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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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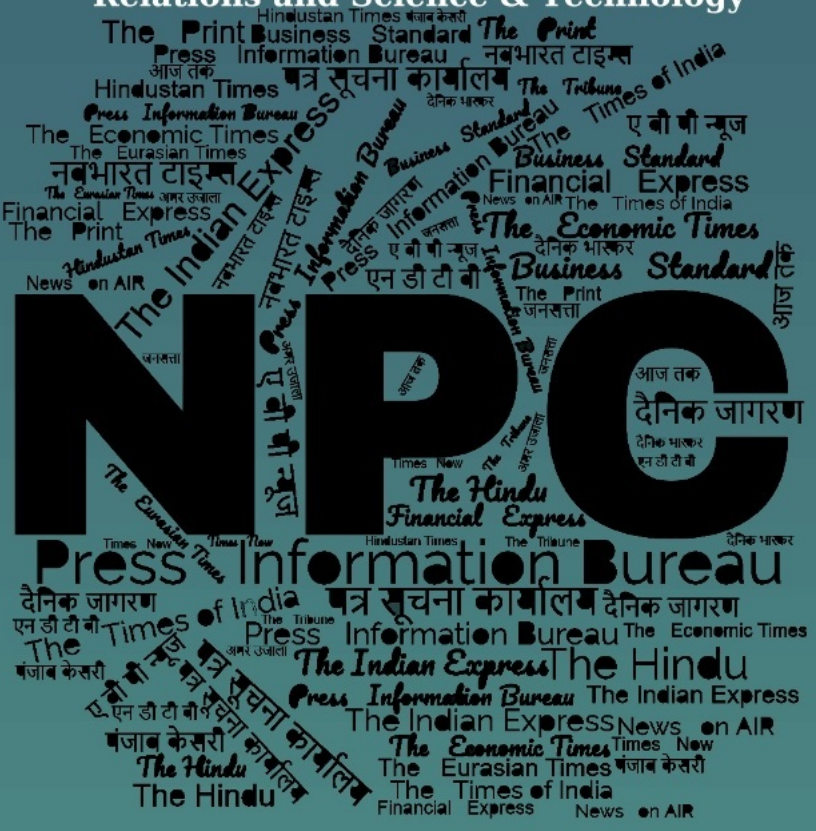

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CONTENTS

Defence News

एंटी ड्रोन सिस्टम रोकेगा घुसपैठ, तस्करी पर लगेगी लगाम

Source: Dainik Jagran , Dt. 04 Dec 2025

एंटी ड्रोन सिस्टम रोकेगा घुसपैठ, तस्करी पर लगेगी लगाम

जागरण संवाददाता, अमृतसर: पाकिस्तान में बैठे तस्करों व आतंकियों द्वारा भारत में की जा रही संदिग्ध गतिविधियों को अब सीमा सुरक्षा बल तकनीक से पस्त करेगी। बीएसएफ से मिली आधिकारिक जानकारी के अनुसार, बल ने पंजाब से सटी अंतरराष्ट्रीय सीमा पर बढ़ते ड्रोन के खतरे, हथियार व मादक पदार्थों की तस्करी रोकने को मल्टीलेयर हाइटेक सुरक्षा कवच तैयार किया है। यह नेटवर्क सीमा पार से होने वाली हर गतिविधि पर 24 घंटे नजर रखेगा।

इस सिस्टम के लागू होने के बाद ड्रोन, हथियार व नशे की तस्करी लगभग असंभव हो जाएगी। बीएसएफ ने सीमावर्ती क्षेत्रों में रडार, इंफ्रारेड और इलेक्ट्रो आप्टिकल कैमरों के साथ-साथ रेडियो फ्रीक्वेंसी एनालाइजर भी इंस्टाल किए हैं। एंटी ड्रोन सिस्टम भी सीमा की सुरक्षा में शामिल किया गया है, जो संदिग्ध ड्रोन को न केवल पकड़ने में, बल्कि उसे हवा में ही निष्क्रिय भी कर सकता है।

- बीएसएफ ने पंजाब से सटी अंतरराष्ट्रीय सीमा पर मल्टीलेयर हाइटेक सुरक्षा कवच किया तैयार
- रडार, इंफ्रारेड और इलेक्ट्रो आप्टिकल कैमरों के साथ रेडियो फ्रीक्वेंसी एनालाइजर स्थापित

