किराना हिल्स को निशाना बना सकता है। हालांकि, उन्होंने यह भी स्पष्ट किया कि इमेज से किसी भूमिगत सुरंग या सैन्य संरचना को नुकसान पहुंचने के संकेत नहीं मिलते, जिससे यह हमला एक 'चेतावनी स्ट्राइक' माना जा रहा है। साथ ही, सरगोधा एयरबेस की मरम्मत हुई रनवे भी भारतीय हमले की पुष्टि करते हैं। भारतीय वायुसेना ने 9-10 मई की रात पाकिस्तान के 13 में से 11 प्रमुख एयरबेस को टारगेट कर उन्हें भारी नुकसान पहुंचाया था। इनमें सरगोधा एयरबेस (अब मुशाफ एयरबेस) भी शामिल था, जो किराना हिल्स के नजदीक है।

इसे पाक के परमाणु हथियारों के भंडारण स्थल के तौर पर जाना जाता है।

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Satellite imagery suggests India's missile hit Pakistan's nuclear-hub Kirana Hills

Source: The Times of India, Dt. 20 Jul 2025

More than two months after the Indian govt denied targeting Kirana Hills, where a chunk of Pakistan's nuclear arsenal is believed to be located, fresh imagery from Google Earth, captured in June, appears to indicate that a missile indeed hit the strategically sensitive site in Pakistan's Sargodha district. On May 10, India targeted several key Pakistani military installations as part of Operation Sindoor to avenge the horrific killing of tourists in J&K's Pahalgam by terrorists linked to Pakistan-based terror groups.

The satellite images were analysed and shared by well-known satellite imagery expert and geo-intelligence researcher Damien Symon on X. "Imagery update from Google Earth of the Sargodha region, Pakistan, captured in June 2025, shows — 1. The impact location of India's strike on Kirana Hills in May 2025; 2. Repaired runways at Sargodha airbase post-India's strikes in May 2025," he shared. Kirana is a heavily-fortified area associated with Pakistan's nuclear weapons programme. It's believed to house an underground nuclear weapons storage facility and serve as a site for nuclear research and testing, including subcritical nuclear tests conducted in the 1980s.

The area is considered strategically important because of the radar stations and tunnels, supposed to be meant for military purpose, located there. The site's proximity to the Sargodha airbase (now rechristened Mushaf airbase) only adds to its strategic importance .In the immediate wake of

Operation Sindoor, the IAF had denied reports that it hit Kirana Hills. Replying to a question on Kirana Hills in a press conference on May 12, Director General of Air Operations Air Marshal AK Bharti had said, “Thank you for telling us that Kirana Hills houses some nuclear installations. We did not know about it. We have not hit Kirana Hills. I did not brief in my briefing yesterday.”

However, DGMO Bharti’s peculiar smile while answering that question then went viral.To an X user’s question on whether the Indian missile strike “indicates that the explosion was deep inside and whether this place which was struck a point of significance like an entrance or an exit”, Symon replied, “No, this along with earlier imagery, neither indicate any subterranean impact or penetration, its just one side of a hill with nothing of value in its immediate vicinity, must've been a warning strike on India’s part, tunnels etc are further away & don’t show any damage.”

In addition to the impact site, the satellite images also showed repaired runways at the Sargodha airbase, further indicating damage sustained during the Indian strikes in May. The rapid repairs suggest the airbase was considered a high-priority strategic asset. India had launched around 15 BrahMos missiles and other precision weapons on the night of May 9-10, targeting key Pakistani airbases. The operation, carried out by the IAF, damaged 11 out of Pakistan’s 13 major airbases, delivering a significant blow to the rival country’s air defence network and military infrastructure.

It was Symon who had earlier dismissed certain Pakistan media outlets’ claims that their military had targeted the Adampur airbase in Punjab allegedly damaging a Su-30MKI and destroying a Russia-developed S-400 air defence system. To dismiss these assertions, Symon had then provided imagery from March 2025, well before the conflict, which depicted a MiG-29 undergoing routine maintenance. After the conflict ended, PM Narendra Modi went to the Adampur airbase and posed with security personnel with an S-400 missile defence battery in the background, debunking Pakistan’s claims.

https://timesofindia.indiatimes.com/india/satellite-imagery-suggests-indias-missile-hit-pakistans-nuclear-hub-kirana-hills/articleshow/122791325.cms

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INS Sandhayak visits Malaysian port to boost maritime

Source: The Pioneer, Dt. 20 Jul 2025

INS Sandhayak, the first of the indigenously designed and built hydrographic survey ship, is visiting Port Klang in Malaysia to foster international goodwill and elevate awareness of the MAHASAGAR vision.

Mutual and Holistic Advancement for Security and Growth Across Regions or MAHASAGAR vision of India seeks to boost regional maritime cooperation.

INS Sandhayak, the Indian Navy’s indigenously designed and constructed survey vessel (large), made her maiden port call at Port Klang, Malaysia, for hydrographic cooperation from July 16-19.

This visit demonstrates India’s growing role in regional hydrographic capacity building under the Indian Naval Hydrographic Department (INHD) and National Hydrographic Office framework, said a spokesperson of the Indian Navy. INS Sandhayak — the Sandhayak-class hydrographic survey ship — was commissioned in February 2024, he added.

According to officials, the ship has full scale coastal and deep water surveying capacity, oceanographic data collection and is capable of search and rescue (SAR) and humanitarian operations with onboard helicopter and hospital functions.

The ship's maiden visit to Port Klang aims at facilitating technical exchanges and strengthening institutional ties via concerted cooperation like sharing of survey technologies and sustained hydrographic support engagements.

The key activities during the visit include in-depth knowledge-exchange sessions, official receptions and events designed to foster international goodwill and elevate awareness of the MAHASAGAR vision, a Navy official said.

