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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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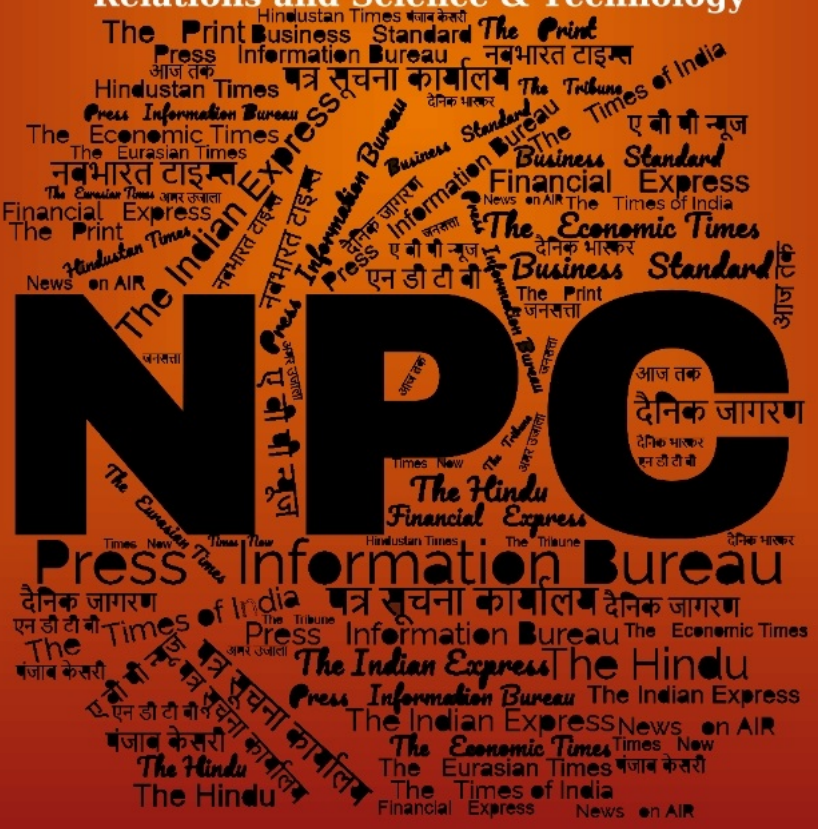

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DRDO News

india.com

Wed, 08 Jan 2025

Bad News for China, Pakistan, Bangladesh as India set to introduce Guided Pinaka MBRL System, boost border security with…, it can destroy…

The Indian Army is all set to introduce the guided Pinaka multi-barrel rocket launcher (MBRL) system later this year. This will upgrade the artillery of the Indian Army. This system will boast a range of over 75 kilometers and pinpoint accuracy, successfully completed its final flight tests in November 2024, paving the way for its induction into service.

The Guided Pinaka was developed by the **Defence Research and Development Organisation (DRDO)**. The system also represents a significant leap in India's indigenous artillery capabilities. According to the reports, the system went through rigorous testing in three phases across various field firing ranges, validating its enhanced range, accuracy, consistency, and rate of fire.

It can engage multiple targets simultaneously with devastating effect, launching 12 rockets per salvo.

"The successful completion of these trials is a testament to our commitment to advancing India's military capabilities," stated a senior **DRDO** official. "The Guided Pinaka will significantly enhance the Indian Army's long-range precision strike capabilities, providing a strategic advantage in various operational scenarios."

The Pinaka system, originally developed as an unguided rocket launcher with a range of around 40 kilometers, has seen significant advancements over the years. The guided version now features cutting-edge navigation, control, and guidance technologies, enabling precision targeting. This precision is vital in modern warfare, where reducing collateral damage is a top priority.

Here are some of the key features of Guided Pinaka

- The Guided Pinaka is developed by the Defence Research and Development Organisation (**DRDO**).
- The system also represents a significant leap in India's indigenous artillery capabilities.
- The system went through rigorous testing in three phases across various field firing ranges, validating its enhanced range, accuracy, consistency, and rate of fire.
- The Pinaka system, originally developed as an unguided rocket launcher with a range of around 40 kilometers, has seen significant advancements over the years.

- The guided version now features cutting-edge navigation, control, and guidance technologies, enabling precision targeting.
- This precision is vital in modern warfare, where reducing collateral damage is a top priority.
- These guided rockets are expected to gradually replace some of the older, unguided variants currently in use, offering a more efficient and effective means of neutralizing enemy targets from a greater distance.
- Manufactured by several Indian defence firms under **DRDO's** supervision, the Pinaka system exemplifies India's growing indigenous defence manufacturing capabilities.

Its development involved key partnerships with companies like Tata Power SED, Larsen & Toubro, and Bharat Earth Movers Limited (BEML), showcasing the synergy between the public and private sectors in defence technology.

https://www.india.com/news/guided-pinaka-mbrl-system-china-india-pakistan-bangladesh-indian-army-drdo-nia-border-securitry-pm-narendra-modi-united-states-7524138/

Defence News

Defence Strategic: National/International

Press Information Bureau
Government of India

Ministry of Defence

Wed, 08 Jan 2025

Raksha Mantri Shri Rajnath Singh & Defence Minister of Maldives Mr Mohamed Ghassan Maumoon hold bilateral talks in New Delhi

Reaffirm readiness to enhance bilateral relationship towards 'Comprehensive Economic & Maritime Security Partnership'

Raksha Mantri Shri Rajnath Singh held bilateral discussions with the Defence Minister of Maldives Mr Mohamed Ghassan Maumoon in New Delhi on January 08, 2025, and

comprehensively reviewed various aspects of bilateral defence & security cooperation. During the talks, both sides reasserted the firm commitment to work closely in realising the joint vision for India-Maldives Comprehensive Economic and Maritime Security Partnership.

Raksha Mantri reaffirmed India's readiness to support the Maldives in capability enhancement for defence preparedness, including provisioning of defence platforms & assets to augment its capacities, as per its national priorities and in line with New Delhi's 'Neighborhood First' policy and the vision of SAGAR (Security And Growth for All in the Region). Minister Maumoon appreciated India's historical role as the 'First Responder' for the Maldives, and thanked New Delhi for assisting Male in augmenting the modern infrastructural capacities and training of defence & security personnel. On the Government of Maldives' request, India handed over defence equipment and stores to the Maldives.

