

UPSC-CSE 2027/28

DAILY CURRENT AFFAIRS

 **ONE STOP SOLUTION**

By **Faiyaz Sir**



**20
JULY**



**COMPLETE
COVERAGE**



**EXAM
FOCUSED**



**ANALYSIS
MADE EASY**



**STATIC + CURRENT
INTEGRATION**

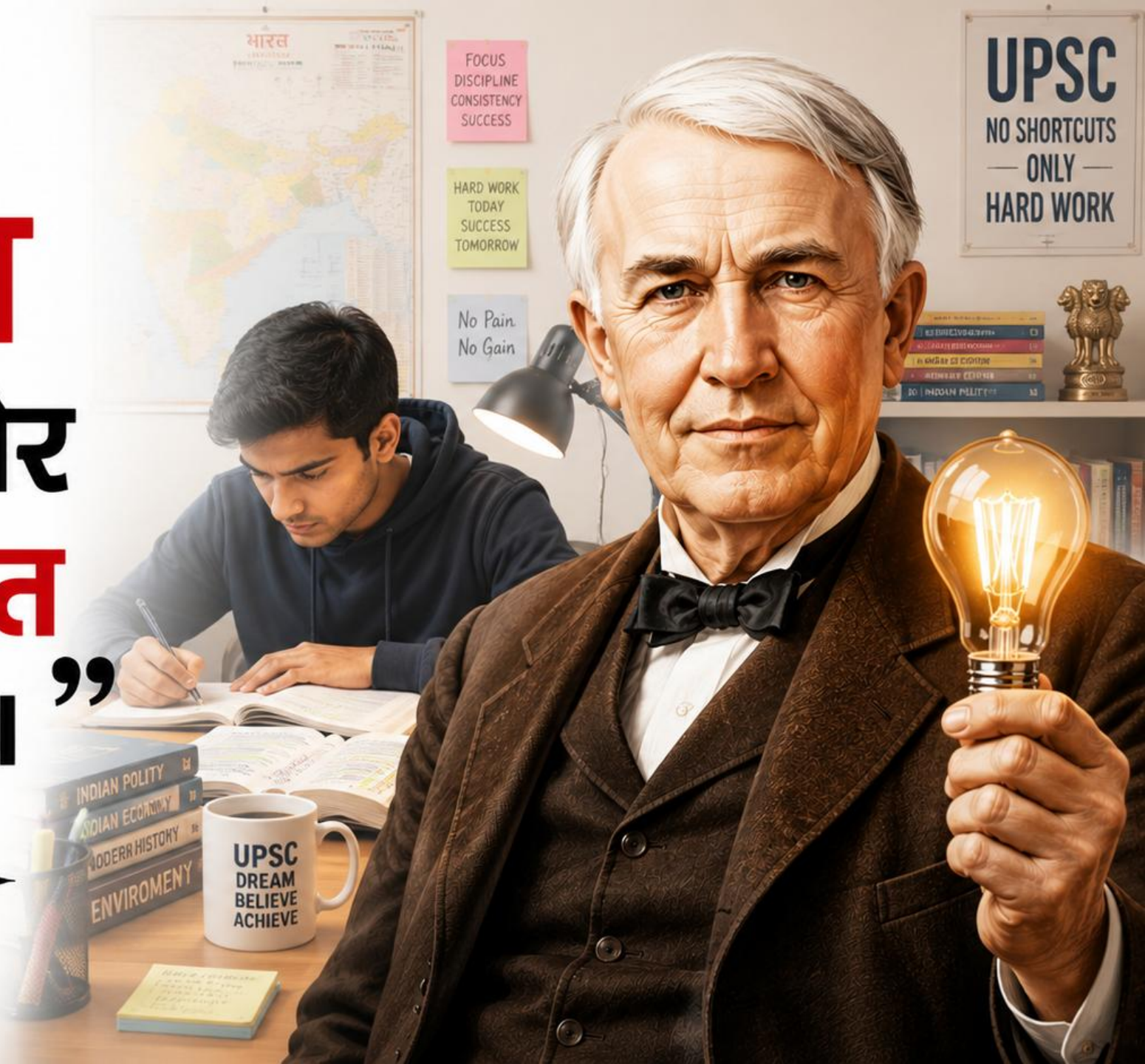


**STAY AHEAD
STAY PREPARED**

“

सफलता
1% प्रेरणा और
99% मेहनत
का परिणाम है।”

— **थॉमस एडीसन** —



आज क्या पढ़ेंगे?

