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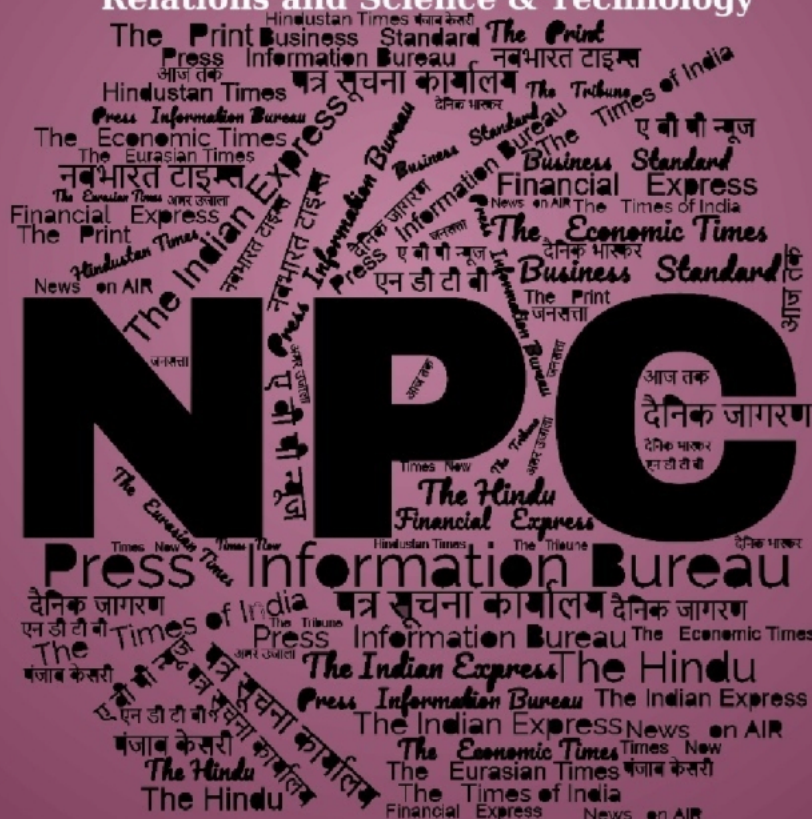
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CONTENTS

S. No.	Title	Source	Page No.
Defence News			1-4
1	New theatre command plan ready, awaits nod	<i>The Tribune</i>	1
2	Top brass to review tech-driven warfare at two-day 'Ran Samwad'	<i>The Tribune</i>	1
3	Indian army contingent departs for India–Egypt Joint Special Forces Exercise 'Cyclone'	<i>Press Information Bureau</i>	2
4	INS Sudarshini departs Sète, France after participation in Escale à Sète 2026	<i>Press Information Bureau</i>	3
5	INS Trikand arrives at Mombasa, Kenya	<i>Press Information Bureau</i>	4
Science & Technology News			5-9
6	India's nuclear dream crosses a milestone at Kalpakkam	<i>The Times of India</i>	5
7	National Quantum Mission achieves 1,000-km secure communication milestone in under 3 years of its launch: Dr. Jitendra Singh	<i>Press Information Bureau</i>	7
8	Over 4600 objects placed in orbit in 2025 after 315 space launches: Report	<i>The Hindu</i>	9

Defence News

New theatre command plan ready, awaits nod

Source: The Tribune, Dt. 09 Apr 2026

The proposed formation of theatre commands for the armed forces has acquired new contours. The western theatre, focused on Pakistan, is likely to be headed by an Indian Air Force (IAF) officer, while the northern theatre, oriented towards China, will be led by an Army officer. The maritime theatre command, on expected lines, will be headed by a Navy officer.

The plan will require approval from the Ministry of Defence as well as the Cabinet Committee on Security. Theatre commands refer to geographically defined operational areas, each headed by a military commander who controls all war-fighting assets, including aircraft, helicopters, guns, tanks, equipment and personnel.

Under the revised proposal, the IAF is set to be the permanent lead for the western theatre. This follows the impact of IAF strikes during Operation Sindoor in May last year. The allocation of theatre commands is now largely fixed, with little likelihood of rotation — unlike an earlier proposal that envisaged rotational leadership between the Army and the IAF.

The military is also considering the creation of a Vice Chief of Defence Staff, along with deputy commanders for all theatres, who would be drawn from different services to ensure jointness. With the current Chief of Defence Staff set to retire in May, the revised proposal could be presented before the end of his tenure. A key issue remains the division of IAF assets, with some strategic capabilities likely to be centrally controlled from Delhi to enable seamless operations across theatres.