Minister Maumoon is on his first official visit to India. The visit is part of continued high-level engagements between the two sides. It has provided an opportunity to further deepen the bilateral defence & security ties for the mutual benefit of the two countries and the Indian Ocean Region.

https://pib.gov.in/PressReleasePage.aspx?PRID=2091162

Press Information Bureau
Government of India

Ministry of Defence

Wed, 08 Jan 2025

Delivery Of Yard 82 (LSAM 14)

Induction ceremony of the seventh Missile Cum Ammunition Barge (MCA) Barge, LSAM 14 (Yard 82) was held on 07 Jan 25 at Naval Dockyard, Mumbai. Chief Guest for the Ceremony was Cmde Gaurav Doogar, GM (HR), ND (Mbi).

The contract for construction and delivery of eight MCA Barges was concluded with a MSME Shipyard, M/s SECON Engineering Projects Pvt. Ltd., Visakhapatnam on 19 Feb 21. These Barges have been indigenously designed by the shipyard in collaboration with an Indian Ship Designing firm and successfully model tested at Naval Science and Technological Laboratory (NSTL), Visakhapatnam to ensure their seaworthiness. The Barges have been built in accordance with the relevant Naval Rules and Regulations of Indian Register of Shipping (IRS). MCA Barges are proud flag bearers of Make in India and Aatmanirbhar Bharat initiatives of Government of India and highlight the Indian Navy's commitment to encourage MSMEs.

Six of these MCA Barges have already been inducted and are providing an impetus to the operational commitments of Indian Navy by facilitating Transportation, Embarkation and Disembarkation of articles/ ammunition to Indian Navy platforms both alongside jetties and at outer harbours.

https://pib.gov.in/PressReleasePage.aspx?PRID=2091079

Press Information Bureau
Government of India

Ministry of Defence

Wed, 08 Jan 2025

Indian Navy Conducts Workshop On Mental Health As Part Of 60-Day Resilience Programme

A transformative workshop on ‘Self-transformation and Inner-awakening’, led by internationally renowned spiritual teacher Sister BK Shivani was conducted by Indian Navy on 07 Jan 25 at Dr DS Kothari Auditorium, DRDO Bhawan, New Delhi. The workshop, organised to uplift the mental and emotional resilience of Naval Personnel. VAdm Kiran Deshmukh, Chief of Materiel was the Chief Guest.

The workshop commenced with a welcome address followed by a two-hour session by Sister BK Shivani. The workshop aimed to address the increasing need for mental health awareness and practical tools to foster emotional balance, particularly among Naval Personnel serving in high-pressure roles.

Sister BK Shivani captivated the audience with her profound insights into the working of the mind and the importance of inner harmony. Her immersive and interactive session focused on

understanding the root causes of mental stress and strategies to overcome it through self-awareness, meditation and positive thinking. She emphasised that mental health begins with our thoughts. By choosing peaceful, positive and empowering thoughts, we can transform our experiences and create a happier and healthier life.

In his concluding address, the Chief of Materiel appreciated the initiative, emphasising the critical importance of mental health in ensuring professional as well as personal fulfillment. He also brought out that the mental well-being of Naval Personnel is fundamental to a peaceful and cohesive work environment. The Chief of Materiel conveyed his appreciation on Sister BK Shivani's dedication to mental health advocacy. He encouraged the attendees to integrate the workshop's teachings into their daily lives.

The workshop was part of the 60-day Resilience Programme launched by Indian Navy aimed at enhancing mental health and inner harmony among Naval Personnel and their families. This workshop served as a powerful reminder of the need to prioritise mental health in all aspects of life, inspiring participants to lead with mindfulness and positivity. The workshop was attended by Naval Officers, Sailors and Defence Civilians.

The overwhelming success of the workshop reinforced the Navy's focus on holistic well-being and operational excellence.

The event was live streamed on Indian Navy's official YouTube channel, enabling diverse audience to benefit from this enriching session.

https://pib.gov.in/PressReleasePage.aspx?PRID=2091088

THE ECONOMIC TIMES

Wed, 08 Jan 2025

'Still waiting for 40 Tejas jets that were ordered in 2010': IAF chief

India faces heightened security challenges from neighbouring countries China and Pakistan, exacerbated by rapid military advancements in the region. Speaking at the 21st Subroto Mukherjee Seminar in New Delhi, IAF Chief Air Chief Marshal A.P. Singh expressed concerns over India's ability to keep pace with the evolving threat landscape.

"The world today is in a precarious position dominated by conflicts and contests. We have our own security concerns on the western and northern borders with increased militarisation by China and Pakistan," Singh stated.

China's Military Modernisation Shocks Global Powers

China's recent advancements in military technology include the maiden flights of two sixth-generation stealth fighter jets on 26 December in Chengdu. Videos of these tailless, advanced combat aircraft cruising at low altitudes have raised eyebrows globally, including in the United States, which is yet to finalise its own sixth-generation fighter project. The unveiling underscores China's growing prowess, already demonstrated by its fifth-generation Chengdu J-20 jets deployed at airfields near the Indian border in Hotan and Shigatse.

Singh remarked, "China is investing heavily in its air force. The recent unveiling of its new stealth aircraft is a case in point."

India's Indigenous Fighter Jet Delays

India's indigenous fighter jet programmes, such as the Tejas Mark-1A, face significant delays, partly due to supply issues with GE-F404 turbofan jet engines from the United States. The IAF currently operates 30 fighter squadrons, well below the authorised strength of 42.5 required to counter threats from China and Pakistan. The Air Force plans to induct 180 Tejas Mark-1A and 108 Tejas Mark-2 fighters before transitioning to the Advanced Medium Combat Aircraft (AMCA).

The AMCA project, approved in March 2022 at a cost of over ₹15,000 crore, is still in its early stages. Its first prototype is expected to fly in four to five years, with production and induction projected for post-2035.