1. विक्रम-1: भारत के अंतरिक्ष भविष्य की रूपरेखा
2. बारिश का पानी जमा करें (कैच द रेन)
3. महत्वपूर्ण तथ्य

Spreading wings

Vikram-1 is an engineering triumph seeking commercial viability

The launch of the Vikram-1 rocket built by Skyroot Aerospace from Sriharikota marked the Indian private sector's first orbital flight. Vikram-1 is a four-stage launcher designed to provide what Skyroot has called a "cab service" for satellites, letting customers pick their orbit and launch schedule rather than accept the orbital slot and drop-off point presented by rideshares, at a commensurate premium. Skyroot is targeting a price per launch below that of the PSLV and above that of the SSLV (projected), to be achieved in part by basing the rocket on carbon-composite structures. It also has plans for a more powerful Vikram-2 rocket. The company was founded in 2018 by two former ISRO engineers and its path to orbit followed engine tests in 2020 and a suborbital flight in 2022. For roughly six decades, ISRO held a state monopoly over launch activities in India while private firms were limited to being suppliers. Reforms since 2020 and the 2023 Space Policy opened the door for commercial players and freed ISRO to focus on R&D and scientific missions. In 2024, up to 49% FDI in launch vehicles was allowed by the automatic route. The push is also part of the government's ambition of growing the national space economy to \$44 billion by 2033 from around \$8 billion alongside satellite manufacturing, communications, navigation, and earth observation.

Orbital launch capability remains hard-won: India is now only the third country to host private enterprise that has demonstrated it. But now that Skyroot has proved competence in engineering, its next milestone is commercial viability, which may be harder. Specifically, the company has to demonstrate repeatability and stable launch costs in an increasingly crowded suppliers' market that includes established 'brands' such as SpaceX and Rocket Lab and a bevy of rapidly scaling Chinese firms. Rideshares on larger rockets are still often cheaper per kilogram to orbit. The model Skyroot is betting on, letting customers specify orbit and schedule in return for a premium over a rideshare launch, depends on a market of uncertain size. The greater production scale will challenge the engineering, too, as batch-to-batch variability becomes harder to control. India also lacks a Space Activities Act, leaving liability to be governed by policy, contracts, existing law, and international commitments rather than statute, maintaining long-term regulatory uncertainty, particularly in the event of a launch or orbital mishap. The Vikram-1 launch is an engineering triumph. Whether it translates to commercial success, which is the real national ambition, is now the question.

The materials and methods that made the Vikram-1 launch unique

If its engine is printed, the airframe is woven; carbon-fibre composite — filaments of near-pure carbon set in resin — offers strength per unit weight many times that of aerospace aluminium or maraging steel; Skyroot has thus claimed a five-fold saving over the best rocket steel

Jacob Koshy

The Vikram-1 rocket, built by the Hyderabad firm Skyroot, shot through the sky a little past noon on July 18. The seven-storey-tall vehicle lifted off ISRO's First Launch Pad at Sriharikota and, a little over 15 minutes later, placed its payloads in an orbit roughly 450 km above the earth. The mission, named 'Aagamam', Sanskrit for 'arrival', made India only the third country, after the U.S. and China, whose private industry can reach orbit on its own launch vehicle.

Rocket engines have traditionally been forged, machined, welded from dozens of parts. 3D printing inverts this. A laser fuses metal powder layer upon layer, building the part up from nothing. There are some real advantages to this approach. An engine printed as one piece sheds the bolts, seals, and joints where conventional engines leak and fail. When Skyroot test-fired its 'Raman' engine in 2020, it said the fully printed injector halved the mass and cut components and lead time by 80% against conventional manufacturing.

