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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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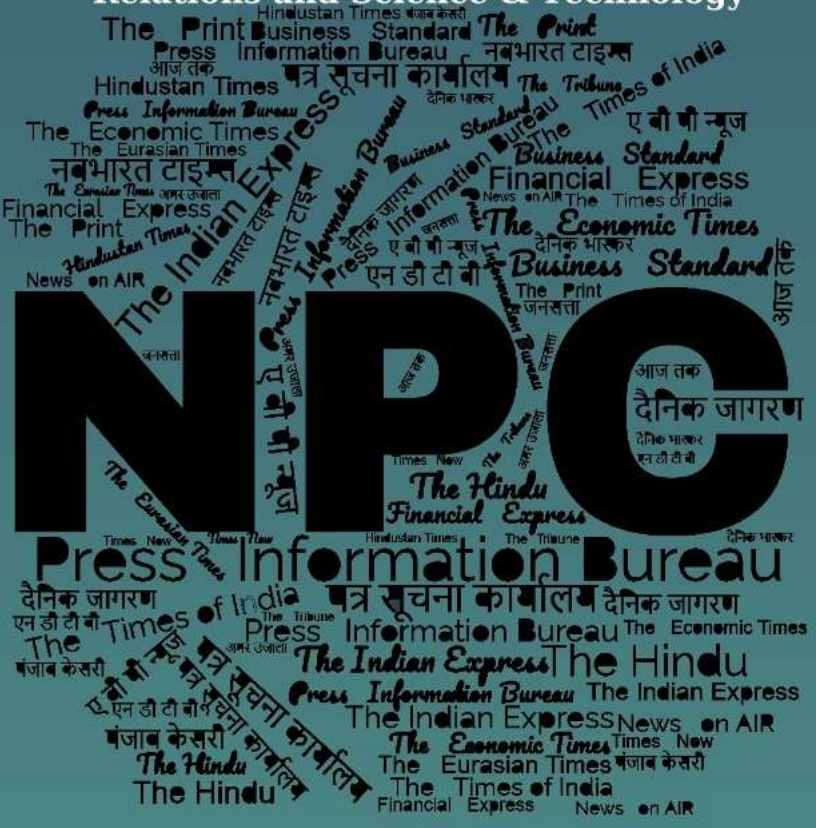

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DRDO News

Raksha Mantri visits Defence Materials and Stores Research & Development Establishment, a DRDO lab in Kanpur

Source: PIB , Dt. 30 Nov 2025

Raksha Mantri Shri Rajnath Singh visited the Defence Materials and Stores Research & Development Establishment (DMSRDE), a Kanpur-based laboratory of DRDO, on November 30, 2025. He conducted an overview of cutting-edge defence materials research and innovations undergoing at the laboratory.

Raksha Mantri was briefed on the laboratory's vision, mission, charter, ongoing projects, and technology focus areas by Director DMSRDE. Materials, Technologies, and Products developed by DMSRDE in ceramics & ceramics matrix composites, stealth & camouflage materials, nanomaterials, coatings, polymers & rubbers, fuels & lubricants, technical textiles and personal protection systems were also demonstrated.Shri Rajnath Singh appreciated the laboratory for its effort in the successful realisation of defence products, especially the Bullet Proof Jacket (Level-6), Naphthyl Fuel for BrahMos Missile, High Pressure Polymeric Membrane for Indian Coast Guard ships, Silicon Carbide Fibre, Activated Carbon Fabric-based Chemical, Biological, Radiological & Nuclear suit and various other stealth products. He emphasised that technology developments should be aligned with end user requirements.

Raksha Mantri also appreciated the DMSRDE for carrying out a large number of transfer of technologies in the last two years fulfilling the Aatmanirbhar Bharat' vision of the Government. He called for exploring export potential of developed defence products/technologies and said MSME & industries interactions in DTTC, Lucknow to be enhanced to meet the requirements of industries. He commended the laboratory's growing synergy with industry and academia in realising Prime Minister Shri Narendra Modi's vision for a Viksit Bharat by 2047.

Earlier, Shri Rajnath Singh offered floral tributes to former President Bharat Ratna Dr APJ Abdul Kalam at his statue at the premises. He was received by Secretary, Department of Defence (R&D) & Chairman DRDO Dr Samir V Kamat.

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DRDO organises Industry Outreach Programme in New Delhi

Source: PIB, Dt. 01 Dec 2025

In line with the Government's vision of achieving Aatmanirbharta and Viksit Bharat, DRDO conducted an Industry Outreach Programme at DRDO Bhawan, New Delhi on December 01, 2025. The programme covered DRDO laboratories of North India and their Industry partners with participation of 220 scientists working on niche and critical defence technologies from 18 DRDO laboratories and 271 industry leaders from a diverse mix of defence industries.

Secretary, Department of Defence R&D and Chairman DRDO Dr Samir V Kamat was the Chief Guest and Secretary (Defence Production) Shri Sanjeev Kumar was the Guest of Honour. During the event, a new procedure was released for implementing 'DRDO's ToT Policy -2025'.

The highlight of the programme was the open house discussion, wherein the distinguished guests and panel of DRDO experts along with the Secretary (Defence Production) took on the various queries, concerns and suggestions from industry and resolved to find solutions to the complex and challenging issues involved in indigenous defence production involving PSUs and private industries. The event also included in-house brainstorming involving various corporate directorates of DRDO HQ and scientists from DRDO laboratories. The corporate directors elucidated on various policies and procedures involving indigenous research projects in DRDO laboratories and their outcome for the benefit of the services.

In his address, the Chairman, DRDO expressed optimism in the capabilities of the Indian industry, exuding confidence that in the next five years, the various government policies will mature and that indigenous defence industrial ecosystem will grow manifold, thereby realising the vision of Aatmanirbharta. He outlined various opportunities for the industries in partnering with DRDO towards meeting the technology needs of the Armed Forces and other government agencies.

The Secretary (Defence Production) highlighted the policies of the Government in promoting indigenous production and stressed that true self-reliance can be achieved only when the full cycle of designing to manufacturing and production at scale is carried out in-house.

Setting the tone for the interaction, DG (Production Coordination & Services Interaction) Dr (Mrs) Chandrika Kaushik highlighted the various initiatives of DRDO towards promoting indigenisation and the growth of defence industrial ecosystem. She highlighted the rising trend, wherein India is now emerging from being an importer of defence equipment to that of a net exporter and encouraged the Indian industries towards sustained R&D and deeper collaboration with DRDO.

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RESEARCH AND DEVELOPMENT IN MANUFACTURING SECTOR

Source: Press Information Bureau, Dt. 1 Dec 2025

The Government has taken steps to enhance R&D in Defence manufacturing through several initiatives. Some of these initiatives include:

- **Development cum Production Partner (DcPPs)/ Production Agency (PAs) including private industries:** DRDO has implemented DcPP model to identify potential manufacturing agency through competitive process involving both public and private sector and transfer the manufacturing technology to meet production requirements.
- **Transfer of Technology (ToT) to Industries:** DRDO has developed a pool of 2000 industries to manufacture sub-systems, systems and equipment. The technology of DRDO developed systems are transferred to Indian Industries at zero ToT fee for Development cum Production Partner (DcPP)/ Production Agency (PA)/ Development Partner (DP). Consultancy Services of DRDO Scientists to industry is made available.
- **DRDO Patents:** The Policy for free area of DRDO Patents by Indian Industries has been implemented.
- **Technology Development Fund (TDF):** TDF Scheme is a program of MoD executed by DRDO to encourage participation of public/ private industries especially Micro, Small and Medium Enterprises (MSMEs)/ Start-ups and to promote self-reliance in Defence technology as part of Make-in-India

initiative. The projects sanctioned through TDF have also seen a lot of successes with 26 technologies successfully developed and two of the project systems flown in Space as part of PSLV mission. In line with the Government mandate, a corpus of Rs. 500 Cr has been additionally sanctioned towards TDF Scheme with focus towards Deep-Tech and cutting edge technologies.