"R&D loses its relevance in case it is not able to meet timelines. Technology delayed is technology denied," Singh emphasised, voicing frustration over the slow pace of indigenous development.

India's dependence on imported defence equipment has long been a concern. Despite initiatives under the "Atmanirbhar Bharat" (self-reliant India) campaign, achieving strategic independence in defence technology remains a challenge. The IAF has collaborated with micro, small, and medium enterprises (MSMEs) to produce nearly 50,000 components for its Base Repair Depots, demonstrating successful indigenisation efforts.

Additionally, a Directorate of Aerospace Design has been established to work with private industries on innovative technologies. Schemes such as Mehar Baba-I and iDEX (Innovations for Defence Excellence) aim to foster defence innovation.

The Cost of Self-Reliance

Acknowledging the financial implications of self-reliance, Singh noted, “Atmanirbharta will come at a cost and we should accept it. We may have to spend more and buy at a higher rate if required. A mortising of the R&D part and limited numbers will push the cost up but will give the much-needed self-reliance.”

Singh urged policymakers to accept the risks and potential failures inherent in R&D, highlighting the strategic importance of timely innovation. “There has to be an increased aptitude for acceptance of risks involved and failures in R&D,” he stated.

Air Chief Marshal A.P. Singh’s remarks underscore the urgent need for India to expedite its defence indigenisation efforts. As global powers advance their military capabilities, India must address delays in indigenous projects and strengthen private sector participation to secure its strategic independence.

https://economictimes.indiatimes.com/news/defence/still-waiting-for-40-tejas-jets-that-were-ordered-in-2010-iaf-chief-technology-delayed-is-technology-denied/articleshow/117047463.cms

THE ECONOMIC TIMES

Wed, 08 Jan 2025

India eying integrated satellite communication grid, says Defence space official

India's defence forces are planning to build an integrated satellite communication grid comprising spacecraft in different orbits and data relay systems as space emerges as a new domain of warfare, a senior officer said.

Addressing the DefSat Conference here, Defence Space Agency Director General Air Vice Marshal Pawan Kumar said the defence forces were also looking at collaborating with the industry to meet its requirements to get an edge over its rivals in the domain.

"When you talk of communication, I think the technology that we are focusing on is integrated satellite communication grid. We don't want any service to be over dependent on a particular satellite," Kumar said in the inaugural address at the DefSat conference organised by Satcom Industry Association-India here.

Kumar said the defence forces were looking at a mix of constellations, either Medium Earth Orbit (MEO)-Geostationary Orbit (GEO) or Low Earth Orbit (LEO)-MEO-GEO, and a lot of studies have happened on that.

"We are also looking at tracking and data relay satellite systems primarily because it reduces demand to delivery time as far as OODA loop is concerned," he said.

Kumar said the defence forces were also exploring quantum communications because of the obvious advantages of secrecy.

"We are looking for space and ground-based sensors which include telescopes and radars, along with the complete network so that the commanders can make appropriate decisions, whether it is military level, operational level, or tactical level," he said.

The inaugural session of the three-day conference was addressed by Lt Gen PJS Pannu (retd); Viasat India Managing Director Gautam Sharma; Data Security Council India CEO Vinayak Godse; President SIA-India and CMD Ananth Technologies Subba Rao Pavuluri.

https://economictimes.indiatimes.com/news/defence/india-eying-integrated-satellite-communication-grid-says-defence-space-official/articleshow/117054614.cms

THE ECONOMIC TIMES

Wed, 08 Jan 2025

Indian Army prepares blueprint for 'Year of Reforms'

In a landmark announcement on January 1, 2025 Defence Minister Rajnath Singh declared 2025 as the 'Year of Reforms', signalling a decisive shift towards a more agile, technologically advanced, and combat-ready Armed Forces, said a statement from the Indian Army.

This visionary declaration encompasses nine broad areas of focus aimed at transforming India's defence apparatus into a 21st-century powerhouse capable of executing multi-domain integrated operations. The Indian Army has swiftly aligned its transformative initiatives with this roadmap to chart its course towards a Future Ready Army.

The 'Year of Reforms' comes on the heels of the Indian Army's 'Year of Transformation' (2023) and 'Years of Technology Absorption' (2024 and 2025). However, acknowledging the long gestation period required for meaningful change, the Indian Army has already identified 2023 to 2032 as the 'Decade of Transformation'. The announcement of 2025 as the 'Year of Reforms' provides strategic direction and impetus to this long-term initiative.

The Army's comprehensive approach to reform is anchored across five key pillars: Jointness and Integration, Force Restructuring, Modernisation and Technology Infusion, Systems and Processes, and Human Resource Management.

Proactive steps are being taken to facilitate the seamless rollout of Integrated Theatre Commands (ITCs). Initiatives such as joint doctrines, shared tactics, and cross-service staffing between the Army, Navy, and Air Force are fostering a synchronised approach to operations. The integration of Central Armed Police Forces (CAPFs) and inter-ministerial postings is further enhancing

interoperability, creating an ecosystem of shared understanding, synchronized capability development, and operational efficiency.

New domains such as cyber, space, and artificial intelligence (AI) have opened unprecedented opportunities. The Indian Army is resolute in its focus on harnessing indigenous solutions in AI, machine learning, hypersonic technology, and robotics to bolster its capabilities. The creation of specialised units to leverage niche technologies and newer domains is under active consideration, with existing structures being revamped to facilitate combined arms operations in a multi-domain environment.

The Army is undertaking a thorough review of legacy practices and structures to enhance operational efficiency. Delayering organizational hierarchies, digitizing processes, and implementing in-house automated solutions are integral to this overhaul. Procurement procedures are being streamlined in coordination with stakeholders to ensure reduced timelines and greater alignment with the technology curve, enabling faster and more effective acquisition of critical assets.

Defence diplomacy remains a key facet of the reform agenda. Bilateral and multilateral engagements, defence expositions, and defence attache networks will be leveraged to showcase indigenous defence capabilities and promote the Indian defence industry on the global stage. This approach aims to position India as a key player in the international defence ecosystem.