The visit reaffirms India's commitment to regional maritime cooperation, he added.

https://www.dailypioneer.com/2025/india/ins-sandhayak-visits-malaysian-port-to-boost-maritime.html

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मलेशिया पहुंचा स्वदेश निर्मित INS संध्ययाक

Source: Punjab Kesari, Dt. 20 Jul 2025

नई दिल्ली, (पंजाब केसरी): देश में ही डिजाइन और निर्मित पहला हाइड्रोग्राफिक सर्वेक्षण जहाज आईएनएस संध्ययाक अंतरराष्ट्रीय सद्भावना को बढ़ावा देने और 'महासागर' दृष्टिकोण के बारे में जागरूकता बढ़ाने के लिए मलेशिया के पोर्ट क्लैंग का दौरा कर रहा है। अधिकारियों ने शनिवार को यह जानकारी दी। अधिकारियों ने बताया कि भारत क्षेत्रीय सुरक्षा और विकास के लिए पारस्परिक और समग्र उन्नति या 'महासागर' दृष्टिकोण के जरिये क्षेत्रीय समुद्री सहयोग को बढ़ावा देना चाहता है। भारतीय नौसेना के देश में ही डिजाइन और निर्मित भारत का सबसे बड़ा सर्वेक्षण पोत आईएनएस संध्ययाक ने 16-19 जुलाई तक हाइड्रोग्राफिक सहयोग के लिए मलेशिया के पोर्ट क्लैंग में पहली बार लंगर डाला। भारतीय नौसेना के प्रवक्ता ने बताया कि यह यात्रा भारतीय नौसेना जल सर्वेक्षण विभाग (आईएनएचडी) और राष्ट्रीय जल सर्वेक्षण कार्यालय ढांचे के तहत क्षेत्रीय जल सर्वेक्षण क्षमता निर्माण में भारत की बढ़ती भूमिका को दर्शाती है। उन्होंने कहा कि आईएनएस संध्ययाक, संध्ययाक श्रेणी का हाइड्रोग्राफिक सर्वेक्षण जहाज है और इसे फरवरी 2024 में नौसेना की सेवा में शामिल किया गया था।

अधिकारियों ने बताया कि जहाज में तटीय और गहरे पानी का पूर्ण सर्वेक्षण करने, समुद्र विज्ञान संबंधी डेटा एकत्र करने की क्षमता है तथा यह हेलीकॉप्टर और अस्पताल कार्यों के साथ खोज और बचाव (एसएआर) और मानवीय कार्यों को करने में भी सक्षम है।

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ऑपरेशन सिन्दूर के दौरान तीनों सेनाओं के बीच शानदार तालमेल

Source: Punjab Kesari, Dt. 20 Jul 2025

नई दिल्ली, (पंजाब केसरी): प्रमुख रक्षा अध्यक्ष जनरल अनिल चौहान ने कहा है कि ऑपरेशन सिंदूर के दौरान तीनों सेनाओं के बीच शानदार तालमेल देखने को मिला। जनरल चौहान ने शनिवार को तमिलनाडु के वेलिंगटन में डिफेंस सर्विसेज स्टाफ कॉलेज का दौरा किया। उन्होंने 81वें स्टाफ कोर्स के छात्र अधिकारियों, कॉलेज के स्थायी कर्मचारियों और वेलिंगटन के स्टेशन अधिकारियों को संबोधित किया।

प्रमुख रक्षा अध्यक्ष ने ऑपरेशन सिंदूर पर एक व्याख्यान दिया और भारतीय सशस्त्र बलों के सफल अभियानों के दौरान तीनों सेनाओं के शानदार तालमेल के महत्वपूर्ण पहलुओं का उल्लेख किया।

कॉलेज के संकाय सदस्यों के साथ बातचीत करते हुए जनरल चौहान ने तीनों सेनाओं के एकीकरण और संयुक्तता की अनिवार्यता, क्षमता विकास, आत्मनिर्भरता और सेना में किए जा रहे परिवर्तनकारी बदलावों पर ज़ोर दिया। कॉलेज के

● कॉलेज में अभी 45 सप्ताह का 81वां स्टाफ कोर्स चल रहा है

कमांडेंट लेफ्टिनेंट जनरल वीरेंद, वत्स ने उन्हें कॉलेज में प्रशिक्षण गतिविधियों के बारे में भी जानकारी दी। कॉलेज में अभी 45 सप्ताह का 81वां स्टाफ कोर्स चल रहा है। मौजूदा पाठ्यक्रम में 500 छात्र अधिकारी शामिल हैं जिनमें 35 मित्र देशों के 45 छात्र शामिल हैं।

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Op Sindoor proved power of tri-services' synergy: CDS

Source: The Tribune, Dt. 20 Jul 2025

Chief of Defence Staff Gen Anil Chauhan on Saturday delivered a talk on Operation Sindoor at a prestigious military institution and laid emphasis on the tri-services synergy demonstrated during the action by the Indian armed forces.

He visited the Defence Services Staff College, Wellington, Tamil Nadu, and also addressed the student officers of 81st Staff Course, its permanent staff and station officers of Wellington.

"The CDS delivered a talk on Operation Sindoor and emphasised on important aspects of tri-services synergy demonstrated during the successful operations by the Indian armed forces," the Defence Ministry said in a statement.

Later, while interacting with the faculty of the college, Gen Chauhan laid stress on integration and jointness imperatives, capability development, 'Aatmanirbharta' and an in-depth understanding of the transformative changes being pursued in the military.

The CDS was also briefed by the DSSC Commandant, Lt Gen Virendra Vats, on the ongoing training activities at the college, where emphasis is being laid on fostering jointness and inter-services awareness, "specifically with the institutionalisation of the Deep Purple Division", it said. — PTI

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Drone swarming to smarter war rooms: Army's AI roadmap for ops by 2026-27

Source: The Indian Express, Dt. 21 Jul 2025

AMRITA NAYAK DUTTA
NEW DELHI, JULY 20

FROM COORDINATED drone missions (or drone swarming) and real-time battlefield monitoring to combat simulations for troop training, information warfare, and data-backed decision-making — the Indian Army is learnt to have drawn up a detailed roadmap identifying key areas where it plans to deploy Artificial Intelligence (AI), Machine Learning (ML), and Big Data Analytics by 2026–27.

According to sources, one of the immediate priorities is to improve battlefield awareness using AI tools that can process large volumes of information quickly. These include text summarisers built on Large Language Models (LLMs) to scan and condense long reports, AI-powered chatbots, voice-to-text systems, facial recognition, and tools that can detect unusual patterns or threats. AI will also be used to analyse feeds from drones, satellites, aircraft and ground sensors, and fuse this data in real time to support faster, more informed decision-making.