- **New Start-up Policy:** DRDO is coming up with a new policy to facilitate easier interaction with these emerging Start-ups. This policy aims to streamline the process of engaging with start-ups and leveraging their innovative ideas for defence applications.
- **Dare to Dream:** Four Dare to Dream contests have been successfully conducted. The contest is aimed at creation of an ecosystem to foster innovation and technology development in Defence and Aerospace by engaging Start-ups and individual innovators and engaging them to carry out R&D development which has good potential for future adoption for Indian Defence and aerospace needs.
- **Test Facility support to Industries:** Several world class R&D test facilities in DRDO Labs have now been opened for industries and necessary SOP has been formulated. Test facilities of 24 DRDO labs have been uploaded on the Defence Testing Portal (DTP), a platform of MoD for offering the Ministry's test infrastructure to Defence industries in a more transparent manner.
- **Interaction with Industries:** Industry Interaction Groups (IIGs) have been established in labs to facilitate industries.
- **25% Defence R&D Budget opened up for Industry, Start-ups and Academia:** 25% of Defence R&D Budget has been opened up for industry, start-ups and academia based on Budget 2022-23 announcements.
- **Extramural Research:** The aim of Extramural Research is to develop essential knowledge and capabilities in the areas of critical Defence technologies, establish network with researchers, develop highly skilled human resource and augment research infrastructures in Indian academic institutions/ research centers to support the evolving Defence R&D ecosystem in the country.
- **DRDO-Industry-Academia Centres of Excellence (DIA-CoE):** DRDO has policy and mechanism for collaborative directed research in developing critical and futuristic technologies for defence and security applications through a network of DRDO Industry Academia - Centre of Excellence (DIA-CoE). A total of 15 DIA-CoEs have been established which are steering translational research activities in nearly 82 identified research verticals.
- **Defence Industry Corridors:** DRDO is supporting Uttar Pradesh Industrial Corridor and Tamil Nadu Defence Industrial Corridor by collaborating with Industries as knowledge partner. The corridors have been established to achieve 'Aatmanirbharta' and to realise the goal of 'Make in India'.
- **Innovations for Defence Excellence (iDEX):** An innovation ecosystem for Defence titled iDEX was launched by Hon'ble Prime Minister in April 2018 to foster innovation & technology development in Defence & Aerospace by engaging industries including Start-ups/MSMEs/ Individual Innovators, R&D institutes and Academia, iDEX provides grants/ funding and other support to iDEX winners (Start-ups/MSMEs) to carry out R&D which has potential for future adoption for Indian Defence and Aerospace needs.
- **Further, 'Make' procedure under Chapter-**III of DAP-2020 involves Design & Development and Manufacturing of defence equipment or platform. Total 70 projects under various categories (i.e. Make-I/II/III) of 'Make' procedure have been accorded Approval-in-Principal (AIP) in last three (03) years (upto Mar 2025).

DRDO has sanctioned a total of 148 new R&D Projects in the last 3 years. Details of Budget Estimates (BE), Revised Estimates (RE) and actual allocations in respect of the Deptt of Defence R&D along with Actual Expenditure for the last three years along with allocations at Budget Estimates for the year 2025-26 are as under:

(Rs in Cr)

Year	BE Approved	RE Approved	MA Approved	Actual
2022-23	21,330.20	21,130.20	21,130.20	20,585.78
2023-24	23,263.89	23,691.74	23,195.89	22,927.50
2024-25	23,855.61	24,696.94	24,938.70	24,696.94
2025-26	26,816.82	-	-	-

The Government promotes public and private sector partnerships in defence industries by various initiatives such as TDF, Dare to Dream, ToT, DcPP and iDEX etc.

This information was given by Raksha Rajya Mantri Shri Sanjay Seth in a written reply to Shri S Selvaganabathy in the Rajya Sabha today.

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Defence News

DELIVERY OF 'TARAGIRI', THE FOURTH NILGIRI CLASS (PROJECT 17A) INDIGENOUS ADVANCED STEALTH FRIGATE

Source: PIB , Dt. 29 Nov 2025

Taragiri (Yard 12653), the fourth ship of Nilgiri Class (Project 17A) and the third built by Mazagon Dock Shipbuilding Ltd (MDL), was delivered to the Indian Navy on 28 Nov 2025 at MDL, Mumbai, marking a major milestone in achieving self-reliance in warship design and construction. Project 17A frigates are versatile multi-mission platforms, designed to address current and future challenges in the maritime domain.

Taragiri is a reincarnation of the erstwhile INS Taragiri, a Leander-class frigate that was part of the Indian Naval fleet from 16 May 1980 to 27 Jun 2013, rendering 33 years of glorious service to the nation. This state-of-the-art frigate reflects a quantum leap in naval design, stealth, firepower, automation and survivability, and is a symbol of *Aatmanirbharta* in warship building.

Designed by the Warship Design Bureau (WDB) and overseen by the Warship Overseeing Team (Mumbai), P17A frigates reflect a generational leap in indigenous ship design, stealth, survivability, and combat capability. Driven by the philosophy of Integrated Construction, the ship was built and delivered in envisaged timelines.

P17A ships are fitted with an advanced weapon and sensor suite compared to the P17 (Shivalik) class. These ships are configured with Combined Diesel or Gas (CODOG) propulsion plants, comprising a diesel engine and a gas turbine that drive a Controllable Pitch Propeller (CPP) on each shaft, and state-of-the-art Integrated Platform Management System (IPMS).

The potent weapon and sensors suite comprises BrahMos SSM, MFSTAR and MRSAM complex, 76mm SRGM, and a combination of 30 mm and 12.7 mm close-in weapon systems, along with rockets and torpedoes for anti-submarine warfare.

Taragiri is the fourth P17A ship to be delivered to Indian Navy in the last 11 months. The experience gained from construction of first two P17A ships have enabled the build period of Taragiri to be compressed to 81 months, in comparison to 93 months taken for First of the Class (Nilgiri). The remaining three ships of Project 17A (one in MDL and two in GRSE) are planned to be delivered progressively by Aug 2026.

Delivery of Taragiri showcases the design, ship construction and engineering prowess of the nation, and reflects IN's unrelenting focus on *Aatmanirbharta* in both ship design and shipbuilding. With an indigenisation content of 75%, the project has involved over 200 MSMEs and has enabled employment generation of approximately 4,000 personnel directly and more than 10,000 personnel indirectly.

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VICE ADMIRAL SANJAY SADHU, AVSM, NM, ASSUMES CHARGE AS CONTROLLER OF WARSHIP PRODUCTION & ACQUISITION (CWP&A)

Source: Press Information Bureau, Dt. 30 Nov 2025

Vice Admiral Sanjay Sadhu, AVSM, NM assumed charge as the Controller of Warship Production & Acquisition on 28 Nov 2025. Commissioned in the Indian Navy in 1987, the VAdm is a Post Graduate in Mechanical Engineering and MPhil in Defence and Strategic Studies.