These developments come ahead of the second edition of 'Ran Samwad', the Indian military's brainstorming session. At the previous edition held in August last year, sharp differences had emerged among the top military leadership over the structure of theatre commands. Navy Chief Admiral DK Tripathi had supported theaterisation as a long-term goal, while IAF Chief Air Chief Marshal AP Singh had urged caution, suggesting an alternative coordination model led by the service chiefs. Chief of Defence Staff Gen Anil Chauhan had acknowledged the "dissonance" and said efforts were underway to resolve it.

<https://www.tribuneindia.com/news/india/new-theatre-command-structure-takes-shape-awaits-govt-nod/>

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Top brass to review tech-driven warfare at two-day 'Ran Samwad'

Source: The Tribune, Dt. 09 Apr 2026

A year after Operation Sindoor, the top brass of the military will meet to assess the impact of emerging technologies across multiple domains of warfare and chart a roadmap to address new-age threats. Chief of Defence Staff Gen Anil Chauhan, Navy Chief Admiral DK Tripathi and Army

Chief Gen Upendra Dwivedi will outline the evolving contours of warfare at the two-day (April 9-10) brainstorming session, 'Ran Samwad'.

The armed forces describe this shift as 'multi-domain operations' (MDO). The outcome of 'Ran Samwad' is expected to serve as a comprehensive guiding framework to enhance operational preparedness for both conventional and irregular threats. The military is currently undertaking doctrinal adaptations in training and reimagining operations to ensure effective command and control in an increasingly complex battlespace.

At the previous edition of 'Ran Samwad' in August last year, a doctrine on multi-domain operations was released, noting that the character of war is changing: adversaries can now launch coordinated actions across multiple fronts simultaneously, often below the traditional threshold of armed conflict.

This year's discussions will focus on building a roadmap to prepare India's defence forces for multi-domain conflict spanning land, air, sea, cyber, space and cognitive domains. Sessions will examine the evolution of MDO and global trends, including lessons from recent conflicts, to understand how modern battlefields are being reshaped.

As technology evolves rapidly, warfare is expanding beyond traditional domains. While land, air and sea remain core arenas, cyber, space and cognitive domains have emerged as critical new frontiers. The armed forces define MDO as the coordinated, integrated and synchronised employment of military forces alongside non-military national capabilities. The latest edition of 'Ran Samwad' marks a continued and structured dialogue on this evolving nature of warfare.

Future conflicts will increasingly depend on space-based assets such as satellites for communication, navigation and surveillance, even as they remain vulnerable to kinetic and non-kinetic threats. The cyber domain has become equally critical, underpinning networked operations, secure communications and data management, while remaining exposed to cyberattacks and espionage. The growing influence of social media and digital information platforms adds a cognitive dimension to modern conflict.

<https://www.tribuneindia.com/news/india/top-brass-to-review-tech-driven-warfare-at-two-day-ran-samwad/>

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Indian army contingent departs for India–Egypt Joint Special Forces Exercise 'Cyclone'

Source: Press Information Bureau, Dt. 08 Apr 2026

The Indian Army contingent has departed for Egypt to participate in the fourth edition of the India - Egypt Joint Special Forces Exercise, Cyclone - IV, scheduled to be conducted at Anshas from 09 to 17 April 2026. The exercise is a continuation of the growing military cooperation between India and Egypt and follows the successful conduct of the previous edition in India. The Indian contingent, comprising 25 personnel from Special Forces units, will train alongside their Egyptian counterparts in a realistic operational environment.

The exercise aims to enhance joint mission planning capabilities and improve interoperability through the exchange of best practices in special operations. The participating troops will

undertake a series of training activities focused on special operational tactics, techniques and procedures in desert and semi-desert terrain.

The joint exercise will also facilitate mutual exchange of professional expertise and provide an opportunity to strengthen bonds of camaraderie, while fostering greater understanding of each other's military traditions and cultures. Bilateral military exercises such as Exercise Cyclone are a key facet of defence cooperation between India and Egypt, fostering mutual trust and strengthening ties between the armed forces of both nations.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2250186®=3&lang=1>

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INS Sudarshini departs Sète, France after participation in Escale à Sète 2026

Source: Press Information Bureau, Dt. 08 Apr 2026

INS Sudarshini, the Indian Navy's Sail Training Ship, departed the port city of Sète on 07 Apr 2026, marking successful culmination of her participation in the renowned Escale à Sète. This biennial festival is amongst the largest maritime gatherings in the Mediterranean, celebrating global seafaring heritage. During the event, INS Sudarshini actively engaged in a range of maritime activities alongside international tall ships. The ship's crew participated in cultural exchanges, maritime workshops, and sporting events integral to the festival program.