Complex internal plumbing — the fine cooling channels that let Vikram-1's regeneratively cooled engine chill itself with its own propellant — can be printed in shapes no drill can reach. Prototypes emerge in days, not months, so a startup can test, fail, and redesign at a pace that would have been anathema to ISRO's supply chains. The downsides are more subtle: peer-reviewed surveys of the field flag porosity, rough internal surfaces, and batch-to-batch variability, and NASA has documented a printed copper combustion chamber failing on the test stand from degraded material quality.

A printed engine, in short, is faster and lighter but demands obsessive quality control. The flaws hide inside the layers.

Carbon-composite body

If the engine is printed, the airframe is woven. Carbon-fibre composite — filaments of near-pure carbon set in resin — offers strength per unit weight many times that of aerospace aluminium or maraging steel. Skyroot claims a five-fold saving over the best rocket steel. Every kilogram of structure trimmed is a kilogram of satellite gained.

The American company Rocket Lab's Electron rocket pioneered the approach. The material also resists fatigue and corrosion and can be laid up by automated machines into seamless tubes. Vikram-1's own stage-1 is India's longest single-piece composite rocket stage. However, the material and its curing infrastructure are expensive; its strength runs along the fibres, so a poorly designed laminate is strong one way and brittle another; and damage can lurk



This photograph taken on July 7, 2026 shows a Vikram-S rocket model at Skyroot Aerospace facility on the outskirts of Hyderabad. AFP

beneath a perfect surface, demanding ultrasonic inspection where a dent in aluminium announces itself.

Both Vikram-1 and PSLV are four-stage expendable rockets that end in a restartable liquid stage for precise orbital insertion: Vikram-1's Orbital Adjustment Module is a miniature cousin of the PSLV's PS4. Both lean on India's long mastery of solid propulsion. However, the PSLV is a 44-metre, 320-tonne workhorse alternating solid and liquid stages to lift 1,750 kg to polar orbit. Vikram-1 is a 22-metre featherweight stacking three solid stages under its liquid module to carry 350 kg.

The nearer analogue is the SSLV. Both Vikram-1 and the SSLV have three solid-fuel stages capped by a small restartable liquid module, both conceived for small satellites on short notice.

On raw capacity, ISRO wins: SSLV lifts 500 kg to low-earth orbit against Vikram-1's 350 kg. However Vikram-1's all-carbon airframe is leaner than SSLV's conventional casings. Most of all, SSLV was designed by the state and its production licensed to Hindustan Aeronautics Limited for ₹51 crore; Vikram-1 is owned outright by its maker, financed by venture capital, and priced by the market.

First flight

According to reports, the Vikram-1 developmental flight met almost every one of its checkpoints, including the process called 'long coast', a tricky phase for a debutant, where the rocket must

For a maiden flight whose stated ambition was merely to clear the tower and gather data, reaching orbit is an important achievement: Electron, Firefly's Alpha, and ISRO's own SSLV all stumbled the first time

hold its attitude with nothing pushing it while the printed engine burns one last time. For a maiden flight whose stated ambition was merely to clear the tower and gather data, reaching orbit is an important achievement: Electron, Firefly's Alpha, and ISRO's own SSLV all stumbled the first time.

The rocket carried five working payloads and two talismans: EMBRACE, a robotic-arm demonstration by CosmoServe Space aimed at grabbing space debris; the SOLARAS satellite from Grahav Space; Skyroot's own SCOPE experimental satellite; and two deployable-technology demonstrators, uDSP and mDSRN, from the German firm Duedat.

Alongside flew a lab-grown diamond lotus and an 18-karat gold micro-rocket bearing rice-grain sculptures of 'Sarabhai', 'Raman', and 'Kalam' — the three names Skyroot gives its rockets and engines. The company has said that all the payloads have been deployed.

Building rockets

Skyroot holds both of Indian private

THE GIST

The 'Aagamam' mission made India only the third country, after the U.S. and China, whose private industry can reach orbit on its own launch vehicle

Rocket engines have traditionally been forged, machined, welded from dozens of parts. 3D printing inverts this

When Skyroot test-fired its 'Raman' engine in 2020, it said the fully printed injector halved the mass and cut components and lead time by 80% against conventional manufacturing

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spaceflight's firsts — the suborbital Vikram-S launch in November 2022 and now an orbital launch with customer payloads.

