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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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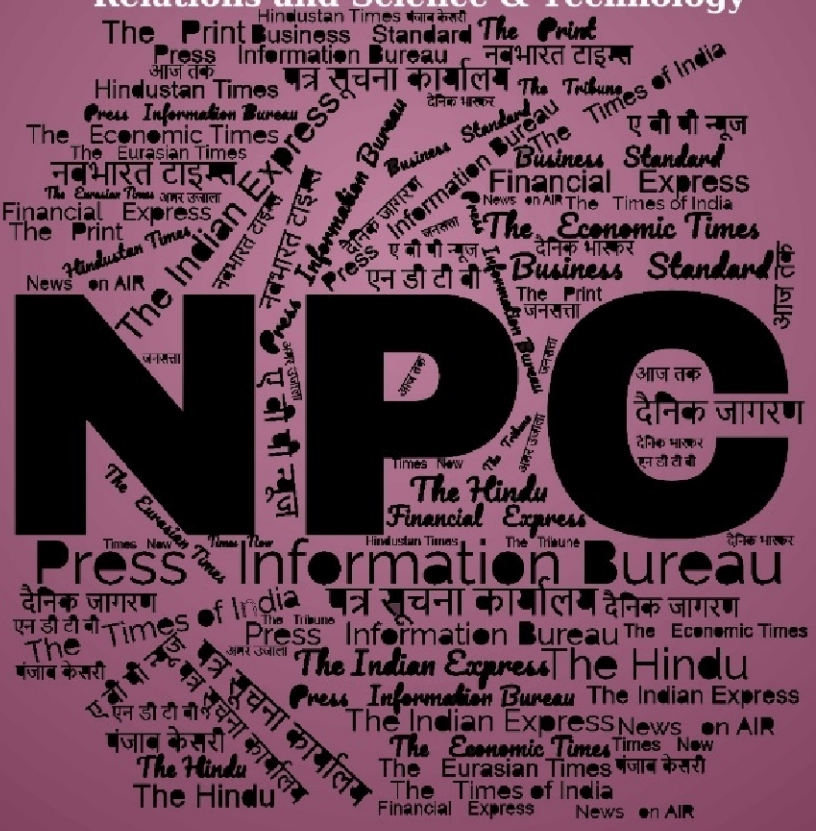

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DRDO NEWS

Two key DRDO-developed armoured platforms unveiled

Source: The Economic Times, Dt. 26 Apr 2026

Two key armoured platforms designed and developed by the DRDO, to meet the emerging operational requirements of the armed forces, were unveiled on Saturday.

The Advanced Armoured Platforms (Tracked and Wheeled), designed and developed by Vehicles Research & Development Establishment, were unveiled by Secretary, Department of Defence (R&D) and Chairman, DRDO, Samir V Kamat at the premises of the DRDO's laboratory in Ahilyanagar, Maharashtra, the defence ministry said.

"The platforms have been developed to meet the emerging operational requirements of the defence forces," it said in a statement. Both the platforms have been integrated with indigenously designed and developed 30 mm crewless turret, with advanced features to meet the mobility, fire power and protection requirements, it said.

The 30 mm crewless turret along with the 7.62 mm PKT gun is configured to launch Anti-Tank Guided Missiles as well. The base design has the capabilities to be configured for multiple roles. The indigenous content is to the tune of 65 per cent with plans to increase it to 90 per cent, the ministry said.

"Integrated with high power engine and automatic transmission, these platforms possess a high power to weight ratio, higher speed capabilities, gradient and obstacle negotiating capability, STANAG (a measure of the level of protection) level 4 and 5 protection with modular blast and ballistic protection all around," the statement said.

Amphibian with improved water obstacle crossing capability by incorporating hydro jets provides operational flexibility in the platforms, it said. The manufacturing of the platforms has been carried out by two industry partners - TATA Advanced Systems Limited and Bharat Forge Limited supported by many MSMEs, the ministry said.

https://economictimes.indiatimes.com/news/defence/two-key-drdo-developed-armoured-platforms-unveiled/articleshow/130516829.cms?from=mdr

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Defence News

Rajnath Singh to attend Shanghai Cooperation Organisation Defence Ministers' meet in Bishkek

Source: The Hindu, Dt. 25 Apr 2026

Defence Minister Rajnath Singh will travel to Bishkek on April 27–28 to attend the Defence Ministers' meeting of the Shanghai Cooperation Organisation (SCO), where regional security challenges and evolving geopolitical dynamics are expected to dominate discussions.