A major highlight was the participation of the Indian Naval marching contingent in the Heritage City Parade, commemorating 400th anniversary of the French Navy. Marching through the historic streets of Sète, while proudly displaying the Indian tricolour, the contingent delivered a flawless display of discipline, unity, and ceremonial excellence.

Adding to the accolades, the Sudarshini rowing team secured a bronze medal at the Jeux Maritimes. The festival concluded with the spectacular Grande Parade de Départ, a ceremonial sail past, during which the ship unfurled her sails, creating a captivating visual display. During her port stay, the ship was open to visitors and welcomed thousands, offering insights into her role and capabilities. The enthusiastic turnout reflected strong cultural engagement and deepening maritime bonds between India and France. A joint yoga session was also conducted with the crew of FS Étoile and ITS Corsaro, symbolizing a shared commitment to health, harmony, and overall well-being.

An official reception was hosted onboard by Shri Sanjeev Singla, Ambassador of India to France, attended by international dignitaries and representatives from participating nations. In his address, he emphasized the strong legacy and growing maritime cooperation between the two navies. Following her departure, INS Sudarshini is now en route to Casablanca, continuing her mission of strengthening maritime ties under Lokayan 26.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2250058®=3&lang=1>

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INS Trikand arrives at Mombasa, Kenya

Source: Press Information Bureau, Dt. 08 Apr 2026

INS Trikand, frontline guided missile frigate of the Indian Navy, arrived at Mombasa, Kenya, on 07 Apr 2026, as part of its ongoing deployment in the South West Indian Ocean Region. The visit aims to strengthen maritime cooperation and enhance bilateral ties between India and Kenya.

The port call coincides with the visit of VAdm Krishna Swaminathan, Flag Officer Commanding-in-Chief, Western Naval Command, to Kenya. Professional, cultural and social engagements will be progressed during the stay, and essential stores will be handed over to the Kenya Defence Forces. Additionally, the ship's Commanding Officer will call on senior government functionaries.



On departure from Mombasa, INS Trikand will engage in a Passage Exercise (PASSEX) with units of the Kenya Navy. The exercise will facilitate exchange of Best Practices and enhance bilateral maritime interoperability. The port call by INS Trikand is aligned with India's vision of MAHASAGAR - Mutual and Holistic Advancement for Security and Growth Across Regions.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2249936®=3&lang=1>

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Science & Technology News

India's nuclear dream crosses a milestone at Kalpakkam

Source: The Times of India, Dt. 09 Apr 2026

Six decades after physicist Homi Bhabha sketched out an audacious three-stage nuclear roadmap for a newly independent India, the country has quietly crossed the threshold into Stage II. Not with fanfare, but with a controlled, self-sustaining reaction igniting inside a reactor on the Tamil Nadu coast.

On April 6, 2026, India's Prototype Fast Breeder Reactor (PFBR) at Kalpakkam attained criticality, the point at which a nuclear reactor sustains a continuous chain reaction on its own, a defining step in the country's civil nuclear journey.

What's "criticality"?

In everyday speech, "going critical" sounds alarming. In nuclear engineering, it is the goal. Criticality marks the point at which a nuclear reactor achieves a self-sustaining chain reaction, a key milestone before full power generation, confirming that the reactor core is functioning exactly as designed. Think of it as the moment an engine first turns over under its own power after years on the drawing board.

What makes this reactor different?

Most nuclear plants in India — and around the world — run on uranium fuel, consume it, and stop. The PFBR does something far more unusual: it produces more nuclear fuel than it burns. That is precisely what earns it the name "breeder" reactor.

The PFBR has a capacity of 500 megawatts of electricity and uses liquid sodium as a coolant. It runs on a uranium-plutonium mixed oxide fuel loaded into the reactor core, surrounded by a blanket of uranium-238. The fission process reacts with this blanket and converts, or "transmutes", the uranium-238, producing more plutonium than the reactor consumes.

Designed by Indira Gandhi Centre for Atomic Research (IGCAR), built and operated by Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI), the PFBR represents a key component of India's long-term nuclear strategy, with major contributions from over 200 Indian industries, including small and medium enterprises.

Why it was always about thorium

To grasp why this moment matters, you need to understand the long game India has been playing since the 1960s. India adopted a three-stage nuclear fuel programme and has been pursuing it ever since. In the first stage, Pressurised Heavy Water Reactors fuelled by natural uranium generate electricity and produce plutonium as a by-product.

That plutonium is then used to make the mixed oxide fuel for a Fast Breeder Reactor in the second stage — the PFBR. This second stage also uses thorium to "breed" a fissile material called Uranium-233, which becomes the fuel for the third and final stage of reactors.