तकनीकी सुरक्षा कवच

- दूर से आने वाले ड्रोन को तुरंत पकड़ लेगा।
- ड्रोन की ऊंचाई, दिशा और गति का सटीक पता चलेगा।
- कम ऊंचाई से उड़ने वाले छोटे ड्रोन भी नजर से नहीं बच पाएंगे।

रेडियो-फ्रीक्वेंसी एनालाइजर

- ड्रोन के रिमोट सिग्नल का पता लगाकर उसकी लोकेशन और आपरेटर की दिशा की जानकारी देगा।
- तस्करों के छिपे कम्यूनिकेशन उपकरण भी पकड़ सकता है।
- ड्रोन को हवा में ही रोकने, जाम करने या गिराने की क्षमता।
- ड्रोन को जीपीएस या कंट्रोल सिग्नल से निष्क्रिय किया जा सकता है।

अमृतसर में ड्रोन फोरेंसिक लैब करेगी विश्लेषण: अमृतसर में ड्रोन फारेंसिक लैब स्थापित की गई है। इस लैब में प्रत्येक ड्रोन का वैज्ञानिक विश्लेषण किया जाएगा। लैब यह पता लगाएगी कि ड्रोन ने कितनी उड़ानें भरीं, किस स्थान से उड़ान भरी, किस मार्ग से आया और कहां सामान गिराया। इससे तस्करी के पूरे नेटवर्क को पकड़ने में सुरक्षा एजेंसियों को मदद मिलेगी। ये सभी अत्याधुनिक उपकरण न केवल रात में, बल्कि खराब मौसम में भी पूरी पारदर्शिता से काम करते हैं।

इंफ्रारेड कैमरे धुंध व कोहरे में कारगर: इंफ्रारेड कैमरों से रात के समय भी ड्रोन गतिविधियों का पता चल सकेगा। ये इंफ्रारेड इमेजिंग से ड्रोन की गर्मी पहचान लेते हैं। ये धुंध, कोहरे और स्मोग में भी कारगर साबित होंगे।

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Indian , Russian Defence Ministers to meet today

Source: The Tribune, Dt. 2 Dec 2025

Indian, Russian Defence Ministers to meet today

NEW DELHI, DECEMBER 3

Defence Minister Rajnath Singh and his Russian counterpart Andrei Belousov will on Thursday review the full spectrum of bilateral defence ties, including military and military-technical cooperation.

They will co-chair the 22nd India-Russia Inter-Governmental Commission on Military and Military Technical Cooperation in New Delhi. The two ministers will also exchange views on contemporary regional and global issues of mutual interest, the Ministry of Defence said.

Russia is offering its latest fifth-generation fighter jet, the Sukhoi-57, to India. New Delhi, meanwhile, is pressing Moscow to expedite pending deliveries of the S-400 air defence system and to finalise a plan for upgrading the Indian Air Force's fleet of 270 Sukhoi-30MKI fighter jets.

The lower house of the Russian Parliament, the State Duma, has ratified a military pact that will allow the militaries of both countries to exchange logistics such as fuel, spares and access to maintenance facilities, air bases and naval ports. The agreement is known as the Reciprocal Exchange of Logistics Agreement. — TNS

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President Droupadi Murmu and Navy chief Adm. Dinesh K. Tripathi during an event organised as part of the Navy Day celebrations in Thiruvananthapuram on Wednesday. Navy Day is celebrated on December 4 each year. — PTI

The Asian Age, 04 Dec 2025

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Major defence,trade deals high on agenda during putin's visit

Source: The Statesman, Dt. 4 Dec 2025

Major defence, trade deals high on agenda during Putin's visit

STATESMAN NEWS SERVICE
New Delhi, 3 December

The much-anticipated two-day visit of Russian President Vladimir Putin to India that will commence from Thursday will provide an opportunity for the leadership of the two countries to review progress in bilateral relations, set the vision for strengthening the 'Special and Privileged Strategic Partnership' and exchange views on regional and global issues of mutual interest.

According to Kremlin Spokesman Dmitry Peskov, President Putin's visit will deliver "significant outcomes" across strategic, defence, energy, and trade sectors.

Mr Putin will start his visit to India on Thursday with an informal meeting with Prime Minister Narendra Modi at his residence, Presidential Aide Yuri Ushakov said in Moscow on Wednesday, calling the upcoming meeting during a private dinner between the two leaders as "one of the key points of the Russian leader's visit."