During his illustrious career spanning more than 38 years, the Flag Officer has tenanted several key Operational, Staff, and Yard appointments. He has served onboard the Aircraft Carrier INS Viraat in different capacities and onboard front line frigates INS Brahmaputra and INS Dunagiri.

Prior to his elevation to Flag Rank, he held many important assignments including Additional General Manager (Production) at Naval Dockyard (Mumbai), Commodore Superintendent of Naval Ship Repair Yard (Karwar), and Principal Director Marine Engineering at Naval Headquarters, New Delhi.

He was also involved in the modernisation and acquisition of the Aircraft Carrier Vikramaditya from Russia, in various capacities in the Project, including Senior Naval Engineer Overseer at Warship Overseeing Team (Severodvinsk), Russia, Director Aircraft Carrier Projects, and Principal Director Aircraft Carrier Projects at Naval Headquarters, New Delhi.

On elevation to Flag Rank, he served as Additional Director General Warship Design Bureau (Submarine Design Group), Chief Staff Officer (Technical), Eastern Naval Command, Admiral Superintendent Dockyard (Visakhapatnam), and Chief Staff Officer (Technical), Western Naval Command. The Flag Officer has the rare distinction of heading two major Dockyards on both the West and East Coasts and being the Chief Staff Officer (Technical) of both the Western and Eastern Naval Command.

He is an alumnus of Naval War College, Goa. For his distinguished service of a high order, the Flag Officer has been awarded the prestigious *Ati Vishisht Seva* Medal and the *Nausena* Medal by the President of India. Prior to assuming charge as CWP&A, the Flag Officer served as the Programme Director, Advanced Technology Vessel Programme at New Delhi.

He has taken charge from Vice Admiral Rajaram Swaminathan, AVSM, NM, who is superannuating on 30 Nov 25 after 38 years of distinguished service to the nation. During the tenure of VAdm Rajaram Swaminathan, eight ships were commissioned into the Indian Navy.

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COMMANDERS' CONFERENCE - 2025 WESTERN AIR COMMAND

Source: Press Information Bureau, Dt. 28 Nov 2025

The two-day Commanders' Conference of Western Air Command (WAC) with the theme of "विकासशील सक्षम भारतीय वायु सेना", held on 27 & 28 November 2025 at New Delhi, culminated today, with Air Chief Marshal AP Singh, Chief of the Air Staff (CAS), presiding over the proceedings as the Chief Guest. On arrival, he was received by Air Marshal Jeetendra Mishra, Air Officer Commanding-in-Chief, WAC and accorded a ceremonial Guard of Honour.

Addressing the Commanders, the CAS highlighted the importance of investing in air warriors' training, emphasising on leadership, welfare and quality of life initiatives that enhance morale and mission effectiveness. He also lauded WAC's humanitarian relief efforts, which exemplify the spirit of " हर काम देश का नाम" .Reaffirming IAF's commitment to national security, the CAS called upon all air warriors to uphold the core value of Mission, Integrity and Excellence.

The Commanders' Conference, spread over a two-day period, involved intense deliberations, discussions and brainstorming amongst all commanders of WAC, along with senior military functionaries from DMA, civil functionaries and domain experts on military matters.

General Anil Chauhan, Chief of Defence Staff, addressed the Commanders' of Western Air Command and emphasised upon importance of professional competence and operational readiness. He called for continuous adaptation, tactical innovation and strategic foresight in the evolving security environment. Highlighting mental and physical agility as key force multipliers, he urged sustained focus operational preparedness.

Prof Ajay Kumar Sood, Principal Scientific Adviser to the Government of India, addressed the Western Air Command Commanders' Conference 2025. Speaking on Technology and Sovereignty, he emphasised that a self-reliant and technologically advanced Indian Air Force remains essential for protecting India's sovereign interests.

During the Conference, Dr. K Rajalakshmi Menon, Director General (Aero), DRDO, gave a talk on Future Technologies in Airborne surveillance System, and underscored the rising importance of autonomous aerial systems, long endurance platforms and space-enabled ISR.

Discussions and brainstorming were also undertaken towards embracing "*Atmanirbharta*" in all aspects of operational thought and further the Nation's and IAF's commitment towards becoming a true "Made in India" and "Made for India" force.

WAC holds the onerous task of securing the Westerns and Northern airspace. Recent operations showcased the high standards of operational preparedness and professionalism that has been a hallmark of WAC.

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CHANAKYA DEFENCE DIALOGUE 2025 CONCLUDES

Reform to Transform – Sashakt, Surakshit Aur Viksit Bharat

Source: PIB, Dt. 28 Nov 2025

Chanakya Defence Dialogue conducted by Indian Army in collaboration with the Centre for Land Warfare Studies concluded today. The two-days Dialogue was conducted at the Manekshaw Centre, New Delhi. Shri Rajnath Singh, Hon'ble Raksha Mantri graced the event today, in presence of Gen Upendra Dwivedi, Chief of the Army Staff among other dignitaries.

The Dialogue reflects the national aspiration for a *Sashakt, Surakshit aur Viksit Bharat*, bringing focus to India's emerging security challenges, defence reforms and technological transformations amid an increasingly complex global order.

Hon'ble Raksha Mantri unveiled key Green and Digitisation initiatives and delivered a special address on *Defence Reforms for a Sashakt, Surakshit aur Viksit Bharat*. He emphasised that the Chanakya Defence Dialogue is a vital forum where the Indian Army's operational experience merges with strategic thinking to shape future-ready policies. He noted that the reforms are a strategic necessity amid shifting global power centres, blurred boundaries between peace and conflict and expanding domains of warfare including cyber, space, information and cognitive influence. He underlined India's growing global role, driven by economic strength, technological capability and principled foreign policy. Reforms, resilience and modernisation, he said, must strengthen defence, economy and society, with the armed forces as the strongest pillar of national security and stability. Stressing the government's focus on capability enhancement, infrastructure, technology, Atmanirbhar Bharat and welfare of soldiers and veterans, he added that a strong, secure and developed India contributes to global stability, ethical use of emerging technologies and humanitarian values. He commended the Dialogue's rich deliberations and affirmed that such platforms deepen strategic foresight and guide India's journey towards a confident and future-ready Bharat.

Ambassador DB Venkatesh Verma, Member of the National Security Advisory Board, delivered a special address on *Resilient National Security @2047*. He stressed that strategic autonomy is meaningful only when India has the will and capability to think, act and fight independently, without allowing external engagements to turn into vulnerabilities. He emphasised the need for an operationally sound military doctrine that can be executed without external interference, supported by a resilient defence-industrial base, secure technology choices and reduced economic dependencies. He noted that strategic autonomy also depends on societal factors such as national self-confidence, willingness to invest in defence and the ability

to produce skilled manpower for modern warfare. Highlighting the importance of balancing productivity, security and welfare power, he called for faster reforms, higher defence spending, stronger R&D and integrated joint military structures. He concluded that India's long-term resilience and rise as a major power will depend on sustaining higher economic growth and ensuring that dependencies do not erode autonomy.