Human resource management, a cornerstone of the Indian Army's strength, is receiving renewed focus. Policy reviews and initiatives are being undertaken to cultivate a motivated and proud workforce, deeply rooted in India's military heritage and traditions. Special emphasis is being placed on the induction of women, the Agnipath scheme, and veterans' welfare, ensuring a well-rounded approach to talent management.

The 'Year of Reforms' reinforces the Indian Army's commitment to evolving in step with global militaries. With reforms aimed at enhancing operational readiness, embracing technological advancements, and fostering jointness, the Indian Army stands resolute in its mission to transform into a future-ready force.

Aligned with the national vision of Viksit Bharat@2047, the Indian Army remains a vital pillar in India's journey towards becoming a global leader. By adapting to the evolving dynamics of warfare and reinforcing its core strengths, the Indian Army is poised to play a pivotal role in securing the nation's future.The journey of transformation continues, with 2025 marking a significant milestone in the Army's relentless pursuit of excellence.

https://economictimes.indiatimes.com/news/defence/indian-army-prepares-blueprint-for-year-of-reforms/articleshow/117057047.cms

THE ECONOMIC TIMES

Wed, 08 Jan 2025

Indigenously manufactured vehicles to reach Lebanon for use by Indian contingent in UNIFIL

In a boost for 'Make in India' initiative, 62 indigenously manufactured vehicles are set to reach Lebanon for utilisation by the Indian contingent deployed in the United Nations Interim Force in Lebanon (UNIFIL), defence sources said on Wednesday. The fleet comprises high mobility troop carriage vehicles, utility vehicles (one tonne and 2.5 tonne), medium and light ambulances, fuel bowsers and recovery vehicles, they said. Until now, the Indian troops serving in the UN peacekeeping mission in Lebanon were operating the vehicles provided by the United Nations. These vehicles were sourced from other countries, a defence source said.

Indigenous vehicles inducted for use by Indian battalion deployed under UNIFIL

In a significant step towards promoting indigenous capabilities and strengthening operational efficiency, 62 Indian-manufactured vehicles are now set to reach Lebanon for utilisation by the Indian contingent deployed in the UNIFIL, the source added. With the induction of these 'Made-in-India' vehicles, the Indian battalion will now rely on "robust and homegrown platforms", showcasing India's commitment to self-reliance and its growing defence manufacturing capabilities on the global stage, the source said.

This development underscores India's leadership in peacekeeping missions and highlights the nation's support for indigenous innovation in defence, he added.

https://economictimes.indiatimes.com/news/defence/indigenously-manufactured-vehicles-to-reach-lebanon-for-use-by-indian-contingent-in-unifil/articleshow/117057904.cms

The Tribune

Thu, 09 Jan 2025

IAF lists requirement for suicide drones to neutralise UAV swarms

With hostile swarm drones posing an ever-increasing threat in present-day battlefield, the Indian Air Force (IAF) has sought a “Kamikaze” drone system to protect vital installations against swarms of enemy unmanned aerial vehicles (UAV). The IAF has projected an initial requirement for 20 such systems.

The term Kamikaze dates back to World War-II when Japanese aircraft loaded with explosives made deliberate suicidal crashes on enemy targets.

The Kamikaze anti-swarm system is designed to counter swarm drones, which may attack vital installations from multiple directions. Once swarm drones are detected, Kamikaze drones with attached explosives can attack them by exploding in their vicinity. A request for information (RFI) for the system was issued by the IAF on January 8.

The system will also be capable of providing “soft-kill” solution, based on jamming of radio frequency links between drones and ground controller and their satellite navigation systems.

Swarm drones are a group of several drones operated simultaneously as a single entity by one controller to meet a specific objective. These drones, according to the RFI, would play a dominant role in future conflicts as these are relatively inexpensive and can be easily manufactured.

The IAF is exploring to induct a vehicle-mounted system capable of operating in all-weather conditions and launching multiple Kamikaze drones. Such a system, as per the IAF, should be capable of autonomously intercepting and exploding in the vicinity of the enemy UAVs that may vary from micro drones weighing less than 250 grams to large drone weighing over 200 kg.

It should provide multi-sensor-based comprehensive solution involving radiofrequency, radar, electro-optic and infrared to enable the controllers detect, track, identify, designate and neutralise several enemy swarms simultaneously.

The armed forces are already using several types of drones for various purposes, some of which have been developed indigenously while others have been sourced from overseas vendors. This includes long-range Kamikaze drones and loiter munitions designed to hit enemy ground targets.

https://www.tribuneindia.com/news/india/iaf-lists-requirement-for-suicide-drones-to-neutralise-uav-swarms/

The Tribune

Thu, 09 Jan 2025

Why China has made new units in Aksai Chin

China has just announced the creation of two new counties in Xinjiang: He'an and Hekang. These counties will cover the entire Aksai Chin plateau, including the 38,000 square km area claimed by India. Hongliu (Dahongliutan) is being announced as the capital of He'an and Xeyidula (Shahidullah) of Hekang.

On December 27, 2024, Xinhua reported that the decision to create two new counties out of Hotan (Khotan) and Pishan counties had been approved by the Central Committee of the Communist Party of China and the State Council. The move comes after the Indian and Chinese troops completed the disengagement process along the LAC on October 28, 2024.

The reason for Khotan's division is not clear. Gaustana or Godaniya, which translates to 'land of the cows' in Sanskrit, is Hotan’s original name. It was called Ling-yul by the Ladakhis and Yu-ten by the Chinese.

Before the Chinese arrived here in the ninth and tenth centuries, Khotan was an important point on the Silk Road, with a flourishing Indian culture. It was the centre of the ancient Buddhist Saka Kingdom. Khotan was ruled by Mirza Abu Bakr Dughlat before Gazi Sultan Syed Khan established the Yarkand Khanate in 1510.

Khotan became a county in 1913 after the collapse of the Qing Empire. In 1919, the Karakax/Moyu county was separated from Khotan. In 1933, Muhammad Amin Bughra, a local Amir, declared Khotan an Emirate. The People's Liberation Army entered Hotan on December 22, 1949. In 2013, a Muslim uprising in Hanerik resulted in the death of hundreds of people.