WHAT IS FAST BREEDER REACTOR

TOI

The Prototype Fast Breeder Reactor (PFBR) at Kalpakkam does something very unusual: It produces more nuclear fuel than it burns, which is why it's called a 'breeder' reactor

Most nuclear plants in India run on uranium. The PFBR uses Uranium-Plutonium Mixed Oxide fuel



The core of the PFBR is surrounded by a blanket of Uranium-238



Fast neutrons convert fertile Uranium-238 into fissile Plutonium-239, enabling the reactor to produce more fuel than it consumes

The PFBR will eventually use Thorium-232 in the blanket.

Thorium-232 will be converted into Uranium-233, which will fuel the third stage of India's nuclear power programme



THORIUM

TOI

INDIA'S ENDGAME FOR ENERGY SELF-RELIANCE

India has been playing a long game since the 1960s, when Homi Bhabha sketched out an audacious three-stage nuclear roadmap

STAGE 1

Pressurised Heavy Water Reactors fuelled by natural uranium produce plutonium as a by-product



STAGE 2

The plutonium is mixed with Thorium to fuel a Fast Breeder Reactor, which produces Uranium-233



STAGE 3

The U-233 becomes the fuel for the final stage of advanced reactors



India holds **800,000+ tonnes** of thorium reserves, mainly in **Odisha, Tamil Nadu, Andhra Pradesh, Kerala**



Two more fast breeder reactors are planned at **KALPAKKAM**

The endgame has always been thorium. India possesses one of the world's largest thorium reserves, estimated at well over 8,00,000 tonnes, concentrated mostly in the monazite sands of Odisha, Tamil Nadu, Andhra Pradesh, and Kerala. Thorium cannot be used directly as nuclear fuel, but the PFBR is the machine that begins converting it into something that can. India imports much of its uranium; thorium is already sitting under Indian soil in vast quantities. The strategic logic writes itself.

Journey plagued by delays

The road to this milestone was long and expensive. Though construction was originally supposed to be completed by 2010, the project was delayed multiple times, and costs ballooned from an initial Rs 3,492 crore to more than double the initial estimate. Prime Minister Narendra Modi visited Kalpakkam on March 4, 2024 to witness the commencement of "core loading" — the process of inserting fuel into the reactor for the first time. Regulatory clearance came in careful stages.

The Atomic Energy Regulatory Board granted permission for the “First Approach to Criticality” only after a thorough multi-tier safety review, regular inspections by a resident site observer team, and extensive evaluation of detailed safety submissions. Criticality was finally achieved on April 6, 2026.

What comes next?

Reaching criticality does not mean the lights in Tamil Nadu will brighten tomorrow. Once a sustained nuclear chain reaction is achieved, a series of low-power physics experiments will be conducted to further assess and understand reactor behaviour. After that, power levels will be raised gradually, with each step requiring regulatory sign-off.

The next milestone will be connecting the reactor to the electrical grid to produce power on a commercial basis, pending approval from the AERB. Two more fast breeder reactors are planned at Kalpakkam in the next phase, contingent on the Department of Atomic Energy’s satisfaction with the PFBR’s performance.

India’s Place in History

Once successfully commercialised, India could become one of the few countries in the world to operate fast breeder reactors at a commercial scale, joining Russia as a leader in this niche but strategically important technology. The achievement is significant, but analysts are measured about what remains.

Commercialising this technology at scale, reprocessing thorium-based spent fuel, and building out many more such reactors are all tasks that still lie ahead — likely spanning decades. But the machine is alive, the chain reaction is running, and a vision conceived in the early years of Indian independence has taken its most consequential step forward.

<https://timesofindia.indiatimes.com/science/indias-nuclear-dream-crosses-a-milestone-at-kalpakkam/articleshow/130117278.cms>

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National Quantum Mission achieves 1,000-km secure communication milestone in under 3 years of its launch: Dr. Jitendra Singh

Source: Press Information Bureau, Dt. 08 Apr 2026

Under the National Quantum Mission, a 1,000-km quantum communication network—one of the longest in the world—has been successfully demonstrated within less than two years of its launch, marking rapid progress against the mission’s target of achieving 2,000 km over an eight-year period, Union Minister for Science & Technology Dr. Jitendra Singh was informed during a review of the Department of Science and Technology (DST) here today.

The milestone, achieved using indigenous technology developed by QNu Labs—a startup supported under the mission and focused on quantum-safe cybersecurity solutions—represents one of the longest quantum key distribution (QKD) deployments globally since the mission’s launch in October 2024. Secretary, DST, Dr. Abhay Karandikar described it as “a landmark advancement in secure quantum communication,” noting that it reflects progress ahead of envisaged timelines.