A senior defence official confirmed that Mr. Singh will lead the Indian delegation at the high-level meeting, which will bring together defence ministers from SCO member states. Key issues on the agenda include terrorism, extremism, and regional security concerns amid shifting global alignments.

https://www.thehindu.com/news/national/rajnath-singh-to-attend-shanghai-cooperation-organisation-defence-ministers-meet-in-bishkek/article70902203.ece

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सेना प्रमुख को अंतरराष्ट्रीय हाल आफ फेम

Source: Dainik Jagran, Dt. 25 Apr 2026

भारत के सेना प्रमुख जनरल उपेंद्र द्विवेदी को अमेरिका स्थित पेंसिल्वेनिया के आर्मी वार कालेज के अंतरराष्ट्रीय हाल आफ फेम में शामिल किया गया है। जनरल वीके सिंह और जनरल बिक्रम सिंह के बाद जनरल द्विवेदी अंतरराष्ट्रीय हाल आफ फेम में शामिल होने वाले तीसरे भारतीय सशस्त्र बलों के प्रमुख हैं। सेना प्रमुख द्विवेदी अमेरिका के आर्मी वार कालेज के प्रतिष्ठित फेलो हैं।

भारतीय सेना ने एक पोस्ट में कहा, "जनरल उपेन्द्र द्विवेदी, सीओएएस ने आर्मी वार कालेज (एडब्ल्यूसी), कालिस्ले बैरक्स, यूएसए का दौरा किया, जहां उन्हें अंतरराष्ट्रीय हाल आफ फेम में शामिल किया गया। अमेरिका दौरे पर गए जनरल द्विवेदी ने नेतृत्व, पेशेवर सैन्य शिक्षा और विकसित हो रहे सुरक्षो गतिशीलता पर फैकल्टी और अंतरराष्ट्रीय छात्र अधिकारियों को संबोधित किया। वह इस कालेज के पूर्व छात्र रहे हैं।

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Army chief inducted into International Hall of Fame at US Army War College

Source: The Times of India, Dt. 25 Apr 2026

India's Army chief General Upendra Dwivedi has been inducted into the International Hall of Fame of the US Army War College in Pennsylvania. "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 VK Singh and General Bikram Singh," the Indian Army said on X on Friday.

During his US visit, General Dwivedi also addressed the faculty and international student officers' leadership, professional military education and evolving security dynamics. An alumnus of the prestigious college, General Dwivedi toured key facilities and participated in academic engagements, including panel discussions, reviewing advanced study projects of the scholars program and interacting with distinguished members of the institution.

During his US visit, Gen Dwivedi had held discussions with General Ronald P Clark, Commanding General US Army Pacific, and other senior leaders, focusing on strengthening India-US Defence Cooperation and advancing a shared vision for peace and stability in the Indo-Pacific, the Indian Army said in a social media post. "COAS also undertook an aerial tour of Oahu island, gaining insights into the training ecosystem and multi-domain operational readiness," the Indian Army said.

The Army chief's visit comes close on the heels of the visits of IAF chief Air Chief Marshal A P Singh and Navy chief Dinesh Tripathi to the US, marking the continuance of high-level military-to-military exchanges between India and the US.

https://timesofindia.indiatimes.com/india/army-chief-inducted-into-international-hall-of-fame-at-us-army-war-college/articleshow/130506245.cms

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Theatre command plan gains ground as CDS submits proposal to Rajnath

Source: The Tribune, Dt. 26 Apr 2026

The military has submitted a formal proposal to the Ministry of Defence for the creation of theatre commands. Chief of Defence Staff Gen Anil Chauhan has sent the proposal to Defence Minister Rajnath Singh after years of deliberations with the chiefs of the three armed forces.

The plan will require approval from the Ministry of Defence as well as the Cabinet Committee on Security. According to sources, the proposal recommends appointing four-star theatre commanders, placing them on par with the Service chiefs.

The concept of geographically defined theatre commands also involves decisions on operationalisation. The three Service chiefs have shared their views on the implementation process, which have been incorporated into the proposal. The final decision on execution rests with the government.

Sources say the Defence Minister is expected to have the proposal examined and hold wider consultations on its implementation, including setting a timeline. In military terms, theatre commands refer to geographically defined operational areas under a single commander, who controls all war-fighting assets, including aircraft, helicopters, guns, tanks, equipment and personnel.