But Chennai's Agnikul Cosmos, incubated at IIT-Madras, is running a parallel course. Its AgniBaan SoRTeD vehicle flew a suborbital flight in May 2024 from India's first private launchpad, on the world's first single-piece 3D-printed engine — a semi-cryogenic design burning liquid oxygen and kerosene, a propellant technology ISRO itself is still maturing.

Having test-fired four Agnilet engines in cluster this May, and with former ISRO chairman S. Somanath joining its board, Agnikul is working on its Mission O2: a two-stage AgniBaan attempting India's first sea recovery of an orbital-class booster while the rocket's upper stage reaches orbit as a working platform. Mission O2, in other words, aims at reusability — the technology that rewrote launch economics and the next barrier Indian rockets must clear.

Since the 2020 reforms and IN-SPACE's creation in 2022, India's space startups have multiplied from a handful to more than 400, but until Saturday (July 18) they all needed ISRO's rockets to fly. A private launcher now could turn ISRO from gatekeeper into landlord — and turn access to orbit from a national programme into a market. The small-satellite launch business is supply-starved worldwide; Skyroot pitches itself as a "cab service" to space. jacob.koshy@thehindu.co.in



भारत सरकार
पत्र सूचना कार्यालय



हमारे बारे में • प्रेस विश्वविधि • गैलरी • अनुसंधान इकाई • मीडिया सुविधाएं • आर्काइव • तथ्यों की जांच • Q उन्नत खोज

होम सभी विश्लेषक / Explainer Details

Technology

विक्रम-1: भारत के अंतरिक्ष भविष्य की रूपरेखा

सुधार, प्रगति और उड़ान

Posted On: 18 JUL 2026 10:12AM

एक नया दौर: भारत रोललत स्पेस हब के रूप में उभर रहा है



विक्रम-1: भारत के अंतरिक्ष भविष्य
की रूपरेखा

सुधार, प्रगति और उड़ान

एक नया दौर: भारत ग्लोबल स्पेस हब के रूप में उभर रहा है

भारत का अंतरिक्ष क्षेत्र: ऐतिहासिक बदलाव का दौर

भारत सरकार के दूरदर्शी सुधारों के चलते देश का अंतरिक्ष क्षेत्र ऐतिहासिक बदलाव के दौर से गुजर रहा है। स्कैरूट एयरोस्पेस के भारत के पहले निजी तौर पर विकसित ऑरबिटल रॉकेट विक्रम-1 के प्रक्षेपण की तैयारी इस परिवर्तन का प्रतीक है। इंडियन स्पेस पॉलिसी 2023 ने पूरी स्पेस वैल्यू चेन को निजी क्षेत्र के लिए खोल दिया है, जिससे नवाचार, निवेश और उद्यमिता को नई गति मिली है। आज भारतीय उद्योग उपग्रह निर्माण, प्रक्षेपण सेवाओं, अंतरिक्ष अनुप्रयोगों और डाउनस्ट्रीम सेवाओं में सक्रिय भूमिका निभा रहा है। इन सुधारों का प्रभाव आंकड़ों में भी स्पष्ट है। 2014 में केवल एक स्पेस स्टार्टअप वाला भारत 2026 तक 400 से अधिक स्पेस स्टार्टअप्स का देश बन चुका है, जो निजी भागीदारी और नवाचार के तेजी से बढ़ते विस्तार को दर्शाता है।

सरकार के सुधारों से भारत की अंतरिक्ष अर्थव्यवस्था भी तेज़ी से आगे बढ़ रही है। वर्तमान में लगभग 8.4 अरब अमेरिकी डॉलर मूल्य वाली इस अर्थव्यवस्था के 2030 तक बढ़कर 40-45 अरब अमेरिकी डॉलर और 2040 तक 100 अरब अमेरिकी डॉलर तक पहुंचने का लक्ष्य है। सरकार का निरंतर सहयोग, अनुकूल नीतियां और मज़बूत सार्वजनिक-निजी भागीदारी (पीपीपी) इस विकास को गति दे रही हैं। इसके परिणामस्वरूप भारत अंतरिक्ष प्रौद्योगिकी, विनिर्माण, नवाचार और वाणिज्यिक अंतरिक्ष गतिविधियों के क्षेत्र में एक वैश्विक केंद्र के रूप में उभर रहा है। भारत के अंतरिक्ष भविष्य की यात्रा के बारे में और जानने के लिए पढ़ें: इंडिया स्पेस ओडिसी