Although the use of AI has been discussed by the Army in the past, it is now being fast-tracked, in the wake of lessons learnt from Operation Sindoor — the Army's cross-border operation in May targeting terror infrastructure in Pakistan and Pakistan-occupied Kashmir.

As part of this push, an AI task force under the Directorate General of Information Systems (DGIS), with representatives from other Army directorates, will soon be set up to oversee the implementation of niche technologies across the force. This will include areas such as training and capacity building, data sharing, maintenance and support, integration, promoting research and development, and

CONTINUED ON PAGE 2

incorporating these technologies into procurement processes.

Sources said the roadmap — which sets specific tactical, operational and strategic goals to be met by 2026–27 — includes deploying AI across a wide range of functions, including decision support systems that can generate counter-intelligence, enhance surveillance, manage logistics and supply chains, analyse Open Source Intelligence (OSINT) and social media, map adversary capabilities, and run wargaming simulations.

These technologies will also be used for better positioning and targeting of equipment, predictive maintenance, and AI-based navigation in environments where GPS access is denied. Decision support systems will further assist in operational planning and threat detection.

To support long-term integration, AI features will be embedded in the General Staff Qualitative Requirements — the technical specifications for all new equipment being procured. The Army also plans to explore retrofitting select AI capabilities into legacy equipment, sources said.

An AI lab is being set up at DGIS to develop and test models, which will also be integrated with AI applications being developed by the Navy and the Air Force. Additionally, the Army is pushing for greater collaboration with industry and academia to advance research in this space.

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Defence panel set to clear purchase of armed drones to plug gaps

Source: Hindustan Times, Dt. 19 Jul 2025

The Defence Acquisition Council (DAC) is set to approve the acquisition of 87 armed medium altitude long endurance (MALE) drones for the Indian armed forces, and the Cabinet Committee of Security, the construction of six airborne early warning and control aircraft which will be based on the Airbus 319 platform -- both measures aimed at plugging key hardware and force-multiplier gaps noticed during Operation Sindoor, people familiar with the matter said .

The Defence Procurement Board headed by defence secretary RK Singh has already approved the acquisition of 87 MALE drones(General Atomics)

These will likely be the first armed drones with Indian military -- the approved acquisition of the Predator MQ 9B drones from the US will not happen before 2028 -- and India has thus far been using Israeli Heron drones for intelligence-surveillance-reconnaissance (ISR) missions and not in a hunting role. The total cost of acquisition is around ₹20,000 crore.

HT learns that the acquisition of 87 MALE drones has already been approved by the Defence Procurement Board (DPB) headed by Defence Secretary R K Singh and now the apex DAC chaired by Defence Minister Rajnath Singh will accord the Acceptance of Necessity (AoN) to the procurement. After AoN, the Defence Ministry will float a Request for Proposal (RFP) in which armed drone companies such as General Atomics, Israeli Aircraft Industries, European consortium (Eurodrone), Adani-Elbit, Tatas, Kalyani Forge and HAL are expected to participate.

Meanwhile, the Cabinet Committee on Security (CCS) is set to give a green signal to the construction of six airborne early warning and control aircraft on the Airbus 319 platform. India has fewer AEW&C aircraft than Pakistan, and the second-hand aircraft will be hardened by Airbus in France before installation of DRDO Netra IA radars, and mission control and communication systems.

The project was hanging fire for quite some time over finance issues, but the people cited above said it was approved as national security needs outweigh any cost escalation. The total project cost is ₹19000 crore with an approved escalation of ₹7000 crore.

The need for armed drones was acutely felt during Operation Sindoor as Pakistan used Turkish and Chinese drones to target India military facilities along the western border. While India only targeted terrorist camps and subsequently, military bases , Pakistan used kamikaze drones to target Jammu, Amritsar, Jodhpur, Bhuj Barnala, Hisar and Bhatinda.

Operation Sindoor was India's direct military action in response to the April 22 Pahalgam terror attack in which 26 people were killed. The operation led to a four-day military confrontation with Pakistan.

While the 87 armed drones with air to ground missiles and laser guided bombs will be acquired through the Make in India route, the defence ministry is also considering retrofitting of 200 ISR Heron ISR drones with armaments in future, the people cited above added. The upgradation project, which will be undertaken by Israel's IAI, will not only involve hardpoints on the wings of the drones but also enhancement of their communication data capabilities so that mission control gets live images of enemy targets to be neutralized.

HT learns that the defence ministry has also asked the Indian armed forces for their urgent requirements such as long distance missiles, mid-air refuelers and long range loitering ammunition.

https://www.hindustantimes.com/india-news/defence-panel-set-to-clear-purchase-of-armed-drones-to-plug-gaps-101752860834910.html

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Army to get 1st batch of Apache helicopters on July 22: Sources

Source: The Pioneer, Dt. 21 Jul 2025

Army will get a big boost regarding its operational readiness with the arrival of first three Apache attack helicopters this week. The Army had inked a $600 million deal with the US for procurement of six helicopters in 2020 and was to get the first batch last year. However, the delivery schedule was delayed by nearly 15 months.

The induction of Apache AH-64E attack helicopters manufactured by Boeing will add muscle to India's combat capabilities along the western border in the wake of Operation Sindoor. According to sources, the first three helicopters are likely to be handed over to the Indian Army's Aviation Corps on July 22. Also known as the 'tanks in the air', the AH-64Es advanced attack helicopters will land at the Indian Air Force's (IAF) Hindon Air Force Station.

The Indian Army had signed a $600 million deal with the United States in 2020 for six Apache attack helicopters, with delivery initially expected between May and June 2024. However, repeated delays due to supply chain disruptions and technical issues faced by the US pushed the delivery timeline to December 2024. As per the original plan, the six helicopters were to arrive in two batches of three.

While the second batch is expected later this year, the first batch has yet to reach India despite the deadline having passed over a year ago. The Army Aviation Corps raised its first Apache squadron at Nagtalao, Jodhpur, in March 2024. Pilots and ground staff were trained and ready for flight operations. The Apache AH-64E helicopters are known for their agility, firepower, and advanced targeting systems and are seen as a crucial addition to the Army's arsenal.