The proposal envisages three primary theatre commands: a western theatre focused on Pakistan, likely to be headed by an Indian Air Force officer; a northern theatre focused on China, expected to be led by an Army officer; and a maritime theatre, to be headed by a Navy officer. The military has

also proposed the creation of a Vice-Chief of Defence Staff and deputy commanders for each theatre, drawn from services other than that of the theatre commander.

At the operational level, the CDS is expected to convene a joint commanders' conference in the first fortnight of May to brief the top leadership of the three forces on the roadmap for enhancing jointness and moving towards integrated operations.

A key issue remains the division of IAF assets, with some strategic resources likely to be centrally controlled from Delhi for seamless deployment across theatres. The Tribune had reported on April 9 that the contours of the theatre command structure had been finalised.

https://www.tribuneindia.com/news/india/military-submits-theatre-command-plan-to-defence-minister/

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In a historic first, INS Sudarshini arrives at Las Palmas, Spain

Source: Press Information Bureau, Dt. 24 Apr 2026

The Indian Navy's Sail Training Ship INS Sudarshini arrived at Las Palmas on 23 Apr 2026, as part of her ongoing transoceanic deployment under Lokayan 26. The port call to the Canary Islands archipelago is significant as it marks the maiden visit of an Indian naval ship to the archipelago. The stopover serves as a strategic pause before the ship embarks on her ambitious trans-Atlantic passage.

During the visit, the Commanding Officer of INS Sudarshini is scheduled to hold professional interactions with Spanish Naval authorities. Strengthening people-to-people ties, the ship will also be open to visitors for the local Spanish community and the Indian diaspora.

The visit underscores growing maritime cooperation and engagement between the Indian Navy and the Spanish Navy. Having sailed from Kochi in Jan 2026, INS Sudarshini has undertaken port calls in Oman, Egypt, Malta, France, and Morocco, spreading the message of Vasudhaiva Kutumbakam.

Looking ahead, the ship will undertake a long trans-Atlantic passage with planned participation in Sail 250 commemorative events across various ports in the United States as part of the United States' 250th Independence Day celebrations.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2255252&reg=3&lang=1

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Inauguration of OTM Complex at Puducherry

Source: Press Information Bureau, Dt. 25 Apr 2026

Director General Indian Coast Guard, DG Paramesh Sivamani inaugurated the state-of-the-art OTM Administrative Complex of Coast Guard District Headquarters No. 13 at Puducherry on 25 April 2026. The inauguration marks a significant milestone in strengthening India's maritime security architecture along the eastern seaboard. The newly constructed complex reflects the

vision of a “Modern Force, Modern Infrastructure” and is designed to enhance operational efficiency and administrative capability.

The facility houses an advanced Operations Centre along with the Maritime Rescue Sub Centre, Puducherry, forming a unified hub for command, control and coordination. The integrated infrastructure will enable prompt and effective response to emerging maritime challenges. Coast Guard District Headquarters No. 13, responsible for Puducherry and Central Tamil Nadu, oversees a maritime area of over 140 nautical miles. The Headquarters plays a vital role in ensuring safety of life and property at sea, preserving the marine environment, and safeguarding India’s maritime interests.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2255571&reg=3&lang=1

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आपरेशन सिंदूर की पहली वर्षगांठ : सेना का सख्त संदेश- 'भारत भूलता नहीं है'

Source: Dainik Jagran, Dt. 27 Apr 2026

'आपरेशन सिंदूर' की पहली वर्षगांठ से ठीक पहले भारतीय सेना ने इंटरनेट मीडिया के माध्यम से दुनिया को अपनी शक्ति और संकल्प का परिचय दिया है। सेना ने स्पष्ट कर दिया है कि भारत की संप्रभुता और मानवता की सीमाओं को लांघने वालों को बख्शा नहीं जाएगा। सेना के आधिकारिक पोस्ट में कहा गया, "सटीक प्रहार, आतंकी लक्ष्यों पर निशाना और स्थायी परिणाम" – यही नए भारत की पहचान है। सेना का यह संदेश साफ है - भारत शांतिप्रिय देश है, लेकिन यदि सीमाओं या नागरिकों पर आंच आई, तो न्याय सुनिश्चित किया जाएगा। 'आपरेशन सिंदूर' इसी संकल्प का प्रतीक है कि भारत न भूलता है, न माफ करता है।