Ambassador Pankaj Saran, Former Deputy NSA delivered a thematic address on *Redefining Strategies in Conventional Wars through Technology*, emphasising doctrinal shifts and technology-driven readiness. He highlighted the growing centrality of technology in national security, noting that its role in conventional warfare is now unquestionable and historically inseparable from the evolution of conflict. Drawing on his experience as Deputy NSA and Ambassador, he reflected on how India's strategic institutions have increasingly recognised technology as a core pillar of security, citing the 2018 reforms in the National Security Council Secretariat that created a dedicated technology division as a decisive shift in mindset. He emphasised that India must build on this foundation, learn from past decades and adopt new approaches. Acknowledging the professionalism of the armed forces and the rising stature of the Chanakya Defence Dialogue, he underlined the need for continued integration of technology, institutional reform and forward-looking thinking to strengthen India's preparedness for future challenges.

Today's sessions dwelt upon *Battlefield Equalisers*, where global experts discussed disruptive technologies such as AI, autonomous systems, hypersonics and cyber capability, highlighting how these are reshaping the character of warfare. The sessions also examined the transformation required for India's forces to become integrated, agile and modern. Distinguished military leaders and experts spoke on jointness, adaptive structures, island security perspectives and the growing role of information and cognitive security in modern conflict.

Lt Gen Pushpendra Pal Singh, Vice Chief of the Army Staff, delivered the Closing Address of the Dialogue, emphasising that India's security environment demands forces that are agile, technologically empowered and operationally integrated. He noted that the insights generated during the two days, ranging from emerging technologies and battlefield equalisation to jointness, innovation and defence reforms, would serve as actionable inputs for the Army's transformation roadmap. Underscoring the importance of self-reliance, future-ready structures and mission-driven capability development, he reiterated the Indian Army's commitment to accelerating reform and strengthening India's preparedness across all domains of warfare. He thanked the Hon'ble President, Hon'ble Raksha Mantri, distinguished speakers, global partners and participants for contributing to a substantive and forward-looking deliberation.

Across its two days, the Chanakya Defence Dialogue 2025 provided an authoritative platform for shaping India's future defence posture. With guidance from the Hon'ble President of India, Hon'ble Raksha Mantri, Gen Upendra Dwivedi, Chief of the Army Staff and other senior military leadership and global experts, CDD 2025 reaffirmed the Indian Army's commitment to building a strong, secure and developed India through deeper self-reliance, technological excellence and an integrated national strategy.

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MoD inks Letters of Offer & Acceptance with US for sustainment support of Indian Navy's fleet of MH60R helicopters through Follow on Support and Follow on Supply Support worth approx Rs 7,995 crore

Source: PIB, Dt. 28 Nov 2025

Ministry of Defence has signed Letters of Offer and Acceptance (LOAs) with the Government of the United States for sustainment support of Indian Navy's fleet of MH60R helicopters through Follow on Support and Follow on Supply Support for a period of five years at an approximate value of Rs 7,995 crore. The LOAs were inked under the Foreign Military Sales programme of US, in the presence of Defence Secretary Shri Rajesh Kumar Singh in New Delhi on November 28, 2025.

Sustainment Support is a comprehensive package which includes provisioning of spares, support equipment, product support, training and technical support, repair & replenishment of components and setting up of 'Intermediate' level component repairs & Periodic Maintenance Inspection facilities in India. In-country development of these facilities will ensure capability build-up in the long run and reduced dependence on the US Government, thus aligning with the vision of *Aatmanirbhar Bharat*. This would further lead to indigenous product and services development through MSMEs and other Indian firms.

The sustainment support would significantly enhance the operational availability and maintainability of the technologically advanced, all-weather capable MH60R helicopters, which also have Anti-Submarine Warfare capability, acquired through the US government. In addition, the support would enable the operation of these helicopters from dispersed locations as well as ships, ensuring optimal performance during all their primary and secondary missions/roles.

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INS VIKRANT AND INS UDAYGIRI PARTICIPATE IN SRI LANKA NAVY INTERNATIONAL FLEET REVIEW 2025 AT COLOMBO

Source: PIB , Dt. 28 Nov 2025

India's first indigenous aircraft carrier INS Vikrant, along with the indigenously built frigate INS Udaygiri, is representing the Indian Navy at the International Fleet Review (IFR) 2025 being hosted by the Sri Lanka Navy in Colombo from 27 to 29 Nov 2025. The event is part of the Sri Lanka Navy's 75th anniversary celebrations and features participation from naval ships, delegations and observers from several countries.

This visit marks the maiden overseas deployment of both ships and underscores India's commitment to strengthening regional maritime cooperation. The maiden participation of indigenously built and Nation's Pride INS Vikrant for an International Fleet Review highlights India's continued engagement with partner navies in the Indian Ocean Region (IOR) and reflects India's emphasis on promoting peace, stability and security through collaboration and interoperability.

The participation of the recently commissioned INS Udaygiri further showcases India's advancing indigenous shipbuilding capabilities and its balanced, expanding naval presence in the IOR.

During their stay in Colombo, the ships will participate in key IFR events including the ceremonial fleet review, city parade, community outreach activities, and professional naval interactions. As part of public outreach initiatives, the ships will also be open to visitors during IFR 2025.

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Tejas saftey record best globally : HAL Chief

Source: Hindustan Times, Dt. 29 Nov 2025

Tejas safety record best globally: HAL chief

HT Correspondent
letters@hindustantimes.com

NEW DELHI: Hindustan Aeronautics Limited (HAL) chief DK Sunil on Friday said the safety record of the Tejas light combat aircraft was the best in the world and there was no problem with the indigenous fighter jet.

"There is absolutely no problem with Tejas. It's a wonderful aircraft and it's absolutely safe. Its safety record is the best in the world. What we saw in Dubai was an unfortunate incident," Sunil said at the ANI National Security Summit, when asked if that the LCA Mk-I crash at the Dubai Airshow was "an isolated occurrence arising out of exceptional circumstances". The pilot, Wing Commander Namansh Syal, was killed in the crash, the second involving the India-built single-engine fighter jet since it was inducted by the Indian Air Force in July 2016.

On Nov 21, a Tejas fighter jet manufactured by HAL crashed at the Dubai Air Show. REUTERS

"As countries evolve and develop their own technologies, they go through phases. Today we have made this 4.5 generation aircraft with the latest capability. It's a resounding success and we should all be proud of it. There will always be naysayers who ambitions.

strength to strength," the HAL chief said.

HAL earlier reported to BSE Ltd and the National Stock Exchange of India Ltd that the incident would not affect its business operations or its future deliveries.

The development came at a time IAF is looking to induct an advanced variant of the plane, the LCA Mk-1A.

There is no question that the crash will have any impact on the future of Tejas, Sunil said. "We have an order for 180 LCA Mk-1As and I am sure the orders will go up. We will definitely

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OP Sagar Bandhu intensfies , 2 aircraft carrying over 20 tonnes of relief supplies lan in colombo

Source: Hindustan Times, Dt. Statesman, 30 Nov 2025

'Op Sagar Bandhu' intensifies, 2 aircraft carrying over 20 tonnes of relief supplies land in Colombo

STATESMAN NEWS SERVICE
New Delhi, 29 November

Intensifying its ongoing humanitarian assistance to Sri Lanka under 'Operation Sagar Bandhu', India on Saturday informed that two aircraft carrying over 20 tonnes of relief supplies and NDRF teams landed in Colombo early this morning in the aftermath of Cyclone Ditwah, which claimed several lives and left thousands affected in the island nation.