Indian Air Force has already inducted 22 Apache helicopters under a separate 2015 agreement. Army Aviation Corps plays a vital role in supporting frontline operations and conducting diverse missions ranging from reconnaissance to casualty evacuation. The induction of the Apache helicopters is expected to significantly augment the Army's ability to conduct offensive and defensive operations.

Apache helicopters are equipped with state-of-the-art targeting systems that provide accurate data on the target in all weather conditions. They also have night vision navigation systems, which will make the offensive capabilities of the army even more effective. Additionally, they also include the latest communication, navigation, sensor, and weapon systems. The Apache helicopters can be used not only to attack, but also in security, reconnaissance, and peace operations.

Two squadrons of the Indian Air Force are already active - one in Pathankot and the other in Jorhat. The US completed delivery of all 22 Apache attack helicopters to the IAF in July 2020.

Later in the year, when US President Donald Trump (during his first term) visited India, New Delhi signed a deal worth $600 million to buy six Apache helicopters. Under this, the first consignment was to be delivered to India between May and June 2024. However, the deployment was delayed.

https://www.dailypioneer.com/2025/india/army-to-get-1st-batch-of-apache-helicopters-on-july-22---sources.html

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LAC पर होगा नियंत्रण, अगले साल तक एक और सड़क होगी तयार

Source: NavBharat Times, Dt. 20 Jul 2025

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■ **नई दिल्ली:** लद्दाख में रणनीति रूप से अहम देपसांग प्लेन्स और दौलत बेग ओल्डी (DBO) तक नई वैकल्पिक सड़क अगले साल पूरी तरह तैयार हो जाएगी। इसके बाद डीबीओ सेक्टर तक पहुंचने के लिए दो रास्ते हो जाएंगे। जिससे लाइन ऑफ एक्चुअल कंट्रोल (एलएसी) पर भारतीय सेना की स्थिति और मजबूत हो सकेगी। इस सड़क के बन जाने से लेह से डीबीओ तक की दूरी 79 किलोमीटर कम हो जाएगी।

सूत्रों के मुताबिक नई वैकल्पिक सड़क नुब्रा वैली के ससोमा से होते हुए आगे जाएगी। यह अगले साल अक्टूबर-नवंबर तक पूरी तरह ब्लैक टॉप हो जाएगी यानी पक्की सड़क पूरी तरह तैयार हो जाएगी। अभी जो सड़क है वह दरबुक-श्योक-दौलत बेग ओल्डी (DSDBO) है। यह नई सड़क भी इसके पैररल ही चलेगी। ये ससोमा-सासेर ला-सासेर ब्रांगसा-गप्शन से होते हुए DBO तक जाएगी। जानकारों का कहना है कि सासेर ला में सर्दियों में भारी बर्फबारी होती है, इसलिए यह सड़क सिर्फ गर्मियों और कुछ सर्दियों में ही इस्तेमाल की जा सकेगी। इसलिए सासेर ला (दर्रा) के नीचे एक टनल बनाने पर भी विचार हो रहा है।

130 किमी लंबी सड़क

सूत्रों के मुताबिक सासेर ब्रांगसा तक का काम पूरा हो गया है। यह अगले साल अक्टूबर-नवंबर तक पूरी तरह तैयार हो जाएगा। यह सड़क करीब 130 किलोमीटर लंबी है जिसमें 9 पुल बनाए गए हैं। इनकी वजन क्षमता 40 टन है। इन पुलों को अब 70 टन क्षमता वाले पुलों में बदला जा रहा है।

क्यों है डीबीओ अहम

DBO सेक्टर जिसे सब-सेक्टर नॉर्थ भी कहा जाता है, सियाचिन ग्लेशियर से 60 किलोमीटर ईस्ट में और सासेर कांगड़ी रिज के पार स्थित है। मिलिट्री एक्सपर्ट्स कहते हैं कि यही एकमात्र क्षेत्र है जहां पाकिस्तान और चीन के बीच मिलिट्री मिलीभगत की संभावना वास्तविक हो सकती है। DBO सेक्टर में ही देपसांग प्लेन्स हैं। ये अक्साई चिन प्लेटू का एक्सटेंशन है।

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India upgrading 255-km key Ladakh road to counter China

Source: The Tribune, Dt. 21 Jul 2025

Countering China's rapid infrastructure growth, India is upgrading a strategically vital 255-km road in Eastern Ladakh to enable the movement of very heavy vehicles, including tanks and specialised trucks capable of carrying long-range missiles. The existing Darbuk-Shyok-Daulat Beg Oldie (DS-DBO) road, which links Leh with DBO on a 16,600-foot-high plateau, is undergoing an upgrade, sources said.

The entire route, which runs through a desolate and treeless stretch of the Karakoram mountain range, will be strengthened to 'class 70' specifications, meaning the road and all 37 bridges along it will be able to support vehicles weighing up to 70 tonnes. This includes Army tank carriers and missile-transporting trucks.

The DS-DBO road is the only land access to the Galwan Valley, the site of the bloody India-China clash in June 2020. North of DBO lies the Karakoram Pass, which separates Ladakh from China's Xinjiang region, while the strategically important Depsang Plains — where India and China were locked in a military standoff from May 2020 to October 2024 — lie to the east of DBO. The area north of Shyok is referred to as the "sub sector north" (SSN) by the Army.

The Indian military has factored in a scenario where China's People's Liberation Army could push westward into the 16,000-foot-high Depsang Plains and threaten a section of the DS-DBO road, potentially cutting off access to DBO and, by extension, the Karakoram Pass. Indian defensive positions in the SSN are designed to hold back any such thrust by the PLA. Since May 2020, thousands of troops from both sides have been stationed along their respective sides of the Line of Actual Control (LAC). Holding onto the SSN is considered vital, making the DS-DBO road a crucial logistical link.

To reduce dependence on a single route, an alternative Leh-Saser La-Murgo-DBO axis is being developed and is expected to be ready by next year. This alignment is not visible to Chinese Army ground patrols near the LAC.

The Border Roads Organisation is constructing a 4-km-long concrete stretch near Saser La, a 17,800-foot-high pass in the Karakoram. This section will form part of a 56-km military-grade road connecting Sasoma, Saser La and Murgo, where it will merge with the existing DS-DBO route.