पहलगाम का जख्म और न्याय की हुंकार : यह पूरा घटनाक्रम 22 अप्रैल 2025 की उस काली तारीख से जुड़ा है, जब पहलगाम में लश्कर-ए-तैयबा के मुखौटे 'द रेजिस्टेंस फ्रंट' ने धर्म छकर 26 निर्दोष पर्यटकों की नृशंस हत्या कर दी थी। इस घाव को भारत भूला नहीं है। सेना ने चेतावनी देते हुए कहा कि जब इंसानियत की हदें पार की जाती हैं, तो जवाब निर्णायक होता है। इस हमले के जवाब में, भारतीय सशस्त्र बलों ने 6 और 7 मई को 'आपरेशन सिंदूर" शुरू किया। इसके तहत पाकिस्तान और गुलाम कश्मीर में स्थित लश्कर और जैश-ए-मोहम्मद के नौ आतंकी कैंपों को मिट्टी में मिला दिया गया था। यह आपरेशन केवल एक सैन्य कार्रवाई नहीं, बल्कि आतंकवाद के खिलाफ भारत की 'जीरो टालरेंस' नीति का प्रमाण था।

आत्मनिर्भर भारत : नई मुद्रा, नई तैयारी : सेना ने अपने पोस्ट में आपरेशन महादेव' का भी जिक्र किया, जिसके तहत 93 दिनों तक दुर्गण हिमालयी क्षेत्रों में तलाशी अभियान चलाकर पहलगाम हमले के मुख्य दोषियों को ठिकाने लगाया गया था। आज की भारतीय सेना पहले से कहीं अधिक घातक और आत्मनिर्भर है। सेना ने इंटरनेट मीडिया पर एक पोस्ट साझा किया कि अब हमारे पास 50 नई मिशन-रेडी यूनिट्स, पांच लाख से अधिक आधुनिक हथियार और आठ एंटी-टेर आपरेशनल फ्रेमवर्क तैयार हैं।

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IAF commences registration for Mehar Baba Competition-3

Source: Press Information Bureau, Dt. 24 Apr 2026

The Indian Air Force has launched the third edition of the Mehar Baba Competition-3 (https://indianairforce.nic.in/mehar_baba). The theme of MBC-3 is “Collaborative Drone-Based Surveillance Radars.” The competition aims to encourage innovation in advanced drone and radar technologies. Meritorious participants will receive development funding from the Indian Air Force, and the top three winners will be honored with awards. The registration for MBC-3 is commencing on 27 Apr 26.

The competition was earlier announced by Hon'ble Raksha Rajya Mantri, Shri Sanjay Seth during Aero India 2025. The aim of MBC-3 is to develop a proof of concept for collaborative swarm of Unmanned Aerial Systems working as an airborne radar capable of detecting, tracking and reporting aerial targets in a contested environment and provide their accurate location at a centralised monitoring station. IAF invites Indian industries, start-ups, academic institutions and research establishments to participate in the competition and be a part of the next wave of aerospace innovation. Interested participants may obtain full information related to the competition from the 'Vision Document' available on the official website https://indianairforce.nic.in/mehar_baba.

This pioneering model of the competition has successfully cultivated a robust ecosystem and has generated orders worth approximately Rs. 2000 Crores for the unmanned systems industry. The first two editions of MBC were conducted with the themes 'Swarm Drones for Humanitarian Assistance and Disaster Relief Operations' and 'Swarm Drone Based Foreign Object Debris Detection on Aircraft Operating Surfaces' respectively. IAF received a very encouraging response from industry, start-ups and academia for these competitions. MBC has proven to be a frontrunner in bridging the gap between Indian industry, academia and users by providing them a common platform to work on critical defence related technologies.

Mehar Baba Competition is an IAF initiative to encourage indigenous development of niche aviation technology. Since it's launch in 2018, MBC has experienced overwhelming participation from the industry and academia. The competition has inspired academia, start-ups and industry to develop novel indigenous solutions for tackling real-world aviation challenges.