The High Commission of India in Sri Lanka in a post on X said, "#OperationSagarBandhu standing strong with the people of Sri Lanka!

Two aircraft carrying 20+ tonnes of relief supplies and NDRF teams landed in Colombo early this morning, ready to support ongoing search and rescue efforts across Sri Lanka. #NeighbourhoodFirst #CycloneDitwah."

Earlier, an Indian Air Force plane carrying around 12 tonnes of humanitarian aid, including tents, tarpaulins, blankets, hygiene kits, and ready-to-eat food items, landed in Colombo.

In a post on X, External Affairs Minister S Jaishankar said, "Operation Sagar Bandhu unfolds. Indian Air Force C-130 J plane carrying approx 12 tonnes of humanitarian aid, including tents, tarpaulins, blankets, hygiene kits, and ready-to-eat food items, lands in Colombo."

He said another Indian Air Force (IAF) IL-76 has reached Colombo as part of India's ongoing humanitarian assistance to Sri Lanka under Operation Sagar Bandhu, at a time when the island nation is dealing with the escalating fallout of Cyclone Ditwah.

In the latest post on X, he further informed that the aircraft arrived with "9 tons relief material" and "2 Urban Search & Rescue Teams comprising 80 National Disaster Response Force Personnel." The External Affairs Minister also wrote that "A total of around 27 tons of relief material delivered by air and sea. More is on the way!"

The High Commission of India in Sri Lanka has also set up an Emergency Help Desk at Bandaranaike International Airport (BIA) in Colombo to support Indian nationals impacted by Cyclone Ditwah.

CSIR -NAL unveils production version of Hansa-3 plane

Source: Hindustan Times, Dt. 30 Nov 2025

CSIR-NAL unveils production version of Hansa-3 plane

Jacob Koshy
NEW DELHI

The CSIR-National Aerospace Laboratories (NAL), Bengaluru, launched a "production version" of the indigenous Hansa-3(NG) trainer aircraft on Saturday. Mumbai-registered M/s Pioneer Clean Amps, which will manufacture the two-seater planes, has reportedly commenced manufacturing. It has set up a ₹150-crore facility in Kuppam, Andhra Pradesh, to make 100 aircraft annually.

The Hansa-3 has an all-composite airframe (as opposed to purely metal), and is designed to meet the expanding demand for PPL (Private Pilot Licence) and CPL (Commercial Pilot Licence) training. First designed and developed by the CSIR-NAL in the early 1990s, the latest iteration of the Hansa-3 has undergone significant upgrades. This April, the NAL signed a deal with Pioneer for manufacturing the planes.

Science Minister Jitendra Singh presided over the inaugural function in Bengaluru to release the production plan on Saturday. He said that India would need nearly 30,000 pilots in the next 15 to 20 years, and Hansa-3(NG) represented a "critical step" towards fulfilling this domestic requirement through fully indigenous technology, reducing dependence on foreign trainer aircraft, and creating new avenues of livelihood and entrepreneurship in aviation.

Hansa-3(NG) is a 'critical step' in fulfilling domestic needs through indigenous technology

The CSIR-NAL is working on a 19-seater Light Transport Aircraft SARAS Mk-2 for both civilian and military operations. With a pressurised cabin, digital avionics, glass cockpit, autopilot, command-by-wire flight controls, and significant weight and drag reduction, the aircraft would bolster regional connectivity and address India's indigenous short-haul passenger aircraft requirement, an accompanying press statement noted.

Dr. Singh also inaugurated the Iron Bird Facility for SARAS Mk-2, describing it as a "crucial platform" for full-system integration, ground testing, and validation of major aircraft subsystems.

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Navy to hold international fleet review in visakhapatnam in Feb

Source: The Hindu , Dt. 29 Nov 2025

Navy to hold International Fleet Review in Visakhapatnam in Feb.

The Hindu Bureau
NEW DELHI

The Indian Navy will organise the International Fleet Review (IFR) in February 2026 in Visakhapatnam. The exercise seeks to reinforce the themes of being "United through Oceans" and strengthening "Bridges of Friendship".

Commander Sreehari S., posted at INS *Agrani* in Coimbatore, said India last conducted an IFR in 2001 to mark 50 years of the Republic. The 2026 edition coincides with the 75th anniversary. He said the maritime domain had become central to India's foreign policy and strategic outreach. With threats such as piracy, climate change, illegal fishing, and economic inequality growing, multilateralism had emerged as indispensable to collective security and sustainable growth. Maritime challenges transcend borders, making collaboration essential. Hence, India had positioned the Navy as a key architect of multilateral engagement, he said.

Naval outreach: India last conducted an International Fleet Review in 2001. INDIAN NAVY

New Delhi's efforts to strengthen regional maritime capacities include gifting platforms such as a corvette to Vietnam, fast interceptor craft to Mozambique, and commissioning a Maritime Rescue Coordination Centre in Sri Lanka. India's reputation as a dependable partner is shaped by its Humanitarian Assistance and Disaster Relief responses across the Indo-Pacific.

In October, while addressing senior military leaders of UN Troop Contributing Countries, Defence Minister Rajnath Singh reiterated India's commitment to a rules-based international order and called for reforming outdated multilateral structures. Naval diplomacy, he said, remained a vital component of India's strategic toolkit. The India-China dynamic in the Indian Ocean Region, marked by intense competition without naval confrontation, reflected the importance of calibrated maritime engagement.

Today, the Navy participates in nearly 20 bilateral exercises, including SIMBEX, Varuna and CORPAT, and several multilateral engagements such as QUAD, MILAN, Malabar and Konkan. Institutions such as the Indian Ocean Naval Symposium, launched in 2008, have evolved into platforms for dialogue, coordination and cooperative security planning.

Rajnath says India emerging as a global voice of responsbility

Source: The Hindu , Dt. 29 Nov 2025

Rajnath says India emerging as a global voice of responsibility

Saurabh Trivedi
NEW DELHI

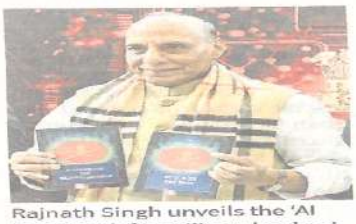
Defence Minister Rajnath Singh on Thursday said that India's economic growth, technological progress, and principled foreign policy had positioned it as a "voice of balance and responsibility" amid global flux.

Speaking at the Chanakya Defence Dialogue 2025 in New Delhi, held on the theme "Reform to Transform – *Sashakt, Surakshit, aur Viksit* Bharat", the Minister said nations across the Indo-Pacific and the Global South saw India as a reliable and trusted partner.

He underlined that India was shaping global conversations with "responsibility, strategic autonomy and confidence" rooted in civilisational values. The trust earned internationally, he said, stemmed from path-breaking reforms, India's consistent stand for sovereignty, and commitment to a rules-based order.

Reforms key

Mr. Singh cautioned that an era marked by terrorism, cross-border extre-



Rajnath Singh unveils the 'AI handbook for military leaders'.

stant vigilance and clarity of purpose. In this environment, reforms were no longer optional but a strategic necessity, strengthening institutions, increasing force agility, and enabling India to shape its own destiny.

Listing the government's key initiatives, he said India was modernising its armed forces, reforming procurement to ensure "speed, transparency and accountability", and building a robust defence industrial ecosystem through Aatmanirbhar Bharat.