According to Mr Ushakov, Putin will discuss important issues of bilateral ties and the international situation with PM Modi. He stated that Putin will also hold talks with PM Modi in a narrow and expanded format. Key aspects of trade and economic cooperation will be discussed and several agreements will be signed during Mr Putin's visit to India, Russian state-run news agency *TASS* reported.

According to Ushakov, India and Russia plan to sign a programme for the development of strategic areas of economic cooperation until 2030.

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Raksha Mantri & his Russian counterpart to co-chair 22nd meeting of India-Russia Inter-Governmental Commission on Military & Military Technical Cooperation in New Delhi

Source: PIB, Dt. 3 Dec 2025

Raksha Mantri Shri Rajnath Singh and the Defence Minister of Russia Mr Andrei Belousov will co-chair the 22nd India-Russia Inter-Governmental Commission on Military & Military Technical Cooperation ministerial meeting in New Delhi on December 04, 2025. The two leaders will review the entire range of multi-faceted relations between the two countries in the field of defence, including Military and Military Technical Cooperation. They will also exchange views on contemporary regional and global issues of mutual interest.

During the visit, the Russian Defence Minister will also lay a wreath at the National War Memorial, New Delhi, and pay tribute to the Indian soldiers who have made the supreme sacrifice in the line of duty.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2198385&reg=3&lang=1

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ICGS Vigraha undertakes operational visit to Indonesia as part of its overseas deployment to ASEAN countries

Source: PIB, Dt. 3 Dec 2025

As part of its overseas deployment to ASEAN countries, Indian Coast Guard Ship (ICGS) Vigraha is undertaking an operational visit to Jakarta, Indonesia, from December 02-05, 2025. During the three-day visit, personnel of the ICG and Indonesian Coast Guard (BAKAMLA) will participate in an extensive programme of activities, including professional interactions, tabletop exercises, shipboard drills and joint training sessions. The visit underscores the growing centrality of Coast Guard-to-Coast Guard cooperation in promoting maritime safety, security and environmental stewardship in the region.

The engagements are focused on Maritime Law Enforcement, Marine Pollution Response and Maritime Search and Rescue areas where both organisations share significant operational responsibilities owing to their large Exclusive Economic Zones and heavy maritime traffic. Joint activities will strengthen interoperability in handling incidents related to illegal, unreported and unregulated fishing, piracy, trafficking, maritime accidents and environmental hazards. A Passage Exercise (PASSEX) will be organised to further enhance operational cohesion, communication procedures, and seamanship coordination between the two services.

The current visit also includes courtesy calls, ship visits, yoga & sports activities and professional exchanges at maritime training establishments. These interactions will strengthen people-to-people ties and build camaraderie among personnel, an essential foundation for effective operational cooperation. India and Indonesia, both leading maritime democracies, are committed to upholding a Rules-Based International Order (RBIO) in the Indo-Pacific. Cooperative Coast Guard engagement plays a vital role in translating this principle into practical action through routine maritime enforcement, joint response mechanisms and coordinated surveillance of strategic sea lanes.

A major pillar of India-Indonesia maritime partnership is the Memorandum of Understanding (MoU) signed between the ICG and BAKAMLA in July 2020. This landmark agreement institutionalised a structured framework for operational engagement, strengthening collaboration in maritime law enforcement, coordinated patrols, Search and Rescue, marine pollution response, information sharing and capacity building. Since its conclusion, the MoU has enabled sustained interaction between the two agencies, facilitating the exchange of best practices, professional training, and improved interoperability during joint maritime operations.

Over the years, ICG and BAKAMLA have built a robust tradition of cooperation characterised by regular high-level visits, bilateral training exchanges, coordinated patrols and collaboration through ASEAN-led and Indo-Pacific maritime initiatives. Indonesia regularly participates in capacity-building programmes and specialised courses offered by the ICG, while ICG ships visiting Indonesian ports have facilitated practical training and cross-deck interactions. The presence of ICGS Vigraha in Jakarta signals India's continued commitment to cooperative maritime security and its readiness to support partners in strengthening their maritime capabilities and preparedness.

On completion of the Jakarta leg, ICGS Vigraha will sail to Port Klang, Malaysia, continuing its operational deployment to ASEAN countries. The deployment aims to enhance regional engagement, strengthen collaborative response mechanisms, and contribute to peace, stability, and good order at sea across the Indo-Pacific.