400+

स्पेस स्टार्टअप्स

2026 तक

\$8.4B

वर्तमान अर्थव्यवस्था

अमेरिकी डॉलर

\$45B

2030 का लक्ष्य

अमेरिकी डॉलर

\$100B

2040 का लक्ष्य

अमेरिकी डॉलर

मिशन आगमन: विक्रम-1

पहला निजी ऑरबिटल प्रक्षेपण यान

स्कैरूट एयरोस्पेस द्वारा विकसित 'विक्रम-1' भारत का पहला निजी तौर पर विकसित ऑरबिटल प्रक्षेपण यान है, जो 350 किलोग्राम तक के पेलोड को पृथ्वी की निचली कक्षा (लो अर्थ ऑरबिट) में स्थापित करने में सक्षम है। ऑरबिटल प्रक्षेपण यान उपग्रहों को पृथ्वी की निर्धारित कक्षाओं में स्थापित करते हैं, जिससे संचार, नौवहन, पृथ्वी अवलोकन और वैज्ञानिक अनुसंधान जैसी सेवाओं को बढ़ावा मिलता है।

उन्नत तकनीक

इसे पूरी तरह से कार्बन कंपोजिट स्ट्रक्चर, भरोसेमंद सॉलिड-फ्यूल बूस्टर और 3डी-प्रिंटेड लिक्विड इंजन से बनाया गया है; विक्रम-1 भारत की बढ़ती प्राइवेट-सेक्टर लॉन्च क्षमताओं को दिखाता है।

प्रक्षेपण समय-सारणी

विक्रम-1 का प्रक्षेपण 'मिशन आगमन' के तहत 12 जुलाई से 4 अगस्त, 2026 के बीच निर्धारित है। इस मिशन की सफलता भारत की स्वदेशी वाणिज्यिक प्रक्षेपण क्षमता और अंतरिक्ष क्षेत्र में किए गए सरकारी सुधारों की प्रभावशीलता को प्रदर्शित करेगी।

ग्राहक पेलोड

इस मिशन के तहत कई ग्राहक पेलोड को पृथ्वी की निचली कक्षा में 450 किलोमीटर की ऊंचाई पर स्थापित किया जाएगा। इनमें स्कैरूट का स्कोप उपग्रह, डीक्यूब्ड का प्रौद्योगिकी प्रदर्शन पेलोड, ग्रह स्पेस का सोलारास एस-3 उपग्रह तथा कॉसमोसर्व स्पेस की 'एम्ब्रेस' नामक रोबोटिक भुजा शामिल है। 'एम्ब्रेस' को अंतरिक्ष में मौजूद मलबे को पकड़ने के लिए विकसित किया गया है।

विशेष वस्तुएं

विक्रम-1 की पहली उड़ान में दो विशेष वस्तुएं भी भेजी जाएंगी—'कॉस्मिक ब्लूम', जो फूल के आकार की एक कलाकृति है और 18 कैरेट सोने से बना एक सूक्ष्म रॉकेट। इस सूक्ष्म रॉकेट पर सी. वी. रमन, विक्रम साराभाई और डॉ. ए. पी. जे. अब्दुल कलाम की अत्यंत सूक्ष्म आकृतियां उकेरी गई हैं, जिनमें से प्रत्येक का आकार चावल के एक दाने से भी छोटा है। यह भारत के महान वैज्ञानिकों को श्रद्धांजलि अर्पित करने का एक प्रयास है।

भारत के अंतरिक्ष क्षेत्र में निजी भागीदारी को सक्षम बनाने वाले प्रमुख सुधार

भारत सरकार ने अंतरिक्ष क्षेत्र में महत्वपूर्ण सुधारों के माध्यम से निजी क्षेत्र की भागीदारी बढ़ाने और नवाचार के नए अवसरों को प्रोत्साहित करने की दिशा में कई अहम कदम उठाए हैं।