The greater part of Aksai Chin, which includes the picturesque Aksai Chin Lake or Amtogor Tso, will be included in the new He'an county, with Hongliu as its capital. Southeast of the Lingzi-Thang plains is Surigh Yilganing Kol, also called Salikyaili Genzhi Tso, from where Indian nomads collected salt until the 1950s to trade with other areas.

India's claims line encompasses the strategically crucial Tianshuihai, which is also called by Ladakhis as the Thalda Basin or Mapothang. Tianshuihai is situated east of the Lakh-Zang range and northwest of the Aksai Chin Lake, which separates the Aksai Chin plateau from the Lingzi-Thang plains in the south and the Kunlun plains in the north.

The 1962 clash between India and China took place in these locations. Tianshuihai and Tianwendian are major military sites in the PLA area, which is traversed by China’s G315 and G219 highways.

The LAC is situated near Hongliu town, which is also called Dahongliutan. The place was earlier a barren stop for trucks travelling on the G219 highway. The area has become a hot spot for rare metal mining due to the abundant resources of lithium, rubidium, beryllium, tantalum and niobium. The Chinese have been developing infrastructure to make use of the abundant pegmatite resource

in Dahongliutan, which is believed to have more than 2 million tonnes of lithium. It's possible that Hongliu's new administrative town is being constructed to promote mining. There are almost no villages in the region.

It is inevitable that Aksai Chin, which is uninhabited, will eventually be subjected to a colonising mission. With large-scale investments by China in infrastructure and mining, Han migrants could enter the area claimed by India. China is possibly aiming to turn this deserted and prone-to-war frontier area into an economic outpost by connecting it to the global network as part of the Belt and Road Initiative.

It appears that the Hekang county, with Xeyidula (Shahidullah) as its capital, is being created from the current Pishan/Guma county. From here, the Karakash (Black Jade) river flows north into Khotan and becomes closer to Karakoram. Shahidulla in the Karakash Valley was a vital point of entry and location for the British, Russian, Chinese and Kashmiri empires during the Great Game.

The Hindu Tash region in the Kunlun range was the extent of India's dominance at that time. Sumgal (meaning "three fords" in Ladakhi), which used to be the main route between Karakash and Khotan, is located between the Hindu-Tash mountain and the Aksai Chin plains.

In 1864, Maharaja Ranbir Singh of Jammu and Kashmir ordered the construction of a fort on a bluff near Shahidulla, where a small Dogra force guarded the fort until 1866, when its remote location led to its abandonment. In 1865, William Johnson established a forward line and marked India's border at Brinjga in the Kunlun, across Karanghu Tagh of Ladakh. The Khotanese area included the Chinese Yangi Langar. The northernmost boundary line of India was marked by a broad swath of the Kunlun, which includes the Kilian and Sanju. Following a 100-mile stretch east of the Kunlun, the Ladakh-Khotan frontiers then detoured beyond the Kunlun before heading southeast to incorporate Aksai Chin and connect with the Lingzi-Thang plains of Ladakh.

Johnson may have been motivated to draw the alignment for several reasons: a) Uyghur, Indian and Tibetan caravans passed through Shahidulla, a vital tract junction between the Kunlun and Karakoram ranges; b) Karakash has a strong Indian Buddhist influence that dates back thousands of years; c) the Uyghur tribes have long recognised the Hindu-Tagh or Hindu-Tash pass as the traditional border with India; d) farmers from Nubra and Changthang could have easily brought the entire Karakash valley under cultivation due to its abundance of water; e) population would have been another factor, though the area was susceptible to Kanjuti robber attacks; and f) Yaqub Beg himself thought the Kunlun delineated the Kashgharia border.

Nevertheless, the British recognised Beg's dominance over Shahidulla, denied the Maharaja's claim and blocked Johnson's plan. Rather, they considered Ak-Tagh in the Karakoram as India's natural frontier. Since the British colonists had no intention of keeping the passes north of the Karakoram, the Chinese occupied Shahidulla in 1890.

The Chinese took control of the Maharaja's fort and erected a new one at Suget Karaul, close to Suget Pass, after the Indian guards were evacuated by 1892. Since then, China has continued its incursions into Aksai Chin and south of the Karakoram.

Another possibility is that China is responding to India's decision, announced in August 2024, to create five new administrative districts (Sham, Nubra, Changthang, Zanskar and Drass) out of the

districts of Ladakh, Kargil and Leh. India must also develop a more compelling regional economic story for Eastern Ladakh.

https://www.tribuneindia.com/news/comment/why-china-has-made-new-units-in-aksai-chin/

The Tribune

Thu, 09 Jan 2025

IAF's Rafale to exercise with France' marine versions today

The French Navy's Rafale-M jets will carry out an exercise with Rafale jets of the Indian Air Force (IAF) along the western coast of India on Thursday.

Both variants are made by French manufacturer Dassault and are similar in terms of engine and capabilities. But, the marine version, Rafale-M, has a different landing gear adapted to carry out landings on the deck of an aircraft carrier; while the IAF's fleet uses a conventional runway. The French jets are on board the nuclear-powered aircraft carrier of the country's Navy, Charles de Gaulle, which is in Goa till January 9.

India is also buying 26 Rafale-M jets. Before India approved the purchase, Dassault tested its take-off and landing abilities at the shore-based test facility (SBTF) in Goa, which mimics the take-off ramp of an aircraft carrier. Indian aircraft carriers are designed differently from their French counterparts.

Earlier, India had purchased 36 Rafale jets from France for the IAF.

https://www.tribuneindia.com/news/india/iafs-rafale-to-exercise-with-france-marine-versions-today/

The Indian EXPRESS

Thu, 09 Jan 2025

Security concerns to trade via Chabahar: India and Taliban hold first top-level talks

In the first high-level bilateral engagement with the Taliban regime, Foreign Secretary Vikram Misri met Afghanistan acting Foreign Minister Amir Khan Muttaqi in Dubai Wednesday.