A dirt track on the Sasoma-Murgo route was activated in August 2020 during the peak of the India-China military standoff. Since then, the BRO has been working to widen it. In 2022, the National Board for Wildlife cleared the passage of this road through 55 hectares of the Karakoram Wildlife Sanctuary.

https://www.tribuneindia.com/news/borderroadsorganisation/india-upgrading-255-km-key-ladakh-road-to-counter-china

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Matching China in LAC infra, Nyoma airstrip set for Oct ops

Source: The Tribune, Dt. 20 Jul 2025

Matching China in infrastructure development, India is set to provide connectivity to all Army outposts in the Himalayas within five years. Separately, the strategic air base at Nyoma in eastern Ladakh is expected to be completed by October this year.

The Border Roads Organisation (BRO) upgraded the mud-paved runway at Nyoma, located just 30 km from the Line of Actual Control (LAC) with China, into a proper paved runway last year. "The target is to complete the rest of the work by October," said BRO Director General Lt Gen Raghu Srinivasan.

The Nyoma base is being developed to support aircraft launch and recovery, as well as minor maintenance work. This includes setting up radar stations and building habitats for IAF personnel. Located on the banks of the Indus, Nyoma lies 180 km south-east of Leh at an altitude of 13,700 feet, where winter temperatures can drop to minus 20°C, necessitating infrastructure suited to extreme cold.

Once completed, Nyoma will be the fourth IAF base in Ladakh. Leh already serves as an operational base, while Kargil and Thoise (base of Siachen) have full-fledged airstrips. Additionally, Daulat Beg Oldie has a mud-paved runway used for special operations. Though there are two other such runways at Fukche and Chushul, located just 2-3 km from the LAC, these are considered unusable in case of conflict.

On road infrastructure, Lt Gen Srinivasan said, "In another five years, there would be no portion of the border where we will not be able to deploy." The BRO, a wing of the Ministry of Defence, is

working to connect forward Army posts in the northern sector that are currently accessible only on foot. “Now we are connecting those posts with roads,” the DG said.

He acknowledged the challenges faced in Arunachal Pradesh, where the BRO is building two key highways that will link all the state’s valleys seamlessly. Among other major projects is the Shinkun La tunnel, poised to be the world’s highest, which will provide year-round connectivity between Ladakh and Himachal Pradesh and serve as a third access route to Ladakh.

All posts to get connectivity: BRO

- Five-year target: BRO aims to connect all forward Army posts along LAC, replacing foot-only access routes with roads in 5 years
- Arunachal highways: It is building key highways in Arunachal Pradesh to seamlessly connect remote valleys across the eastern frontier
- Shinkun La Tunnel: Set to Be world’s highest, it will offer year-round access between HP and Ladakh, easing military logistics

https://www.tribuneindia.com/news/india/matching-china-in-lac-infra-nyoma-airstrip-set-for-oct-ops/

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To boost surveillance, Govt taps global firms for high-resolution satellite imagery

Source: The Indian Express, Dt. 21 Jul 2025

To boost surveillance, Govt taps global firms for high-resolution satellite imageryIndia is already working on upgrading its satellite capabilities and has fast-tracked deployment of 52 surveillance satellites under the SBS (Space Based Surveillance)-III programme.

With high-resolution satellite imagery proving to be indispensable in evolving battlefield situations, the government is learnt to have reached out to multiple global commercial earth-observation satellite players for sourcing it. The initiation of talks with these satellite imagery providers comes in the wake of Operation Sindoor in May, where it has been inferred that China provided live inputs through satellite support to Pakistan.

Senior Army officials have since said that when the DGMO-level talks were on, Pakistan flagged information about “specific vectors” on the Indian side that were being primed and readied for action, likely from satellite inputs facilities by China. “We are in talks with commercial satellite imagery providers. We have to deepen our surveillance measures,” an official told The Indian Express.

The objective of these discussions is to extend the surveillance envelope and be able to do real-time surveillance at the time of conflicts for more efficient military actions, officials said. The move likely includes Maxar Technologies, which operates some of the world’s most advanced Earth observation satellites that can capture images with 30-centimetre resolution, detailed enough to discern targets such as infrastructure, buildings, artillery gun systems and even vehicles.

When contacted by The Indian Express, Maxar’s spokesperson said they “don’t comment on contract negotiations”. While India’s satellites, including the Cartosat and RISAT, have played a big role in helping defence forces to strategise, track enemy mobilisation and confirm strike impact,

while maintaining real-time situational awareness which prevented any major damage to the country's military assets, these domestic satellites face some limitations in their capabilities.

The Cartosat-3 satellite was designed to offer resolution of up to 30-centimetre, but is claimed to provide good quality imagery at about 50 centimetres. Also, Cartosat-3 operates alone, which limits how frequently it can scan the same area, something that is crucial during fast-paced military engagements where the battlefield is limited to a specific sector. Visibility is crucial, which the Pakistanis are believed to have with Chinese inputs.

Behind the move

India's satellites, including the Cartosat and RISAT, have played a big role in helping defence forces to strategise and maintain real-time situational awareness, but there are some limitations in their capabilities. The move to rope in global players is aimed at plugging these gaps.

India is already working on upgrading its satellite capabilities and has fast-tracked deployment of 52 surveillance satellites under the SBS (Space Based Surveillance)-III programme after Operation Sindoor, to enable efficient and enhanced monitoring of land and sea borders, with stronger imaging and all-weather functionalities.

"They will start launching the satellites from next year onwards and the deployment of all satellites will be completed by 2029," the official said. In October last year, the Union Cabinet approved $3.2 billion for the SBS-III programme to develop next-generation satellites over the next decade. Under the programme, ISRO will manufacture and launch the first 21 satellites, while private companies will handle the remaining 31. The Defence Space Agency will oversee the operation of the newly launched satellite system.

https://indianexpress.com/article/business/to-boost-surveillance-govt-taps-global-firms-for-high-resolution-satellite-imagery-10138903/

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Pakistan again extends closure of sole runway at Rahim Yar Khan airbase that was struck by India during Operation Sindoor

Source: The Indian Express, Dt. 19 Jul 2025

Pakistan has once again extended the closure of the sole runway at its Rahim Yar Khan airbase, which was hit and damaged by India's military strikes on May 10 during Operation Sindoor. As per the latest notice to airmen, or NOTAM, issued by the Pakistan Civil Aviation Authority, the runway will continue to remain closed for flight operations at least till 4:49 am Pakistan time (5:29 IST) on August 6.