भारतीय अंतरिक्ष नीति, 2023

भारत सरकार ने भारतीय अंतरिक्ष नीति, 2023 अधिसूचित की है, जिसके तहत गैर-सरकारी संस्थाओं को अंतरिक्ष क्षेत्र की संपूर्ण मूल्य श्रृंखला में भागीदारी की अनुमति दी गई है। इस नीति ने भारत में निजी क्षेत्र के लिए अंतरिक्ष गतिविधियों के नए अवसर खोले हैं। इसका उद्देश्य प्रौद्योगिकी में नवाचार को बढ़ावा देना, नए विचारों और उद्यमों को प्रोत्साहित करना तथा अंतरिक्ष क्षेत्र में निवेश को बढ़ाना है। साथ ही, यह नीति अंतर्राष्ट्रीय सहयोग को भी बढ़ावा देती है और अंतरिक्ष के शांतिपूर्ण उपयोग एवं अन्वेषण के लिए वैश्विक साझेदारियों को मजबूत करती है। ये सभी कदम मिलकर एक महत्वपूर्ण बदलाव की ओर अग्रसर हैं।

एकल-खिड़की अंतरिक्ष नियामक

भारतीय राष्ट्रीय अंतरिक्ष संवर्धन एवं प्राधिकरण केंद्र सरकारी और गैर-सरकारी संस्थाओं की अंतरिक्ष गतिविधियों को प्रोत्साहित करने तथा उन्हें आवश्यक अनुमतियां प्रदान करने के लिए एक स्वतंत्र एकल-खिड़की एजेंसी के रूप में कार्य कर रहा है। भारतीय अंतरिक्ष नीति, 2023 के लागू होने के बाद इन-स्पेस को और अधिक सशक्त बनाया गया है। यह संस्थाओं को एक स्पष्ट और स्थिर नियामक ढांचा उपलब्ध कराता है तथा उद्योग की व्यापक भागीदारी को आसान बनाता है। साथ ही, यह इसरो की सुविधाओं, प्रौद्योगिकी और तकनीकी विशेषज्ञता तक पहुंच उपलब्ध कराता है तथा पारदर्शी दिशा-निर्देशों के माध्यम से अनुमोदन प्रक्रिया को सरल बनाता है।

4,500+

संस्थाओं का पंजीकरण

जून 2026 तक

133

अनुमतियां जारी

जून 2026 तक

106

समझौता ज्ञापन

हस्ताक्षर किए गए

\$150M

निवेश आकर्षित

वर्ष 2025 में

118

प्रौद्योगिकी हस्तांतरण

समझौते सुगम

189

संयुक्त परियोजनाएं

समझौते हस्ताक्षरित

जून 2026 तक इन-स्पेस ने 4,500 से अधिक संस्थाओं का पंजीकरण, 133 अनुमतियां जारी की हैं और 106 समझौता ज्ञापनों पर हस्ताक्षर किए हैं।

इसके अलावा, फरवरी 2026 तक इन-स्पेस ने वर्ष 2025 के दौरान भारतीय अंतरिक्ष स्टार्टअप्स में 15 करोड़ अमेरिकी डॉलर का निवेश आकर्षित करने में सहायता की, जबकि शीर्ष 10 स्टार्टअप्स को इसी मूल्य के पुष्ट वाणिज्यिक ऑर्डर प्राप्त हुए। जून 2026 तक इन-स्पेस ने 118 प्रौद्योगिकी हस्तांतरण समझौतों को सुगम बनाया तथा 189 संयुक्त परियोजना कार्यान्वयन योजनाओं, प्रौद्योगिकी साझेदारी समझौतों और व्यावसायिक साझेदारी समझौतों पर हस्ताक्षर कराए, जिससे प्रौद्योगिकी के व्यावसायीकरण और उद्योग के बीच सहयोग को नई गति मिली।