Investments in start-ups, deep-tech and research and development were under way to prepare for future battlefields, alongside efforts to expand

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India , Russia defence ministers to meet, S-500 acquisition on agenda

Source: The Hindu , Dt. 29 Nov 2025

India, Russia Defence Ministers to meet, S-500 acquisition on agenda

Saurabh Trivedi
NEW DELHI

The Defence Ministers of India and Russia are set to meet on December 4 in New Delhi on the sidelines of Russian President Vladimir Putin's state visit to India.

A senior official confirmed that Defence Minister Rajnath Singh will hold talks with his Russian counterpart Andrey Belousov to review ongoing defence cooperation and explore new avenues of partnership.

Acquiring S-500

According to the official, the agenda includes discussions on the timely delivery of remaining S-400 air defence systems. India is also likely to examine the possibility of acquiring additional S-400 units as well as Russia's next-generation S-500 system – capable of intercepting ballistic missiles at ranges up to 600 km and airborne targets up to 400 km.

Russian Defence Minister Andrei Belousov, left, and Indian Defence Minister Rajnath Singh in Moscow in 2024. AP

The meeting is also expected to take up cooperation in shipbuilding and jointly developed weapons systems, an area both sides are looking to strengthen further.

In June this year, Mr. Singh and Mr. Belousov met in Qingdao, China, where Moscow reaffirmed its commitment to timely S-400 deliveries. India had placed an initial order for five S-400 units, of which three have been delivered. The remaining two are scheduled for delivery in 2026 and 2027.

The S-400 system has proved its strategic significance in recent Indian operations, including Operation Sindoor, and has been officially designated 'Sudarshan Chakra' in Indian service – after the mythological weapon of Lord Vishnu.

The Ministry of Defence has also identified an Indian firm to set up a Maintenance, Repair and Overhaul (MRO) facility for the S-400 system in the country.

Addressing a public gathering in Karnataka on Friday, Prime Minister Narendra Modi elaborated on the vision of Mission Sudarshan Chakra, stating that it aims to build an impenetrable protective wall around key national, industrial and public sector assets. "If the enemy dares to show audacity, India's Sudarshan Chakra will destroy them," the Prime Minister said.

Earlier, during his Independence Day address, Mr. Modi had announced the ambitious 'Sudarshan Chakra Mission', a decade-long initiative to bolster India's national security architecture.

Mohul | India seals

Indonesia eyes coastal , sea-launched Brahmos

Source: Hindustan Times , Dt. 02 Dec 2025

{ DEAL INCHES CLOSER }

Indonesia eyes coastal, sea-launched BrahMos

Rezaul H Laskar
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NEW DELHI: Indonesia's armed forces have expressed interest in both coastal batteries and sea-launched versions of India's BrahMos supersonic cruise missile as part of the Southeast Asian nation's comprehensive military restructuring programme, people familiar with the matter said on Monday.

The procurement of BrahMos missiles, jointly developed by India and Russia, figured in Indonesian defence minister Sjafrie Sjamsoeddin's discussions with Indian interlocutors during his visit to New Delhi last month. Besides co-chairing the bilateral defence ministers' dialogue with his counterpart Rajnath Singh, Sjafrie visited BrahMos Aerospace for a briefing on the missile, the people said.

The Indian side also conveyed its support for the Indonesian military's plans to manufacture pharmaceutical products for public distribution, the people said on condition of anonymity. In July, Sjafrie signed an agreement with Indonesia's food and drug supervisory agency for laboratories operated by the military to begin making drugs and medical supplies for civilians.

"The Indonesian military is interested in coastal batteries of BrahMos, or the surface-to-surface version of the missile, and the sea-launched version. Negotiations are currently more advanced for the coastal batteries," one of the people cited above said.

There is also strong interest in the sea-launched version of BrahMos, the people said, noting that Indonesian Navy chief Admiral Muhammad Ali had visited BrahMos Aerospace, the manufacturer of the missile, during a visit to India in January.

If the deal goes ahead, Indonesia will become the second foreign customer for the BrahMos. INDIAN NAVY

If the deal goes ahead, Indonesia will become the second foreign customer for the BrahMos, named after the Brahmaputra and Moskva rivers, after the Philippines, which has concluded a $375-million deal to acquire three batteries of the cruise missiles. The proposed deal with Indonesia is expected to be worth at least $450 million, the people said.

PICK OF THE DAY

While there have been no discussions on providing a credit line to Indonesia for the procurement of the BrahMos, the people said the Indian side will be open to considering this if there is a request.

The discussions on the BrahMos missile dovetails with growing maritime security cooperation between India and Indonesia in recent years, with the focus on a secure and peaceful maritime environment, the people said.

The two countries are also engaged in joint initiatives such as Exercise Samudra Shakti and are strengthening operational collaboration to tackle shared maritime challenges such as piracy and illegal activities at sea, they said.

"The Indian side can also support the Indonesian defence ministry's plans to begin manufacturing pharmaceutical products, given India's extensive expertise in this field," the person cited above said.

Laboratories run by Indonesia's military supply medicines for troops, and Sjafrie has said the manufacturing of pharmaceuticals for civilians is aimed at cutting prices by 50% and making drugs available through village cooperatives launched by President Prabowo Subianto, who was chief guest at this year's Republic Day celebrations.

Indonesia has been engaged in discussions with India on the BrahMos missile, the export version of which has a range of 290km, for more than seven years. Indian experts have also visited Indonesia to assess the fitting of the missile on Indonesian warships. Vietnam too has expressed interest in acquiring the BrahMos missile.

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Army conducts combat launch of BrahMos crusie missile

Source: The Hindu, Dt. 02 Dec 2025

Army conducts combat launch of BrahMos cruise missile

The Indian Army carried out a combat launch of the BrahMos supersonic cruise missile on Monday from a test range in the Bay of Bengal. The Ministry of Defence confirmed that the mission was executed through a precisely coordinated effort involving a BrahMos unit of the Southern Command and elements of the Tri-Services Andaman & Nicobar Command. Lt. Gen. Dhiraj Seth, General Officer Commanding-in-Chief, Southern Command, lauded the successful combat launch. The launch boosts the Army's long-range strike capability and deterrence.

Armed forces to procure additional Heron Mk II UAVs

Source: The Hindu, Dt. 02 Dec 2025

Armed forces to procure additional Heron Mk II UAVs

Saurabh Trivedi
TEL AVIV

To enhance their unmanned capabilities in the wake of Operation Sindoor, the Indian armed forces have signed up for more satellite-linked Heron Mk II Unmanned Aerial Vehicles under emergency procurement, sources in the Israeli defence industry said.

According to the sources, the Army and Air Force, which already operate Heron Mk II drones, have placed additional orders while the Indian Navy is acquiring them for the first time. The Navy, which has long relied on Israeli-made Searcher UAVs for surveillance, will soon transition to the more advanced Heron Mk II platform.

As per existing guidelines, under emergency procurement, armed forces can procure weapons systems, including entire systems, up to ₹300 crore.

The Heron family, especially the Heron Mk II, has emerged as a key component of evolving combat environments due to its versatility and proven reliability. Indian Army has deployed these drones at forward bases in northern sector.

The Indian Army has already deployed Heron drones in forward bases.

In line with India's push for defence indigenisation, several Israel defence industries, including state-owned defence manufacturers, are working with defence PSUs and private partners to enhance local production. The companies are also creating training, maintenance and integration capabilities within India, the official said.