So far, an Indian official, at the level of Joint Secretary, had been meeting Taliban ministers, including Muttaqi, and Defence Minister Mohammad Yaqoob. But Misri's meeting is an upgrade, signalling high-level official engagement from the Indian government.

A statement from the Ministry of External Affairs said the two sides discussed various issues pertaining to bilateral relations as well as regional developments.

But it was not just a meet-and-greet sort of a meeting as it covered a range of issues — India's "security concerns" in Afghanistan, the need for India to "consider engaging in development projects in the near future", Delhi's humanitarian assistance including support for rehabilitation of Afghan refugees from Pakistan, use of Iran's Chabahar port for accessing the conflict-ridden country, and cricketing ties between the two countries.

"The Afghan side underlined its sensitivities to India's security concerns," the MEA statement said. One of Delhi's core concerns has been that anti-India terror groups should not be allowed to operate from Afghan soil.

During the meeting, Foreign Secretary Misri "underlined India's historic friendship with the Afghan people and the strong people-to-people contacts between the two countries. In this context, he conveyed India's readiness to respond to the urgent developmental needs of the Afghan people," the MEA said.

It said the two sides "evaluated the ongoing Indian humanitarian assistance programmes. The Afghan Minister appreciated and thanked the Indian leadership for continuing to engage and support the people of Afghanistan. In view of the current need for development activities, it was decided that India would consider engaging in development projects in the near future, in addition to the ongoing humanitarian assistance programme".

The MEA said that in response to the needs of the Afghan people, India decided to extend humanitarian assistance to Afghanistan. India has so far dispatched several shipments consisting of 50,000 MTs of wheat, 300 tons of medicines, 27 tons of earthquake relief aid, 40,000 litres of pesticides, 100 million polio doses, 1.5 million doses of Covid vaccine, 11,000 units of hygiene kits for the drug de-addiction programme, 500 units of winter clothing and 1.2 tons of stationery kits.

"In response to the request from the Afghan side, India will provide further material support in the first instance to the health sector and for the rehabilitation of refugees," the MEA said. This rehabilitation of refugees is again an important element since Pakistan has been sending back Afghan refugees.

The two sides also discussed "strengthening of sports (cricket) cooperation, which is highly valued by the young generation of Afghanistan." This is a sunrise area for stronger cooperation, as India has helped Afghan cricketers to practice in India including in Noida.

"It was also agreed to promote the use of Chabahar port for supporting trade and commercial activities, including for the purpose of humanitarian assistance for Afghanistan."

India got a reprieve from US sanctions on the use of Chabahar port, citing access to Afghanistan as a reason. But with Donald Trump set to enter the Oval Office on January 20 and the threat of sanctions, this is also a posturing just before the inauguration to showcase the potential utility of the Chabahar port.

The two sides, the MEA said, agreed to remain in touch and continue regular contacts at various levels – this keeps the window open for future engagements at a political level.

Incidentally, there was no mention of protection of rights – be it women's rights, or minorities and their inclusion in the Taliban-led government – in the MEA's official statement about the meeting between Misri and Muttaqi.

Since August 2021, when the Taliban seized control of Kabul, there have been at least four meetings between J P Singh, Joint Secretary heading the Pakistan, Afghanistan and Iran division in the Ministry of External Affairs, and the Taliban leaders including Muttaqi and Yaqoob, and a meeting between the Indian Ambassador in Qatar with the Taliban representative in Doha.

https://indianexpress.com/article/india/india-foreign-secy-vikram-misri-meets-afghanistan-fm-muttaqi-taliban-9767532/

Science & Technology News

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"AI and block technologies are no more an option but the only choice, the challenge is to best utilize it for the benefit of the mankind", says Union Minister Dr. Jitendra Singh at National Conference on Cybersecurity, AI, and Blockchain

"Pioneering Technology: Dept. of Pensions First to Use Face Recognition for Digital Life Certificates" – Dr. Jitendra Singh

"Govt. & Private Sectors Join Forces to Combat Narrow Vested Interests harming Citizens", says Dr. Singh

Union Minister Dr. Jitendra Singh emphasized that artificial intelligence (AI) and blockchain technologies are no longer optional but are the only viable choice for the future. While addressing the National Conference on Cybersecurity, Artificial Intelligence, and Blockchain at the PHD Chamber of Commerce and Industry today, Dr. Singh stated, "The challenge lies in best utilizing these technologies for the benefit of mankind."

Recalling his association with the annual conference over the past seven years, Dr. Union Minister of State (Independent Charge) for Science and Technology, Minister of State (Independent Charge) for Earth Sciences, MoS PMO, Department of Atomic Energy and Department of Space, MoS Personnel, Public Grievances and Pensions, Dr. Jitendra Singhhighlighted the importance of such symposiums, which provide a platform to discuss challenges that the government and society must overcome in contemporary times.

Dr. Jitendra Singh acknowledged that cybersecurity and the challenges posed by next-generation technologies are a global concern, with India being no exception. He noted the rapid pace of technological development in the past decade, driven by Prime Minister Narendra Modi's vision of innovation and technological advancement. However, he also pointed out that technology is a double-edged sword, with malicious actors potentially exploiting these advancements.

The Minister of State for Personnel, Public Grievances, and Pensions also referred to the pioneering initiatives taken by his ministry to improve citizens' lives. One notable example was the Department of Pensions, which was among the first to adopt face recognition technology for issuing Digital Life Certificates. This initiative enables pensioners to obtain their certificates from the comfort of their homes without the need for physical presence at banks or government offices.

Dr. Singh emphasized that the challenges posed by technology should be addressed using technology itself. He stated that AI should be an assistant to humans, rather than a tool for domination. Sharing an example from the Department of Administrative Reforms and Public Grievances (DARPG), Dr. Singh noted that while AI has significantly enhanced grievance resolution, human emotional intelligence remains crucial. Despite achieving a 95% grievance disposal rate, citizens sometimes feel dissatisfied, prompting the establishment of a Human Desk in December 2023 to address these concerns.