निजी निवेश को बढ़ावा देना



इन-स्पेस सीड फंड योजना

यह योजना अंतरिक्ष क्षेत्र के स्टार्टअप्स तथा सूक्ष्म और लघु उद्यमों को शुरुआती चरण में वित्तीय सहायता प्रदान करती है। इसका उद्देश्य नई अंतरिक्ष प्रौद्योगिकियों और उनके व्यावहारिक अनुप्रयोगों के विकास को बढ़ावा देना है। योजना के तहत पात्र आवेदकों को एक करोड़ रुपये तक का अनुदान दिया जाता है। वित्तीय सहायता के साथ-साथ मेंटरशिप, प्रशिक्षण और नेटवर्किंग जैसी सुविधाएं भी उपलब्ध कराई जाती हैं, ताकि स्टार्टअप्स को आगे बढ़ने में मदद मिल सके। यह योजना कृषि, आपदा प्रबंधन और शहरी विकास के लिए अंतरिक्ष प्रौद्योगिकी आधारित समाधानों के विकास को भी प्रोत्साहित करती है।



1,000 करोड़ रुपये का वेंचर कैपिटल (वीसी) कोष

इन-स्पेस के तहत स्थापित इस वेंचर कैपिटल कोष का उद्देश्य अंतरिक्ष क्षेत्र में निजी भागीदारी को बढ़ावा देना है। यह निधि अंतरिक्ष प्रौद्योगिकी और उससे जुड़े क्षेत्रों में कार्यरत उभरते स्टार्टअप्स को शुरुआती चरण में पूंजी उपलब्ध कराती है। साथ ही, यह घरेलू अंतरिक्ष स्टार्टअप्स के उत्पादन को समर्थन देने और इस क्षेत्र में निजी निवेश को आकर्षित करने का भी माध्यम है। इस पहल का लक्ष्य अगले दशक में भारत की अंतरिक्ष अर्थव्यवस्था को पाँच गुना बढ़ाना है। यह फंड वित्त वर्ष 2025-26 से 2029-30 तक पांच वर्षों में चरणबद्ध तरीके से उपयोग किया जाएगा, जिसके तहत प्रतिवर्ष 100 करोड़ रुपये से 250 करोड़ रुपये तक का निवेश किया जाएगा।



500 करोड़ रुपये का प्रौद्योगिकी अंगीकरण कोष (टैकनोलॉजी अडॉप्शन फंड-टीएएफ)

इन-स्पेस द्वारा शुरू किए गए इस कोष का उद्देश्य गैर-सरकारी संस्थाओं द्वारा विकसित स्वदेशी अंतरिक्ष प्रौद्योगिकियों के उपयोग को तेज़ी से बढ़ावा देना है। यह प्रारंभिक चरण की प्रौद्योगिकियों को व्यावसायिक रूप से सफल उत्पादों में बदलने में भी सहायता करता है। इस योजना के तहत स्टार्टअप्स और एमएसएमई को परियोजना लागत का 60 प्रतिशत तक तथा बड़ी कंपनियों को 40 प्रतिशत तक वित्तीय सहायता दी जाती है। प्रत्येक परियोजना के लिए अधिकतम 25 करोड़ रुपये तक की सहायता प्रदान की जा सकती है।

भारत के अंतरिक्ष कार्यक्रम का व्यवसायीकरण

न्यूस्पेस इंडिया लिमिटेड (एनएसआईएल)

भारतीय अंतरिक्ष नीति, 2023 के तहत न्यूस्पेस इंडिया लिमिटेड (एनएसआईएल) को इसरो की वाणिज्यिक शाखा के रूप में परिभाषित किया गया है। एनएसआईएल वाणिज्यिक सिद्धांतों के आधार पर अंतरिक्ष प्रणालियों का निर्माण और अधिग्रहण करती है तथा सरकारी और गैर-सरकारी संस्थाओं को एंड-टू-एंड अंतरिक्ष समाधान उपलब्ध कराती है। यह पीएसएलवी के उत्पादन, छोटे उपग्रहों की प्रौद्योगिकी हस्तांतरण, अंतरिक्ष उत्पादों एवं स्पिन-ऑफ प्रौद्योगिकियों के विपणन तथा उपग्रह सेवाओं के माध्यम से निजी क्षेत्र की भागीदारी को बढ़ावा देती है।

राजस्व वृद्धि

पिछले कुछ वर्षों में एनएसआईएल के राजस्व में दस गुना वृद्धि दर्ज की गई है, जो वैश्विक अंतरिक्ष बाज़ार में उसकी बढ़ती वाणिज्यिक उपस्थिति को दर्शाती है।