MBC is conducted in the honour of the legendary air veteran Air Commodore Mehar Singh DSO MVC affectionately known as Mehar Baba. He was born in the district of Lyallapur in 1915 and joined the Royal Air Force College, Cranwell in 1934. Mehar Baba earned the respect of his fellow airmen with his flying skills. At the age of 29, he was awarded the Distinguished Service Order (DSO) for effective leadership and personal bravery. Out of his many achievements, the mission led by him carrying the first contingent of the Indian Army in a Dakota aircraft to Srinagar in 1947 is the most memorable. He also has the distinction of being the first to land at Leh, the highest airstrip in the world then. Mehar Baba was the first IAF recipient to be awarded with Maha Vir Chakra.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2255232&reg=3&lang=1

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Why China's new Atlas drone swarm system could worry India and the world

Source: The Indian Express, Dt. 27 Apr 2026

In late March, the Chinese People's Liberation Army (PLA) unveiled its new Atlas drone swarm system (atelasi). The one-of-a-kind system combines features like simultaneous mass launch, control of nearly 100 drones, and a single human touchpoint to control them all. The system is like a mini-battlefield network on wheels, where drones are truck-launched, remotely navigated by a single operator, and capable of scouting, communicating, confusing, and attacking defence across a large perimeter. More importantly, it is a very small, independent unit that is easy to hide, camouflage, and operate from remote corners.

The Atlas system can simultaneously launch up to 96 small- and medium-sized speed drones that can form defensive structures and precision formations, both to defend and attack. The launch time between drones is less than three seconds. Thus, within 300 seconds, the system can launch all 96 drones for an attack, reconnaissance, or to confuse the adversary. For context, amid the recent West Asia war, the US advanced E-3 Sentry AWACS aircraft at the Prince Sultan Airbase in Saudi Arabia was destroyed by a swarm of 29 drones and a few ballistic missiles.

The entire Atlas system consists of three units — a Swarm-2 ground combat vehicle, a command vehicle, and a support vehicle. A single Swarm-2 ground combat vehicle can carry and launch 48 fixed-wing drones, and a single command vehicle can simultaneously control up to 96 drones in a swarm. Its size and mobility make it extremely useful for reconnaissance, interception, and attack on high-value targets. Currently, China's Atlas system, at least theoretically, outpaces and outsmarts all its competitors.

Purely on scale, the US Department of War's "Perdix" and Defense Advanced Research Project Agency's "Offset" systems can launch 103 micro-drones and 250 unmanned systems, respectively. Even China's "mothership" (Jiu Tian) can launch up to 100-150 drones. But Atlas stands out for its intelligence because, in modern military warfare, counting drones within the swarms is an outdated metric. The real victory lies in the cognitive test: can these 90 to 100 drones think individually and as a unit, reroute, identify, reidentify targets, and execute multiple strikes — all with only a single human touchpoint. It is here that the Atlas Drone Swarm system outshines all its competitors, at least theoretically.

Who is the manufacturer?

China Electronic Technology Group Corporation (CETC) (zhongguo dianzi keji jituan gongsi), established in 2002, one of the leaders of China's push for achieving civil-military integration, has manufactured the Atlas system. It is a state-owned electronics and telecommunications conglomerate and works with the PLA.

CETC operates in a hub-and-spokes model. It is only a 20-year-old organisation, but its research, technology, and manufacturing labs predate its birth. CETC has been responsible for China's major defence electronic breakthroughs, including the technology that gave China its first nuclear bomb, guided missile, and geo-orbital satellite. It works very closely with multiple Chinese technology giants, including Huawei and ZTE, and some divisions within CETC are sanctioned by the US Commerce Department. In 2021, it became the third-largest electronics and telecommunications organisation in China after Huawei and Lenovo.

Fig: *China's Atlas drone swarm operations system*

Previously, it has also been responsible for developing China's predictive behavioural patterns and technology for "policing" in the northwestern province of Xinjiang, home to the Uyghur Muslims. Zhenhua, a CTEC-affiliated company, reportedly oversees a massive database of digital footprints of over 2.5 million influential individuals worldwide, including politicians, diplomats, journalists and military officers. It was also responsible for building networks and radars used in the recent militarisation of the South China Sea.

Has the Atlas system been tested or deployed? Could it be exported?

The Atlas system has undergone multiple advanced tests. This includes the March test, when the PLA conducted the first full media demonstration for it. However, the Chinese government has yet to announce its potential export variant. There are two arguments on this: At first glance, this system appears very similar to a top-tier, state-of-the-art strategic asset class, such as China's J-20 stealth fighter and the United States' F-22 Raptor. Countries don't prefer exporting such asset classes.

But there are exceptions to the rule: Russia is willing to share the export version of its Su-57 stealth fighter jet and has already sold S-400 advanced air defence system to India. The commercial English naming of this asset class and the display of its components at the November 2024 Zhuhai Airshow indicate that an export element is attached to it.