On the day of the airstrikes, Pakistan had issued a NOTAM saying that the runway at the airbase will be unavailable for flight operations for a week. Subsequently, it has issued a number of NOTAMs to extend the closure, an indication that the extensive runway repairs needed after India's precision strikes may be taking significantly longer than anticipated initially. Like the previous NOTAMs for Rahim Yar Khan airbase since May 10, the latest notice also said that closure is due to work in progress, without going into specifics, and that the runway will not be available for flight operations.

Rahim Yar Khan, which is in the southern part of Pakistan's Punjab province and faces the Rajasthan frontier, has a dual-purpose airport — it is home to a forward operational base of the Pakistan Air Force (PAF) Central Air Command and the Sheikh Zayed International Airport.

This satellite image provided by Maxar Technologies shows building and other damage at Rahim Yar Khan in Pakistan.

Satellite images released by the Indian armed forces in the days that followed the airstrikes show a large and deep crater in the middle of the Rahim Yar Khan airbase runway. Satellite imagery also showed extensive damage to a building at the airbase.

According to the International Civil Aviation Organization (ICAO), use of the code 'WIP' in a NOTAM refers to work in progress. As per the US Federal Aviation Administration (FAA), 'WIP' describes any work being done on the airport surface. Given that the NOTAM specifically mentions the runway at the airbase, it indicates that work in progress is on the runway itself.

The airbase's sole runway — Runway 01/19 — has a bituminous surface and is 3,000 metres or 9,843 feet in length, per airport data available on Flightradar24.

The airbase was one the multiple key Pakistani military targets that India hit amid a military conflict that lasted four days, before the two nuclear-powered neighbours arrived at a ceasefire understanding on the evening of May 10. The airbase was among the six Pakistani military targets hit on May 10—Rafiki, Murid, Chaklala, Sukkur and Juniya being the other five — by India using "air-launched precision weapons" from fighter aircraft. The Indian response followed Pakistan's "escalatory" and "provocative" actions in which it attempted air intrusions at multiple locations, which were thwarted by the Indian armed forces.

India and Pakistan engaged in the worst fighting in decades in the wake of India's precision strikes at nine terror infrastructure locations in Pakistan and Pakistan-occupied Kashmir as part of Operation Sindoor in the wee hours on May 7. These strikes were in response to the deadly attack at Pahalgam on April 22 in which 26 people, almost all of them tourists, were gunned down by Pakistan-backed terrorists.

Following India's precision strikes at terror infrastructure early on May 7, the tensions saw a major escalation with Pakistan launching drone and missile attacks against India all along the Line of

Control and the international border, and India neutralising Pakistani attacks and retaliating with strikes at Pakistani military assets in various parts of that country.

https://indianexpress.com/article/business/aviation/pakistan-extends-closure-rahim-yar-khan-airbase-operation-sindoor-10134329/

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Don't Loose a Victory

Source: The Times of India, Dt. 21 Jul 2025

Syed Ata Hasnain

Retd Lt General

"How could we be so naive as to allow a major military victory to flounder...50 years after the victory, we lost the very same nation we helped create?" This question has haunted many observers of India's strategic history with regard to Bangladesh, 1971. Answering it becomes essential, especially as we assess the follow-up to Operation Sindoor and India's long-term objectives in Jammu & Kashmir. These are all aspects of conflict management that are often neglected.

India's 1971 war with Pakistan, which led to the creation of Bangladesh, was among the most decisive military victories of the 20th century. It birthed a new nation and showcased Indian military strength and political will. Yet, over time, the warmth between New Delhi and Dhaka faded into estrangement. Today, Bangladesh is no longer among India's reliable partners. How did this happen? The answer lies in a key principle of strategic affairs: initiating and winning a conflict is far easier than managing the peace that follows.

Every conflict follows a progression. It begins with initiation – often dramatic and kinetic. Then comes stabilisation where gains are consolidated, adversaries deterred, and legitimacy secured. After that, conflict termination – when hostilities cease or shift to a new equilibrium. Finally, the most overlooked stage – conflict resolution. This determines whether peace is lasting or temporary, and whether victory can be strategically harvested.

India has historically prioritised the first two stages, often neglecting the latter. Bangladesh is a telling example. After the Pakistani surrender, we withdrew early, released over 93,000 prisoners of war, and facilitated Sheikh Mujibur Rahman's return. But we assumed Bangladesh's gratitude meant no further investment was needed. We saw its independence as our gift, forgetting that its people had fought for their freedom with their own national ethos.

In hindsight, we did little to nurture Bangladesh's national identity or support its sense of agency in liberation. We celebrated our victory but insufficiently endorsed the sacrifices of the Mukti Bahini and the millions who fought, bled, and suffered. The absence of a shared commemorative space in Dhaka speaks volumes. The iconic photograph of the Pakistani surrender on Dec 16, 1971 features no Mukti Bahini or Bangladeshi political representative.

This disconnect struck me years later during UN peacekeeping missions. Working alongside Bangladeshi army contingents, I noticed discomfort when Indian officers invoked 1971 as a basis for camaraderie. Rather than nostalgia, it often evoked silence or unease. None of us had been briefed on this sentiment because few in our military leadership had examined the post-victory relationship. Perhaps our Pakistan fixation overshadowed that necessity. I wonder if it still does.

This lack of post-conflict political and psychological resolution is something we must avoid repeating in the context of Op Sindoor and the broader transformation in J&K since Aug 5, 2019. The abrogation of Article 370 was a tectonic political step, akin to a revolution. Op Sindoor followed six years later, aimed at deterring Pakistan's asymmetric warfare and dismantling terrorist infra. Tactically and operationally, Sindoor was a success. Strategically, it put Pakistan on the back foot. But will this victory endure?

The real battleground is not along the ceasefire line but in the minds of people. Conflict resolution in Kashmir – like in Bangladesh – will be long and demanding.

The goal is not merely territorial security or threat neutralisation, but trust-building, shared narratives, and lasting integration of hearts and minds. This means investing in J&K's youth, enabling their full participation in India's mainstream, and building pride in a pluralistic national identity. It also means fostering friendships across states and faiths and creating platforms where Kashmiri youth don't feel "othered" or under suspicion.