Dr. Singh also highlighted how AI has been used to better analyze and resolve grievances through the CPGRAMS portal, which serves as a model for other nations.The minister also underscored that the current government is open to collaborating with non-governmental players to address the future challenges of technology. He referred to the recently approved Bio e3 policy, which enables

India to adjust to global economic shifts and contribute significantly to the global stage. Additionally, Dr. Singh spoke about the Anusandhan NRF, which has reduced the nation's dependence on government funds. Through the NRF, nearly 60-70% of funding will come from private sources.

Dr. Singh also highlighted the growth of startups in the past decade, noting that India has witnessed a significant increase in the number of startups, from just 350 to nearly 1,900. He emphasized the need for synergy and collaboration, urging all stakeholders to work together to tackle antisocial elements and vested interests, with the ultimate goal of making India a 'Viksit Bharat' (developed India) by 2047. He also recognized the critical role that forums like the PHD Chamber of Commerce and Industry play in achieving this vision.

The conference also saw the presence of Shri Rajesh Kumar Pathak, Secretary, Technology Development Board, DST; Shri Ashok Mutha Jain, IPS, ADG, Uttar Pradesh Police; Anuj Agarwal, Chairman, Centre for Research on Cyber Crime and Cyber Law; from the PHDCCI Dr. Ranjeet Mehta, CEO & Secretary General, and Shri Vinod Karwa, Chair, MSME Committee attended the conference. Dr. Neha Berlia, Chair, Task Force on Digital Security, joined the session online.

The conference served as a crucial platform for discussions on the future of technology, cybersecurity, and the role of AI and blockchain in shaping India's future. The insights shared by Dr. Jitendra Singh and other experts set the stage for continued collaboration and innovation, which will be essential for India's progress in the coming years.

https://pib.gov.in/PressReleasePage.aspx?PRID=2091159

THE HINDU

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V. Narayanan, who is set to take over as ISRO Chairman, terms his new assignment 'a great responsibility'

V. Narayanan, a noted rocket and spacecraft propulsion expert, is set to succeed S. Somanath as the next Chairman of Indian Space Research Organisation (ISRO) at a time when India's space sector is in reform-mode and the national space agency has major projects lined up including the Gaganyaan human spaceflight, the Chandrayaan-4 mission and the development of the country's own space station.

Speaking to The Hindu on Wednesday (January 8, 2025), Dr. Narayanan, who has been heading the ISRO's Liquid Propulsion Systems Centre (LPSC) since January 2018, described his upcoming assignment as a "great responsibility" as well as a "great opportunity to follow in the footsteps of stalwarts who led the ISRO over the decades."

Given the ISRO’s busy calendar for 2025, Dr. Narayanan is quite aware that he has little to no time to rest on his laurels. “Towards January-end we have the GSLV Mk-II/IRNSS-1 K mission. We also have lined up the first of the uncrewed flights of the Gaganyaan programme, the G-1 mission, as well as a commercial launch using the LVM3 launch vehicle,” he said. “These apart, there are several experiments related to the Gaganyaan programme. So you see, we have our hands full,” he said.

High-profile programmes in the ISRO’s to-do list include the Chandrayaan-4 moon mission, the development of India’s own space station, the Bharatiya Antariksha Station, a second mission to Mars and the maiden Venus Orbiter Mission (VOM). While all of this may not happen during Dr. Narayanan’s tenure, the space agency has kicked off preparations.As per the Union Cabinet’s Appointments’ Committee decision, Dr. Narayanan will take over as Secretary, Department of Space and Chairman, Space Commission, “for a period of two years” from January 14, 2025.

Dr. Narayanan, who who was born into a humble farming family in Kanyakumari district of Tamil Nadu, brings a ton of experience to the Chairman’s post, having joined the space agency in 1984 and worked in one of its core areas - rocket propulsion.

Increasing India’s presence in space tops his list of priorities, according to Dr. Narayanan. This is also an area where the space sector reforms that were set in motion a few years ago by opening it up to private players will play a vital role, he said.

“If you look at societal and strategic applications, today we have about 53 satellites in orbit. We need many more for communication, navigation and earth observation purposes. The ISRO on its own cannot meet this requirement. The reforms will help in this area. We have been giving opportunities to the private sector and the startup ecosystem,” he said.

Dr. Narayanan also drew attention to India's plans to expand its share in the global economy from 2% to 10%. "So far we have not concentrated much on the space economy aspect. We need to have our due share, though. We are targeting 10%," he said.

He reiterated the importance that the ISRO places on collaboration with other space agencies. "In our development stage as a space agency, indeed there was support. Today, all the spacefaring nations truly understand our abilities and strengths. Strength respects strength," he said.Increasing India's presence in space tops his list of priorities, according to Dr. Narayanan.

Dr. Narayanan was born to C. Vanniyaperumal, a farmer, and S. Thangammal, a homemaker, in Melakattuvilai, a village in Kanyakumari district. He has three brothers and two sisters. Young Narayanan and his siblings studied in a Tamil medium school near their home. It was when Narayanan was in Class IX that their home got an electricity connection. He was a class X topper in his school.

Dr. Narayanan is an alumnus of the Indian Institute of Technology-Kharagpur. He obtained his M.Tech. in cryogenic engineering with a first rank in 1989 and a Ph.D. in aerospace engineering in 2001.As a rocket propulsion expert, Dr. Narayanan has done important work on major ISRO missions and programmes including cryogenic technology, the moon (Chandrayaan 1, 2 and 3), Mars (Mangalyaan) and Aditya-L1 (to study the sun) missions and the upcoming Gaganyaan programme during a career spanning four decades.

On joining the ISRO on February 1, 1984, he initially worked on solid propulsion at the Vikram Sarabhai Space Centre (VSSC). In 1989, he moved to the LPSC to work on cryogenic propulsion. "His contributions made India one among six countries in the world to have the complex and high performance cryogenic propulsion systems and made it self reliant in this area. He has also finalised the Propulsion Road Map of ISRO for the next 20 years (2017-2037)," the LPSC has noted. At LPSC, his team has also been working on propulsion systems that use semi-cryogenic and electric propulsion technologies.Dr. Narayanan is married to Kavitharaj N.K. The couple has a daughter, Divyaa, and a son, Kalesh.

https://www.thehindu.com/sci-tech/science/v-narayanan-who-is-set-to-take-over-as-isro-chairman-terms-his-new-assignment-as-a-great-responsibility/article69075005.ece

THE HINDU

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ISRO delays satellite docking experiment again

ISRO has once again postponed the Space Docking Experiment (SpaDEx) involving two satellites, citing excessive drift during a crucial manoeuvre.