More broadly, what is the role of drones and drone swarms in the Chinese armed forces?

Conceptually, as detailed in the 2020 version of The Science of Military Strategy (zhanlue xue), a publication of China's Academy of Military Science, "intelligentization" (zhi neng hua) is a defining paradigm of future conflicts. The 14th Five-Year Plan (2021-2025) explicitly stated that future wars will be "uncrewed and intelligent" and called to "steadily advance national defense and military construction".

In the past 50 years, China has consistently learned from others' wars. For instance, the two Gulf Wars compelled the PLA to pursue a strategy of winning local wars under informatised conditions. Similarly, China is taking notes on drone use from recent conflicts, including the Russia-Ukraine

war, the Israel-Palestine conflict, India's Operation Sindoor, and the US's Operation Epic Fury. On the ground, China has amassed a substantial number of surveillance, attack, reconnaissance, advanced, and loitering ammunition drones and drone systems. The intelligent guesswork is that China has tens of thousands of Unmanned Aerial Vehicles across all four variants — smaller drones, medium-altitude long-endurance, high-altitude long-endurance, and advanced, novel, and stealth drones.

These have been deployed across all PLA theatre commands and military districts and have been regularly included in operations in the Taiwan Strait, the South China Sea, and around the Line of Actual Control (LAC) with India. Some of them are also tested in Ukraine, Gaza, and with Houthi Rebels around the Red Sea area. In the past 18 months, the PLA has also tested a "drone mothership" (jiu tian) capable of releasing 100-150 smaller loitering drones. Now, the PLA is moving towards studying and testing applications in real war simulations, such as amphibious landing military operations and island blockade scenarios.

What are the implications of these developments for India, and the Taiwan contingency?

Commissioning the Atlas system with the PLA's Eastern and Western Theatre Commands and the Xinjiang and Tibet Military Districts could influence any future conflict's outcome at various stages. The Atlas system can confuse and overwhelm Taiwan's and India's air defences, forcing these countries to waste multiple resources on eliminating them, which is difficult given its mobility and camouflage. Furthermore, the system's algorithm-driven kill chain and autonomous, independent target identification make it lethal against strategically valuable targets.

Especially on the India front, Tibet's advanced road and rail network enables quick deployment and launch. These swarms could also be used to disturb the Indian army's logistics and infrastructure lines by attacking the approach roads to India's forward-deployed posts. Behind enemy lines, attacks isolate the forward posts, thereby making it easier for the aggressor to coerce them. Finally, counter-jamming these swarms is challenging since they share information and adjust formations and targets without central human intervention.

https://indianexpress.com/article/explained/explained-global/china-atlas-drone-swarm-system-capabilities-10648103/

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Science & Technology News

ISRO plans to send civilians with STEM backgrounds to space

Source: The Times of India, Dt. 27 Apr 2026

India's astronaut cadre is expected to open to civilians for the first time, marking a shift in how Isro is preparing for the future of human spaceflight beyond the first few Gaganyaan missions.Isro's committee on astronaut selection and management, after deliberation, has recommended that the second batch of Indian astronauts include four civilian specialists from STEM (science, technology, engineering and mathematics) backgrounds alongside six mission pilots from military aviation background.

The first batch of four astronauts, all Indian Air Force (IAF) test pilots, was selected when the focus was squarely on flying the country's first crewed missions safely. "While those from the first batch — Air Commodore Prashanth B Nair, Gp Capt Shubhanshu Shukla, Gp Capt Ajit Krishnan, Gp Capt Angad Prathap — were all fighter plane pilots turned test pilots, the second batch is expected to also include combat helicopter pilots from IAF," a source told TOI.

The move to include civilians signals that Isro is beginning to look past proving the basic technologies for human spaceflight and towards building a sustained astronaut cadre for regular missions, scientific work in orbit and, eventually, India's planned space station.

"Though the proposed second batch will have four civilians they would begin joining mission crews only from the fourth crewed Gaganyaan mission, according to the committee's planning," another source said. The decision to fly only civilians from the fourth human spaceflight mission is on expected lines given that world over, countries have chosen astronauts with military backgrounds until the technology is mature enough to send civilians.