We must also stay alert to emerging threats in psychological, cognitive, and virtual domains – areas where adversaries will try to exploit residual disaffection.

The war of narratives is no less critical than the war of weapons. Psychological operations, disinformation, AI-driven perception shaping, and digitally-stoked grievances will form tomorrow's battle-fronts. Are our institutions resilient enough to uphold the spirit of Aug 5 and Op Sindoor over the long haul?

The answer must be yes. But only if we remain vigilant and wise. History warns us that unmanaged victory becomes deferred conflict. The Treaty of Versailles ended World War I with pomp, only to sow the seeds of World War II. The 2003 Iraq War toppled Saddam Hussein but fractured the region. Victory, if not consolidated, creates space for the defeated to re-emerge. India now has a unique opportunity to shape a new era of peace in J&K. To achieve that, we must avoid complacency, stay alert to invisible frontlines, and remain committed to the long road.

Bangladesh's post-1971 journey is a cautionary tale. It reminds us that nations are built not just by battles, but by the stories and sentiments that follow. By the respect shown to partners, and the emotional bridges constructed long after the last bullet is fired. Bangladesh's choices today are shaped by internal churn, regional dynamics, and broader contestations. Its leadership is confused and diffused. A nuanced diplomatic outreach – one that acknowledges the pride of the Bangladeshi people in their liberation and co-creates a shared historical narrative – can re-anchor the Indo-Bangla relationship.

Applying this lesson to post-Sindoor J&K is equally important.

The writer is a former commander of the Srinagar-based Chinar Corps

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Military College inks pact to boost cyber def system

Source: The Asian Age, Dt. 20 Jul 2025

In a significant step towards boosting cyber defence capabilities, the Military College of Telecommunication Engineering (MCTE), Mhow, has signed an MoU with Amrita Vishwa Vidyapeetham to advance research, innovation, and training in emerging technologies tailored for the armed forces.

The understating will foster mission-critical and future-ready research in emerging technologies, co-create training modules, capsule courses, and certification programs besides faculty and student exchange initiatives.

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How newly commissioned INS Nistar will help save lives in deep sea

Source: The Indian Express, Dt. 19 Jul 2025

Indigenously designed and constructed by Hindustan Shipyard Limited, Nistar is the first of two diving support vessels (DSVs) that were ordered by the Navy in 2018. Its sister ship, Nipun, was launched in 2022, and is expected to be commissioned in the near future.

Meant to support deep-sea diving and submarine rescue operations, these DSVs will enhance India's operational preparedness in the underwater domain and reinforce the country's strategic maritime posture across the Indian Ocean Region (IOR), the Navy said.

Nistar & its capabilities

The original INS Nistar was a submarine rescue vessel acquired by the Indian Navy from the erstwhile Soviet Union in 1969, and commissioned in 1971. It remained in service till 1989, during which time it was the centrepiece of the Navy's diving and submarine rescue operations.

The new Nistar will carry forward this legacy. But unlike its predecessor, it comprises more than 80% indigenous content, with about 120 MSMEs having participated in its construction. This

makes Nistar the first indigenously designed and constructed diving support and submarine rescue vessel in India.

“Nistar is testimony to the growing capability and maturity of our maritime industrial base, and another shining example of Aatmanirbhar Bharat,” Chief of the Naval Staff Admiral Dinesh K Tripathi said during the commissioning ceremony.

With a displacement of around 10,500 tonnes, length of almost 120 metres, beam of more than 20 metres, and an endurance of more than 60 days at sea, the new Nistar is also larger and more capable than its 800-tonne predecessor.

According to the Navy, Nistar’s specialised onboard diving complex has both air and saturation diving systems, which are complemented by underwater remotely operated vehicles (ROVs) and side scan SONARs. Moreover, Nistar will be the mothership of an advanced deep submergence rescue vehicle (DSRV). The Indian Navy acquired two DSRVs from the UK’s M/s James Fisher & Sons in 2018 and 2019 — one each for Nistar and Nipun.

Nistar can also carry a 15-tonne subsea crane, and support helicopter operations. Aboard Nistar is an operation theatre, an intensive care unit, and an eight-bedded hospital with hyperbaric medical facilities, all critical towards meeting the vessel’s operational roles, the Navy said.

Why this matters

The induction of Nistar into the Navy after the successful integration of the two DSRVs is a major milestone for India’s deep-sea capabilities.

With the Navy continuing to expand its submarine arm, it has to reckon with increased operational risks of operating in the deep sea. These risks demand a technologically capable platform for submarine rescue operations — the primary mandate of the Nistar-class vessels.

Officials told The Indian Express that Nistar is built to be both a diving support and a submarine rescue vessel, making it a strategic platform which strengthens India’s position as a net maritime security provider within the IOR and beyond.

With the induction of the two DSRVs in 2018-19, India entered a groupd of only 12 nations with these dedicated capabilities, and one of the very few possessing DSRVs that can be requisitioned by another country and airlifted for rapid international deployment during emergencies.

Until now, however, the Navy relied on commercially leased platforms for the deployment of DSRVs, limiting its instant-deployment capabilities and round-the-clock rescue readiness. Nistar (and Nipun) will change this.

The vessel's dynamic positioning and diving support features mean that the vessel can operate autonomously in the high seas. Officials said that its high transit speed ensures rapid deployment during emergencies, drastically reducing response time in scenarios where every minute counts.

HOW DEEP-SEA RESCUE OPS WORK

IMAGINE THIS. A submarine malfunctions in the deep. Oxygen is fast running out. Hydrostatic pressure keeps the hatch closed, but even if it were to be opened, no human could survive at those depths. All that the trapped crew can do is wait for help.

INS NISTAR — 'salvation' in Sanskrit — is meant for exactly such a situation. It can undertake diving and salvage operations upto 300 m depth, with its DSRV capable of operating 1,000 m under the surface. Here's how deep sea rescues work.

- The first task is to locate the submarine in distress, something easier said than done in the deep-sea gloom. *Nistar* will use ROVs, its advanced sonar system, and DSRV.

- Once the submarine is located, rescuers in the mothership will decide the course of action. If the sub is simply trapped in some underwater debris, ROVs and DSRV equipped with robotic arms and other equipment can try to free it.