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Science & Technology News

Indian space station to be fully operational by 2035,says minister

Source: The Tribune, Dt. 4 Dec 2025

Indian space station to be fully operational by 2035, says minister

Overall configuration reviewed by panel

AKSHEEV THAKUR
TRIBUNE NEWS SERVICE

NEW DELHI, DECEMBER 3

India's space station is set to be fully operational by 2035, and its overall configuration has already been reviewed by a National-Level Review Committee, Science Minister Jitendra Singh informed the Lok Sabha on Wednesday.

He was responding to a query by BJP MP Bhartruhari Mahtab. Singh said ISRO has worked out the overall configuration of the Bharatiya Antariksh Station, the indigenous space station which will consist of five modules and is expected to be fully operational by 2035.

In September 2024, the Cabinet had approved the development and launch of the first module of Bharatiya Antariksh Station (BAS-01) by 2028. The minister said overall system engineering of the BAS-01 module and technology development activities of various subsystems was progressing well.

On a specific question about budgetary support, the minister said the allocation towards various precursor missions, development and launch of BAS-1 were included in the revised scope of the Gaganyaan programme, which has been enhanced with an additional funding in the already approved Gaganyaan programme to Rs 20,193 crore based on the approval from the Cabinet in September-2024.

"Development and launch of the first module of the Space Station base module (BAS-01) is targeted by 2028 and fully operational BAS with five modules is expected by 2035. ISRO is incorporating necessary international standards in the design of BAS-01 subsystems that would ensure interoperability of BAS-01 with systems provided by other international agencies," said the government.

A RARE FEAT

So far, only three nations — the United States, Russia, and China — have independently operated their own space stations. Although Russia's last one, Mir, was decommissioned in 2001.

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PARLIAMENT QUESTION: NATIONAL RESEARCH FOUNDATION (NRF)

Source: PIB, Dt. 4 Dec 2025

ANRF has been established through the Anusandhan National Research Foundation Act, 2023 (25 of 2023). The provisions of the Act came into force on 5th February 2024. It aims to provide high level strategic direction for research, innovation and entrepreneurship in the field of natural sciences including mathematical sciences, engineering and technology, environmental and earth sciences, health and agriculture, and scientific and technological interfaces of humanities and social sciences, to promote, monitor and provide support as required for such research and for matters connected therewith or incidental thereto. The overarching goal of the ANRF will be to seed, grow and promote research and development (R&D) and foster a culture of research and innovation throughout India's universities, colleges, research institutions, and R&D laboratories.

The programmes and initiatives under the ANRF have been formulated to align national research efforts with strategic priorities. These include supporting research across disciplinary and interdisciplinary areas of science and technology through competitive funding; strengthening R&D capabilities in state universities; implementing mission-mode programmes in domains of national importance; encouraging private-sector participation in R&D; and providing limited support through fellowships, seminars, and workshop grants.

A major initiative under ANRF is the Mission for Advancement in High-impact Areas (MAHA), which promotes priority-driven, solution-oriented research through multi-institutional, multi-disciplinary, and multi-investigator collaborations. Under the MAHA programme, ANRF has so far identified and launched four missions: the Electric Vehicle (EV) Mission, the 2D Innovation Hub, the MedTech Mission, and the AI for Science and Engineering initiative.

ANRF's programmes focus on strengthening industry-academia collaboration and promoting translational, mission-driven research with active industry involvement. To ensure effective engagement, the MAHA–EV Mission mandates participation from relevant industries, PSUs, and start-ups, and includes a requirement for industry partners to contribute 10% of the total project cost.

To strengthen the country's R&D outlook and create a competitive national research ecosystem, the Government is undertaking a series of strategic measures. These include building indigenous capabilities in critical technologies such as semiconductors, Artificial Intelligence, 5G/6G, quantum computing, biotechnology, clean energy, space technologies, and cyber-physical systems; establishing national mission programmes such as the National Quantum Mission, the India Semiconductor Mission, and the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) to drive coordinated, mission-mode research. Further steps include operationalising the Anusandhan National Research Foundation (ANRF) to support high-impact and translational research; enhancing industry-academia collaboration; promoting private-sector participation in R&D; and establishing a ₹1 lakh crore RDI Fund to catalyse research and innovation in sunrise and strategic sectors. The Government is also strengthening human capital for R&D through fellowship schemes such as the Prime Minister's Early Career Research Grant and other research support programmes.