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Share the theatre command stage

Source: The Economic Times, Dt. 02 Dec 2025

Share the Theatre Command Stage

Philip Campose

Indian armed forces are in the middle of a major transformation aimed at improving jointness, resource optimisation and operational efficiency. Creation of CDS and Department of Military Affairs (DMA) in 2019 were first steps toward integration. The next logical move is 'theatreisation' — implementation of integrated theatre commands (ITCs) by which specific resources from army, navy and air force will be pooled under single commanders for geographical or threat-centric theatres of operations.

But this reform has faced resistance, particularly from IAF, due to concerns about the fragmentation of air power. Also, what happens to the existing 17 service commands? Should they be abolished or coexist with the new theatre commands?

Currently, all three services focus primarily on protecting their own turfs through perpetuation of the current system of service-specific commands. Theatreisation would address some existing weaknesses by providing:

- **Unity of command** A single operational commander reduces delays and ensures synergy in combat.
- **Integrated planning** Pooling resources prevents duplication and wastage.
- **Rapid decision-making** Current structures require coordination between multiple service chiefs during a crisis, slowing response.
- **Preparedness for multi-domain threats** India faces a two-front challenge from China and Pakistan, along with cyber and space threats.
- **Global models** Major powers like China and the US operate through integrated theatre commands. China's Western Theatre Command specifically focuses on the Indian frontier.

The rationale for joint commands is strong. Yet, structural change must account for the operational realities of each service. The new concept is creation of three integrated theatre commands:

- **Northern** For the China border (Ladakh and northeast).
- **Western** For the Pakistan front.
- **Maritime** For the Indian Ocean region.

Three-in-one

Further, there could be an Air Defence Command, for pan-India air and missile defence.

Some objections of the IAF do bear merit. Its current resource constraints would need to be addressed. Also, overall budget and resource constraints will have to be kept in view while implementing restructuring plans.

A hybrid approach — joint theatres for operational synergy, co-existing with functional commands for training, logistics and strategic roles — is an option. Merge operational commands and retain functional commands. Implementation can be phased and deliberate, imbibing and incorporating 'lessons' along the way.

Instead of permanent allocation, air assets should remain under centralised control at Air HQ. CDS, through a joint operations centre, should allocate assets dynamically based on theatre needs. This preserves air power principles of centralised control and decentralised execution.

Before structural change, large-scale tri-service exercises should be conducted, and joint doctrines for integrated war-fighting developed. This will reduce mistrust and build operational confidence.

Overcoming turf battles requires political will and strong CDS leadership. CDS powers under 'Allocation of Business Rules' need clarity and modification. Also needed is a mindset shift from service-specific thinking to mission-oriented jointness. And integration needs investment in networks, integrated services routers and joint logistics systems.

Theatreisation is essential for India to fight future multi-domain wars effectively. It can deliver jointness without fragmentation, integration without loss of flexibility, and synergy without diluting any service's core strength.

The writer is former vice-chief, Indian Army

Israel to get Iron Beam laser defence system

Source: The Pioneer , Dt. 02 Dec 2025

Israel to get Iron Beam laser defence system

PRESS TRUST OF INDIA
Tel Aviv

A new laser interception system, known as Iron Beam, will be delivered to the Israeli military on December 30 to bolster its air defence, a senior defence ministry official announced on Monday.

"With development complete and a comprehensive testing programme that has validated the system's capabilities, we are prepared to deliver initial operational capability to the IDF on December 30, 2025," said Daniel Gold, Head of the Israel Ministry of Defence (IMOD) Directorate of Defence Research & Development.

"Simultaneously, we are already advancing the next-generation systems," he added. Iron Beam is a ground-based high-power laser air defence system designed to counter aerial threats, including rockets, mortars, and UAVs. Speaking at the second International DefenseTech Summit at Tel Aviv University here, the Israeli general said that the Iron Beam laser system is expected to fundamentally change the rules of engagement on the battlefield. The system has been in development for over a decade.

"We are actively developing the next generation of technological surprises for future conflicts – across space, offensive, and defensive domains – and will operationalise them at the appropriate time," he said. During the recent war, short-range tactical laser systems were deployed and they successfully intercepted dozens of threats.

The summit, led by the Directorate of Defence Research & Development (DDR&D), in collaboration with the Blavatnik Cyber Research Centre at Tel Aviv University, focuses on technological innovation in light of lessons learned from the recent war.

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INS Vikrant makes maiden overseas deployment for srilanka's International Fleet Review 2025

Source: The Statesman, Dt. 29 Nov 2025

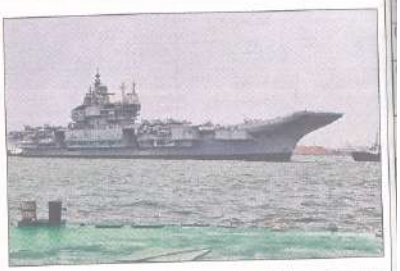
INS Vikrant makes maiden overseas deployment for Sri Lanka's International Fleet Review 2025

STATESMAN NEWS SERVICE
New Delhi, 28 November

India's first indigenous aircraft carrier, INS *Vikrant*, along with the indigenously built frigate INS *Udaygiri*, is representing the Indian Navy at the International Fleet Review (IFR) 2025 being hosted by the Sri Lanka Navy in Colombo.

The event, which will culminate on 29 November, is part of the Sri Lanka Navy's 75th anniversary celebrations and features participation from naval ships, delegations and observers from several countries. In a statement issued here today, the naval spokesperson said that the visit marks the maiden overseas deployment of both ships and underscores India's commitment to strengthening regional maritime cooperation.

The maiden participation of indigenously built INS *Vikrant* for an International Fleet Review highlights India's continued engagement with partner navies in the Indian Ocean Region (IOR) and reflects India's emphasis on promoting peace, stability and security through collaboration and interoperability. "The participation of the recently commissioned INS *Udaygiri* further showcases India's advancing indigenous shipbuilding capabilities and its balanced, expanding naval presence in the IOR, the spokesperson said further.



During their stay in Colombo, the ships will participate in key IFR events, including the ceremonial fleet review, city parade, community outreach activities, and professional naval interactions. As part of public outreach initiatives, the ships will also be open to visitors during IFR 2025.

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Science & Technology News

Number of women scientists supported by government schemes since 2014 doubled during over 11 years after Sh Narendra Modi took over as PM, says Minister Dr Jitendra Singh;

Source: PIB, Dt. 28 Nov 2025

Women's Participation in National R&D Ecosystem Surges Under Modi Government; DST Schemes Show Transformative Growth

Women constitute 18.6 % work force STEM, and progressively rising.

Modi Government's "Nari Shakti" Vision Drives Unprecedented Inclusion of Women in Science and Technology: Dr. Jitendra Singh

Policy Push Since 2014 Expands Opportunities for Women Scientists from Research Training to Leadership Roles

Union Minister of State (Independent Charge) for Science & Technology and Minister of State in the Prime Minister's Office, Dr. Jitendra Singh today highlighted that the number of women scientists supported by government schemes doubled since 2014, during over eleven years after Sh Narendra Modi took over as Prime Minister.

Elaborating the details of different women-centric schemes run by the Department of Science & Technology, the Minister cited figures to substantiate the point, as follows.