Inclusion of civilians is tied to a growing mission tempo. The planning assumptions envisage two crewed missions a year, with astronauts potentially flying again after a two-year gap following return from a mission. A full astronaut turnaround cycle — selection, training and mission preparation — is estimated at 4.5 years. The committee has estimated that seven astronauts would initially suffice for operational needs in the second batch, but raised the number to 10 after accounting for possible international mission opportunities and attrition.

Another major shift is planned from the seventh crewed mission, when crew size is proposed to rise from two astronauts to three, enabled by augmentation of the Gaganyaan crew module's capacity. That expansion is linked to longer-term plans for the Bhartiya Antriksh Station, where scientific utilisation is expected to require a larger and more diverse astronaut pool.

For a third batch, the committee has estimated a need for 12 astronauts, and in this pool, the ratio of astronauts with military backgrounds and civilians is expected to change drastically. "The committee has recommended two mission pilots and 10 specialists," the first source said. In all, the committee has proposed an astronaut cadre strength of up to 40, arguing that long-term uncertainties and evolving global opportunities warrant a larger margin in planning. The readiness of the second batch has been targeted in 72 months, with the third batch by 96 months.

While the selection process and creation of an astronaut cadre is on expected lines given India's plans for a sustained human presence in space, the space agency is lagging in related infrastructure and technology development.

Isro currently only operates a temporary astronaut training centre and is yet to begin the process to set up a full-fledged facility. In terms of technology, even for the first mission, Isro is lagging in several aspects, the most crucial being ECLSS (environment control and life support systems) without which no astronaut can venture into space.

https://timesofindia.indiatimes.com/city/bengaluru/isro-will-open-astronaut-cadre-to-civilians-4-of-10-in-2nd-batch/articleshow/130539329.cms

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Skyroot flags-off Vikram-1, India's first private orbital launch soon

Source: The Indian Express, Dt. 26 Apr 2026

In a major boost to India's space industry, Skyroot Aerospace is likely to become the first private company to launch an orbital space rocket. On Saturday, Skyroot flagged off the payload fairing for its Vikram-1 rocket in Hyderabad, with the launch of the rocket slated for later this year. The payload fairing — the upper nose cone of the launch vehicle that houses the satellites — is now headed for India's only spaceport in Sriharikota, where it will be integrated with the rest of the launch vehicle.

"We completed the most critical testing of Vikram-1 and are excited to begin integration and launch campaign activities next week at the spaceport towards this historic launch," said Naga Bharath Daka, co-founder and COO, Skyroot Aerospace. Launch campaign is the period before a launch when the vehicle is integrated, tested and prepared.

Telangana Chief Minister A Revanth Reddy, also present at the flag-off event, said that it was a key milestone in the state's pursuit of becoming a global leader in the aerospace sector. Telangana is among a handful states with their own space policy — the first step towards creating space manufacturing hubs, such as the launch vehicle hub in Tamil Nadu and a satellite hub in Gujarat. The launch of India's first privately manufactured PSLV (polar satellite launch vehicle) — ISRO's workhorse launcher — is also likely to take place this year.

The Vikram-1 launcher

Among Skyroot's many small launch vehicle projects, Vikram-1 is a multi-stage launch vehicle with solid and liquid fuel-based engines designed for launching satellites weighing up to 350kg to low earth orbit. The low earth orbit is the region of space from 160 km to 2,000 km above the surface of Earth. The number of satellites being launched in this region has skyrocketed in recent years, with many being the Starlink communication satellites.

What makes Vikram-1 different is that the rocket is made of carbon composite instead of metals, and houses a 3D-printed indigenously made engine — making its manufacturing and assembly easier, quicker and cheaper. The launch vehicle has been named to honour Dr Vikram Sarabhai, considered to be the father of the Indian space programme, and its propulsion systems honour several other scientific greats — the solid propulsion system is called Kalam, the liquid Raman, and the cryogenic Dhawan.

"The launch of this orbital rocket will mark a major milestone for India's emerging private space-tech industry. With Vikram-1, we aim to open up space by enabling on-demand satellite launches for a fast-growing global market," said Pawan Kumar Chandana, co-founder and CEO, Skyroot Aerospace.

Skyroot was also the first private company to carry out a single-stage sub-orbital flight in 2022, followed by another company, Agnikul. A sub-orbital flight is launched at a slower speed than the orbital velocity, so it reaches outer space but cannot get into an orbit around Earth.

https://indianexpress.com/article/india/skyroot-aerospace-vikram-1-orbital-rocket-launch-sriharikota-revanth-reddy-10655921/

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