One of the key initiatives to increase participation of private sector is launching of Research, Development, and Innovation (RDI) Scheme. On July 1, 2025 the Union Cabinet approved the RDI Scheme with a total outlay of ₹1 lakh crore over 6 years to incentivize private sector participation in research and development (R&D).

RDI Scheme aims to provide long-term financing at low interest rates to spur private sector investment in RDI. The scheme has been designed to overcome the constraints and challenges in funding of private sector and seeks to provide growth & risk capital to sunrise and strategic sectors to facilitate innovation, promote adoption of technology and enhance competitiveness. The main objectives of the RDI scheme are to 1) encourage the private sector to scale up research, development and innovation (RDI) in sunrise domains and in other sectors relevant for economic security, strategic purpose, and self-reliance, 2) finance transformative projects at higher levels of Technology Readiness Level (TRL) of 4 and above, 3) support acquisition of technologies which are critical or of high strategic importance, and 4) facilitate setting up of Deep-Tech of Funds.

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PARLIAMENT QUESTION: GROSS EXPENDITURE ON RESEARCH AND DEVELOPMENT

Source: PIB, Dt. 4 Dec 2025

As per latest Research & Development Statistics, the Gross Expenditure on Research and Development (GERD) in the country has been consistently increasing over the years and has more than doubled from Rs. 60,196.75 crore in 2010-11 to Rs. 1,27,380.96 crore in 2020-21.

The key sectors and institutions contributing to this increase include: government R&D labs/institutions, public & private sector industries and higher education institutions. In the industrial R&D, the dominant sectors are Drugs & Pharmaceuticals, Information Technology, Transportation, Defence Industries and Biotechnology. The share of government spending in total R&D is 63.6% and that of private sectors is 36.4%.

The government has implemented several measures to encourage innovation, research output and patent filing with the aim to strengthen overall research and innovation ecosystem of the country. Some of the key measures/steps taken up by the government include:

- Launch of ₹1.0 lakh crore Research, Development and Innovation (RDI) Fund to provide financial support to private industries for research and innovation in the critical areas that are vital for national development and global competitiveness such as: Energy security and transition, and climate action; ‘Deep Technologies’ including quantum computing, robotics and space; Artificial intelligence; Biotechnology and medical devices; Digital economy including digital agriculture; etc. This scheme aims to catalyze private sector investment in R&D.
- Establishment of the Anusandhan National Research Foundation (ANRF) to provide high-level strategic directions for research, innovation and entrepreneurship in the diverse fields of sciences and engineering.
- Creation of state-of-art R&D infrastructure in academic and research institutions through programmes like: Fund for Improvement of S&T Infrastructure in Universities and Higher Educational Institutions (FIST); Promotion of University Research and Scientific Excellence (PURSE); Sophisticated Analytical Instrument Facilities (SAIF); Sophisticated Analytical & Technical Help Institute (SATHI); etc.
- Promotion of S&T based innovation and entrepreneurship in academic and research institutions through programme such as: National Initiative for Developing and Harnessing innovations (NIDHI);

Biotechnology Industry Research Assistance Council (BIRAC) programmes; Innovations for Defence Excellence (iDEX); Technology Development Fund (TDF); TIDE 2.0 (Technology Incubation and Development of Entrepreneurs); etc.

- Implementation of mission mode programmes such as: National Quantum Missions (NQM); National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS); National Supercomputing Mission; Mission for Advancement in High-impact Areas (MAHA)-Electric Vehicles; etc. for technology development in specific areas.
- Creation of enabling mechanism for IP management and commercialization through various initiatives such as: establishment of Patent Facilitating Centre; Patent Information Centre to facilitate IPR related activities through State S&T Councils; publishing Intellectual Property Guidelines to facilitate seamless transfer of IP at academic institutes towards commercialization of technologies/products; establishment of Technology Transfer Offices (TTOs) to facilitate transfer of technologies from universities and research institutions to the industry; providing IP and technology management service through Biotechnology Industry Research Assistance Council (BIRAC); etc.

India's rising R&D investments and growth in science and engineering PhDs are directly contributing to its goal to become a global innovation hub and helped in strengthening research capacity, fueling innovation, boosting patent activity and enhancing global competitiveness which is reflected in India's position in global rankings i.e. significant jump in its Global Innovation Index (GII) ranking from 81st (2015) to 38th (2025); 3rd position in number of startups; 3rd position in science and engineering publications; 4th position in number of PhDs in science & engineering; and 6th position in patent filing activity.

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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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