(Clockwise from top) Nistar at Visakhapatnam port; DSRV being lowered; inside DSRV. *Indian Navy*

- But the rescue window is small, and the priority is to save personnel stuck underwater. This is where the DSRV comes in. It can attach to the disabled sub's hatch, allowing the crew to be evacuated. India's DSRVs can rescue 14 trapped personnel at a time.

- *Nistar* is also a dive-support ship, with air diving capabilities for shallower depths, and more complex saturation diving capabilities for greater depths. Nistar can support prolonged saturation dives up to 100 metres.

Based in Visakhapatnam, Nistar will serve as the DSRV mothership in the Eastern Seaboard, and Nipun, based in Mumbai, will serve in the Western Seaboard, completing the Navy's dual-coast operational posture.

This arrangement guarantees simultaneous, high-readiness submarine rescue coverage across both maritime frontiers. This strategic capability would be particularly crucial in various maritime humanitarian assistance and disaster relief (HADR) operations carried out by the Navy.

For greater good

Through bilateral agreements and Memorandums of Understanding with other navies, India has committed to sharing its submarine rescue expertise, and providing actual rescue support during emergencies world wide.

"It positions India as a credible first responder in undersea contingencies and amplifies its soft power through the projection of maritime goodwill," an official told The Indian Express. The officer added that the development sends a signal that India's growing naval capabilities are aligned with the shared security interests of its partners and neighbours.

"In a world where underwater operations are becoming more complex and risks more unpredictable, INS Nistar ensures that India not only safeguards its own interests but is also ready and equipped to serve the greater good of global maritime safety," the official said.

https://indianexpress.com/article/explained/all-about-ins-nipun-how-it-will-help-save-lives-in-deep-sea-10135689/

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Government plans defence 'takeover' of Lakshadweep island

Source: The Times of India, Dt. 19 Jul 2025

Bitra Island, one of the 10 inhabited isles in the Lakshadweep archipelago, is set to be taken over by government for defence purposes. There are 105 families on the island and many have opposed the move.

The Lakshadweep revenue department has issued a notification, dated July 11, for a social impact assessment (SIA). It stated that the intention was to transfer the entire island to defence and strategic agencies considering its "strategic location" and "national security relevance".

Lakshadweep MP Hamdullah Sayeed alleged that the move was aimed at disrupting peace in the area and would be opposed tooth and nail.Lakshadweep MP vows to fight for Bitra islandersIn a video message, Lakshadweep MP Hamdullah Syeed asked Bitra natives not to worry or be anxious about the notification.

"As your MP, we held a conference that included leaders from Bitra and Lakshadweep and discussed it in detail. We have decided to fight with the people of Bitra, politically and legally," he said. Sayeed said the government had already acquired land required for defence purposes on several islands.

Targeting Bitra, which has had an indigenous population for decades, without considering any alternative, is unacceptable. He also criticised the administration for not holding any consultation with the islanders. The notification said that a Social Impact Assessment (SIA) was needed as per provisions of the Right to Fair Compensation and Trans- parency in Land Acquisition,

Rehabilitation and Resettlement Act, 2013. Naming the department of revenue as the project developer, it said SIA activities included consultations with all stakeholders of the proposed area, including the gram sabha.

“The SIA and Consent Society, UT of Lakshadweep, will complete the survey of the proposed area under acquisition within two months from the date of the notification,” it said, adding that consent of gram sabhas and/or landowners was not mandatory.

https://timesofindia.indiatimes.com/india/govt-plans-defence-takeover-of-lakshadweep-island/articleshow/122772936.cms

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Science & Technology News

Team makes powerful water filter with help from light, vibrations

Source: The Hindu, Dt. 20 Jul 2025

Scientists from the Institute of Nano Science and Technology (INST) in Mohali, IIT-Dharwad, and IIT-Kharagpur have designed a cheap, reusable water filter. Industrial plants release dyes such as Congo Red and Methylene Blue into rivers and groundwater, from where they can cause stomach, skin, and breathing illnesses. Ozone, Fenton chemistry and other methods work to clean the water, but they burn through chemicals and electricity, expanding cost and the carbon footprint. The new filter has been designed to sidestep these and other problems. Its development was reported in a paper in the July edition of Nano Energy.

Dr Aviru Basu’s research group.

The researchers first 3D printed thin, sponge-like sheets of polylactic acid (PLA), a biodegradable plastic often used in compostable cups. PLA is naturally water-repelling, so the team soaked each sheet in a mild sodium-hydroxide solution to make it water-loving.

Next, they made nanoparticles of bismuth ferrite (BFO) and dipped the prepared PLA sheets into a BFO ink. Treated sheets stayed strong through five reuse cycles, losing only about 3% of their cleaning power.

Under visible light, the BFO acted like a solar-powered catalyst that split water molecules and created highly reactive radicals that shred organic dye molecules. And when shaken by ultrasound, BFO's piezoelectric nature generated an internal electric field that drove the same radical-making reactions even in the dark. Combining both light and vibration yielded piezo-photocatalysis, a process that worked day or night.

During tests, when light and vibration were used together, the filter removed about 99% of Congo Red and 74% of Methylene Blue in 90 minutes. It also partially cleaned real wastewater collected from a textile plant.

To understand its performance, the authors turned to machine-learning regression models. They fed the computer thousands of experimental data points, including dye concentration, catalyst amount, light intensity, and ultrasound frequency.

Modern algorithms such as random forests, XGBoost, and an artificial neural network learned how these factors interacted. The best models closely matched the experimental results, which they hadn't seen, well enough to prove artificial intelligence could accurately forecast how fast the dyes vanished in different conditions.

"We are thinking of scaling up production and using the filter near treatment plants, where water bodies are regularly polluted," Aviru Basu, INST scientist and corresponding author of the paper, said, adding that the team looks forward to its use in Jal Nigam and Namami Gange projects as well.

"Dr. Adreeja Basu, a plant biotechnologist and professor at Chandigarh University, is also helping us a lot in our efforts to make this product more sustainable using plant-derived products," Dr. Aviru Basu added.

https://www.thehindu.com/sci-tech/science/team-makes-powerful-water-filter-with-help-from-light-vibrations/article69807779.ece

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