The SpaDEx was supposed to take place on January 9.

“While making a manoeuvre to reach 225 m between satellites the drift was found to be more than expected, post non-visibility period. The planned docking for tomorrow is postponed. Satellites are safe. Stay tuned for updates,” ISRO said in a post on ‘X’ on Wednesday (January 8, 2025).

This is the second time when the ISRO postponed the SpaDEx.

The space agency had initially planned it on January 7, 2025, which was cancelled and postponed to Thursday (January 9, 2025), which again got cancelled.

The Space Docking Experiment (SPADEX) is a pivotal project, which is designed to develop and demonstrate the technology needed for spacecraft rendezvous, docking, and undocking using two small satellites, the space agency said.

"SpaDeX will serve as a milestone in advancing India’s capabilities in space docking, a critical technology for future space missions including satellite servicing, space station operations, and interplanetary missions,” ISRO said in an explainer.

https://www.thehindu.com/sci-tech/science/isro-delays-satellite-docking-experiment-again/article69077768.ece

THE ECONOMIC TIMES

Thu, 09 Jan 2025

TCS, ePlane Company in partnership to build e-aviation ecosystem

The ePlane Company—an IIT Madras-incubated electric flying taxi startup—has signed a strategic partnership with Tata Consultancy Services (TCS) to develop scalable solutions for passenger and cargo transportation using e-planes.

The collaboration will focus on battery life cycle modelling, demand estimation and operational optimisation, a senior ePlane official said.The urban mobility startup is developing one of India’s first electric vertical takeoff and landing (eVTOL) aircraft, or air taxis.

It will leverage TCS’s advanced analytics, IoT and AI-driven solutions to build the software ecosystem for air taxis, said Vishnu Ramakrishnan, founders office, ePlane.

“We’re sitting on a lot of data from the battery packs that we’ve put together ourselves. TCS has experience building models that forecast battery life cycle, which is critical because today, forecasting is fairly theoretical,” Ramakrishnan told ET. “We’re leveraging their expertise to accelerate how we model the life cycle of our battery packs.”

The tech giant will also help predict demand estimation based on metrics such as socioeconomic variables, traffic density, travel times, and corridors with heavy traffic, he said. “It supports how we set up vertiports and landing points. TCS’s work on route optimisation will help us here.”

The Chennai-based startup is targeting May 2025 for its prototype trials and expects to do sandbox trials by late 2026 with air ambulance use cases.

“You’ll actually start seeing flights this year, although commercial operations will likely start in 2026. Investors are showing increasing interest, and 2025 will be a big year for us,” Ramakrishnan said.

ePlane and TCS will aim to create an IP for the evolving market for air taxis in the long-term. “TCS has expertise in areas like maintenance, repair, overhaul, and customer experience platforms from aerospace and electric vehicles. At our end, we will provide real-world data from hundreds of hours of flight testing to validate and refine their models,” he said.

The two will also explore offering solutions to global customers leveraging TCS’ network in the future. “TCS has a strong presence in the European and Middle Eastern markets. They will utilise our capabilities in areas like eVTOL, cargo, surveys, or surveillance, where our smaller vehicles and past expertise are a perfect fit,” Ramakrishnan said.

ePlane will help solve related challenges in assembling battery packs and more, he said.

“This partnership embodies our commitment to driving innovation in emerging industries like electric aviation and reflects our vision of leveraging technology for a sustainable future,” TCS chief technology officer Harrick Vin said in a statement.

https://economictimes.indiatimes.com/tech/information-tech/tcs-eplane-company-in-partnership-to-build-e-aviation-ecosystem/articleshow/117064363.cms?UTM_Source=Google_Newsstand&UTM_Campaign=RSS_Feed&UTM_Medium=Referral&from=mdr

DECCAN HERALD

Thu, 09 Jan 2025

IISc researchers uncover neural mechanisms for chronic pain management

Chronic physical pain is debilitating, but sensations like stress, fear, or hunger can sometimes suppress pain.

Scientists at the Centre for Neuroscience (CNS), Indian Institute of Science (IISc), Bengaluru, have uncovered how neurons in different brain regions collaborate to control chronic pain in mice, potentially offering insights for better pain management therapies.

The study, led by Arnab Barik, Assistant Professor at CNS, focused on chemotherapy-induced peripheral neuropathy (CIPN) in mice, a poorly understood side effect of chemotherapy that makes cancer patients hypersensitive to external stimuli, such as cold temperatures. The researchers

identified a brain region called the lateral parabrachial nucleus (LPBN) as a critical player in this phenomenon.

Non-addictive pathways Speaking to DH, Barik explained that this research could pave the way for non-opioid pain treatments. “We typically use drugs to treat pain, but many of them can lead to addiction. Identifying neural pathways to mitigate pain without addiction could significantly improve pain management,” he said.

Key findings

The study revealed that activating LPBN neurons prompted mice to lick their paws more frequently in response to painful cold stimuli — an active coping strategy. These neurons act as a “relay junction”, integrating inputs from different brain regions to regulate pain intensity and coping behaviour.

The researchers found that excitatory inputs from the spinal cord to LPBN neurons heightened pain perception, increasing the paw-licking behaviour.

Inhibitory inputs from the lateral hypothalamus, a brain region associated with stress and hunger regulation, reduced the cold-induced licking response and likely the painful sensations.

Both excitatory and inhibitory signals converge on the same set of LPBN neurons. Depending on the strength and type of inputs, these neurons determine whether the pain response intensifies (more licking) or diminishes (less licking).

https://www.deccanherald.com/india/karnataka/bengaluru/iisc-researchers-uncover-neural-mechanisms-for-chronic-pain-management-3347263