The development is expected to strengthen secure communication capabilities across defence, financial systems and critical infrastructure, while advancing India's broader push towards a secure digital ecosystem. The technology, officials noted, is designed to work across challenging terrains, including underwater and underground networks, expanding its potential civilian and strategic applications.

In a parallel push to deepen the country's quantum ecosystem, the government has expanded support under the National Quantum Mission to nine additional startups, taking the total number of supported ventures to 17. The move is aimed at accelerating indigenous capabilities across quantum computing, communication, sensing and materials.

The newly supported startups are working on areas ranging from quantum biosensors for disease detection and photon sensing technologies to quantum positioning systems, atomic memory and precision electronic systems. The newly supported startups include Sense-XT, ORVISSEMI, QuBeats, Quantum AI Global, bloq, GDQ Labs, Quantum Biosciences, Bumble Bee Instruments Pvt. Ltd., and SAS Qute Electronics Pvt. Ltd.

The review also highlighted progress under the Research, Development and Innovation (RDI) funding framework, where the Technology Development Board (TDB) and Biotechnology Industry Research Assistance Council (BIRAC) are functioning as second-level fund managers. TDB has received over 100 proposals within two months of issuing a call, indicating growing industry interest in research and development financing. Six companies recommended by the investment committee are being taken forward, while additional proposals are under consideration, reflecting increasing participation in government-supported innovation initiatives.

The biotechnology segment, supported through BIRAC, is also witnessing increased activity, with nearly 200 applications received under recent calls, including projects in cancer research, gene therapy and bio-manufacturing. Officials emphasized the use of new financial instruments such as optionally convertible debt (OCD), designed to support startups without immediate equity dilution and to attract private investment alongside public funding. The government is seeking to ensure both innovation and scalability in emerging sectors such as 6G, advanced manufacturing, space technologies and biotechnology.

During the meeting, Dr. Jitendra Singh underscored the need for transparency, structured evaluation and wider outreach to improve participation and awareness of government-backed R&D funding. He also called for coordinated communication strategies to amplify key scientific achievements, including the quantum milestone, and to position India's emerging technology ecosystem more prominently.

Senior officials including DST Secretary Dr. Abhay Karandikar, TDB Secretary Rajesh Kumar Pathak and BIRAC Managing Director Dr. Jitendra Kumar were present at the review. The developments come amid a broader policy push to strengthen India's deep-tech capabilities through mission-mode programmers, blended financing models and startup support frameworks, with quantum technologies emerging as a key strategic frontier alongside biotechnology and advanced communications.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2250162®=3&lang=1>

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Over 4600 objects placed in orbit in 2025 after 315 space launches: Report

Source: The Hindu, Dt. 09 Apr 2026

The Hindu Bureau

BENGALURU

The year 2025 saw 315 successful space launches globally, with about 4,651 objects placed in orbit. According to the Indian Space Situational Assessment Report (ISSAR) for 2025 released on Wednesday, a maximum number of payloads were deployed during 2025.

The report stated that 4,651 objects were launched to orbits and 1,911 re-entered the atmosphere with a net annual growth of 74.5%.

27 satellites operational

With regard to the Indian space assets in 2025, eight satellites were launched



In 2025, eight Indian satellites were launched and four rocket bodies placed in orbit. -FILE PHOTO

and four rocket bodies were placed in orbit. The report said that 12 Indian objects re-entered the atmosphere.

It added that the IRNSS-1D satellite was decommis-

sioned 600 km above geosynchronous orbit.

In total, there are 86 Indian satellites in orbit of which 27 are operational, 23 are defunct (still in orbit), and 36 decayed.

Among the Indian rocket bodies, three Launch Vehicle Mark-3 (LVM-3) are still in orbit and five are decayed; four Small Satellite Launch Vehicles are decayed; four Geosynchronous Satellite Launch Vehicles (GSLV) are in orbit and 10 have decayed, and 42 Polar Satellite Launch Vehicles (PSLV) are in orbit and 19 have decayed.

The report also said that 563 and 519 orbital manoeuvres were carried out in low-earth orbit and geostationary orbit, respectively.

Fourteen collision avoidance measures were carried out in low-earth orbit along with four in geostationary orbit, the ISSAR report said.

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The Tribune
The Statesman
ਪੰਜਾਬ ਕੇਸਰੀ ਜਨਸਤਾ
The Hindu
The Economic Times
Press Information Bureau
The Indian Express
The Times of India
Hindustan Times
नवभारत टाइम्स
दैनिक जागरण
The Asian Age
The Pioneer