Inspire Manak before 2014 - Nil, 2014 to 2025 - 176743. Inspire scholarship for higher education before 2014 -23530, 2014 to 2025 - 50642. Inspire Fellowship before 2014 - 2106, 2014 to 2025 - 5035. Inspire Faculty before 2014 - 175, 2014 to 2025 - 439. WISE (Women Scientist Scheme) before 2014 - 2713, 2014 to 2025 -4419. WISE Vigyan Jyoti before 2014- NIL, 2014 to 2025- 112386.

The Minister said that prior to 2014, women beneficiaries across key DST programmes were limited, but between May 2014 and October 2025, the number has grown exponentially across schemes such as INSPIRE, WISE-KIRAN and Vigyan Jyoti, reflecting the Government's strong push toward women-led development and inclusive scientific growth.

Citing data from DST's Research and Development Statistics 2025, Dr. Jitendra Singh pointed out that women today constitute about 18.6 per cent of the workforce employed in STEM-related fields in the Government and private sector combined, a share that is steadily growing as more women move into research, innovation, and high-technology roles. He further highlighted that women's participation in extramural R&D projects – a critical indicator of their role as principal investigators and research leaders – has almost doubled over the last two decades, rising to 25 per cent in 2019–20 from 13 per cent in 2000–2001. He said this progress is directly linked to the sustained efforts made by the Government in the S&T sector to enable women to enter, sustain and excel in research careers.

The Minister noted that DST's women-centric schemes such as WISE and KIRAN, together with its flagship INSPIRE-based fellowships and other capacity-building programmes, have played a pivotal role in

expanding the pool of trained, employable, and research-active women scientists across the country. He said that prior to 2014, women-specific support mechanisms were limited in scale, fragmented across schemes and often unable to address the full lifecycle of a woman's scientific career, from early-stage research training to re-entry after career breaks and onward progression into leadership roles. In contrast, the period since May 2014 has witnessed a systematic consolidation and expansion of these initiatives, allowing a much larger number of women scientists to receive fellowships, research grants, project leadership opportunities, and institutional recognition.

Dr. Jitendra Singh said that this sharp rise in women's participation is not incidental but the result of a conscious policy thrust under the leadership of Prime Minister Shri Narendra Modi, who has consistently championed the cause of "Nari Shakti" and women-led empowerment in every sphere of national life. He said that when the present Government assumed office in 2014, women scientists were still significantly under-represented in major R&D programmes and institutional ecosystems, despite their presence in universities and academic pipelines. Over the past decade, however, targeted interventions, dedicated women-centric schemes and a strong push for inclusion have ensured that Indian laboratories, universities, start-ups and innovation hubs increasingly reflect the aspirations and leadership of women scientists and technologists.

Dr. Jitendra Singh underlined that the Government's approach has been to view women not merely as beneficiaries of science and technology, but as principal architects and decision-makers in the knowledge economy.He pointed out that the rise in women scientists since 2014 is accompanied by a parallel increase in women occupying positions on expert committees, review panels, national missions and advisory bodies under DST and other S&T departments. This ensures that policy frameworks, funding priorities and programme designs incorporate the perspectives and experiences of women scientists, thereby creating a more responsive and equitable ecosystem.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2196065&reg=3&lang=1

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Star attraction! How a girl who watched the moon became India's Missile Woman

Source: The Times of India, Dt. 01 Dec 2025

Star attraction! How a girl who watched the Moon became India's Missile Woman

Meghna.Dhulia
@timesofindia.com

New Delhi: Long before India knew her as its 'Missile Woman', a young girl in Kerala's Alappuzha used to gaze at the sky with a quiet fascination. "When I returned home in the evenings, I would look at the Moon and feel happy I brought it back with me," Tessy Thomas, 62, recalls. Often, she would step outside at night just to see if it was still there, a ritual that nurtured her curiosity about the universe.

Her interests soon expanded beyond the Moon. "When I was young, I was captivated by science and maths. I used to wonder how contrails coming out of an aircraft made marks in the sky." Simple questions like that formed the basis of an extraordinary career that transformed India's missile and defence landscape.

On Sunday, Thomas was awarded Dr Paulos Mar Gregorios Award 2025 by Wajahat Habibullah, former chief information commissioner of India. Instituted by Sophia Society of the Malankara (Indian) Orthodox Church, the award is given every alternate year in memory of first Metropolitan of Delhi Diocese and noted philosopher Dr Paulos Mar Gregorios.

Thomas is the first woman to lead a missile project in the country and a pioneering engineer in defence tech. She was the first Indian woman to be inducted into Aeronautical Society's Space Pioneer Hall of Fame in 2014 and is a recipient of multiple awards.

On the occasion, Dr Youhanon Mar Demetrios, president of Sophia Society, said, "Thomas has demonstrated to women, men and people of all ages that with determination, one can reach any height."

TESSY THOMAS SAYS

As a young girl, I was fascinated by science and mathematics. I used to wonder how contrails coming out of an aircraft made marks in the sky

Tarun Rawal

EFFORTS RECOGNISED: Tessy Thomas honoured for her contribution to women empowerment as well as space and missile technology

The event was attended by Catholicos Moran Mar Baselios Marthoma Mathews-III, Prof Shyamdas Balakrishna Menon, Rev Fr Dr KM George and Rev Fr Saji Abraham.

Thomas' own leap into advanced science came when she was selected as one of 10 students across India for a specialised missile tech program. "I was fortunate to be guided by Dr APJ Abdul Kalam," she recalls, acknowledging his pivotal role in shaping generations of Indian scientists.

Eventually, she was at the helm of Agni missile program, at a time when the field was heavily dominated by men. Her work was groundbreaking. "Our technology was the first of its kind in the country, and certain things first of its kind in the world," she says.

From an era of limited capability, India rose rapidly, achieving self-reliance in space and missile defence. Somewhere along that journey — from the young girl who used to gaze at the Moon to the trailblazer who helped India touch it — lies a legacy that turned curiosity into national strength.

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NISAR earth observation satellite enters final science phase

Source: The Hindu, Dt. 29 Nov 2025

NISAR earth observation satellite enters final science phase

The Hindu Bureau
BENGALURU

The NASA ISRO Synthetic Aperture Radar (NISAR) satellite, launched in July, has entered the science phase, the ISRO announced on Friday.

The earth observation satellite provides all-weather, day-and-night data, which have a wide range of applications.

It is the first satellite jointly developed by the Indian Space Research Organisation (ISRO) and the U.S.'s National Aeronautics and Space Administration (NASA).

Five-year mission

The NISAR mission is broadly classified into different phases —launch, deployment, commissioning and science phases. The final science operations phase begins at the end of commissioning and extends till the end of NISAR's five-year mission life.

"During this phase, the science orbit will be maintained via regular manoeuvres, to avoid or minimise conflicts with science observations. Extensive calibration and validation activities will take place," the ISRO had said earlier.

After the launch of the satellite on July 30 from the Satish Dhawan Space Centre in Sriharikota, a 12-metre diameter antenna reflector was deployed. It plays a key role in both ISRO's S-Band and NASA's L-Band Synthetic Aperture Radar (SAR) Payload.

"NISAR S-Band SAR has been regularly imaging Indian landmass and global calibration-validation sites," the ISRO said.

The Tribune
The Statesman
पंजाब केसरी जनसत्ता
The Hindu
The Economic Times
Press Information Bureau
The Indian Express
The Times of India
Hindustan Times
नवभारत टाइम्स
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The Pioneer