प्रौद्योगिकी हस्तांतरण

दिसंबर 2025 तक इसरो द्वारा विकसित प्रौद्योगिकियों के 70 से अधिक प्रौद्योगिकी हस्तांतरण समझौतों के माध्यम से उद्योगों को तकनीक उपलब्ध कराई गई, जिससे उनके व्यावसायीकरण को गति मिली।

वहीं, जुलाई 2026 तक एनएसआईएल ने कुल 141 उपग्रहों का प्रक्षेपण किया है, जिनमें 138 अंतर्राष्ट्रीय/ग्राहक उपग्रह और 3 भारतीय उपग्रह शामिल हैं। यह उपलब्धि वैश्विक स्तर पर भारत की एक विश्वसनीय प्रक्षेपण सेवा प्रदाता के रूप में स्थिति को और मजबूत करती है।

10X

राजस्व वृद्धि
पिछले कुछ वर्षों में

70+

प्रौद्योगिकी समझौते
दिसंबर 2025 तक

141

कुल उपग्रह प्रक्षेपण
जुलाई 2026 तक

138

अंतर्राष्ट्रीय उपग्रह
ग्राहक उपग्रह

अंतरिक्ष क्षेत्र के लिए उदार प्रत्यक्ष विदेशी निवेश नीति

अंतरिक्ष क्षेत्र के लिए प्रत्यक्ष विदेशी निवेश (एफडीआई) नीति को अधिक उदार और निवेशक-अनुकूल बनाया गया है। नई नीति के तहत उपग्रहों के निर्माण और संचालन में 74 प्रतिशत तक, प्रक्षेपण यान और स्पेसपोर्ट में 49 प्रतिशत तक तथा उपग्रहों के पुर्जों और उप-प्रणालियों के निर्माण में 100 प्रतिशत तक स्वचालित मार्ग से प्रत्यक्ष विदेशी निवेश की अनुमति दी गई है। इस नीति से निवेश बढ़ने, प्रौद्योगिकी हस्तांतरण और संयुक्त अनुसंधान को बढ़ावा मिलने के साथ-साथ भारत के अंतरिक्ष क्षेत्र में कारोबार करना और अधिक सुगम होने की उम्मीद है।

74%

उपग्रहों के निर्माण और संचालन में स्वचालित मार्ग से एफडीआई

49%

प्रक्षेपण यान और स्पेसपोर्ट में स्वचालित मार्ग से एफडीआई

100%

उपग्रहों के पुर्जों और उप-प्रणालियों के निर्माण में स्वचालित मार्ग से एफडीआई

नीति से प्रगति तक

सरकार के सुधारों ने भारत के अंतरिक्ष पारिस्थितिकी तंत्र में नवाचार, निजी क्षेत्र की भागीदारी और वाणिज्यिक अवसरों के नए द्वार खोले हैं। इन सुधारों के परिणामस्वरूप प्रक्षेपण सेवाओं, स्वदेशी प्रौद्योगिकी के विकास, सार्वजनिक-निजी भागीदारी और प्रौद्योगिकी हस्तांतरण के क्षेत्र में उल्लेखनीय प्रगति देखने को मिली है।



आगे की राह

सरकार द्वारा किए गए सुधारों और निजी क्षेत्र की बढ़ती भागीदारी के कारण भारत का अंतरिक्ष क्षेत्र एक नए युग की दहलीज पर खड़ा है। भारतीय अंतरिक्ष नीति, 2023, उदार प्रत्यक्ष विदेशी निवेश (एफडीआई) नीति और विशेष वित्तीय सहायता योजनाओं ने अंतरिक्ष क्षेत्र की पूरी मूल्य श्रृंखला को नए प्रतिभागियों के लिए खोल दिया है। इन सुधारों ने एक सशक्त पारिस्थितिकी तंत्र का निर्माण किया है, जिसमें तेजी से विकसित होते स्टार्टअप, स्वदेशी नवाचार और वाणिज्यिक गतिविधियों का विस्तार शामिल है।

'मिशन आगमन' के तहत विक्रम-1 का प्रस्तावित प्रक्षेपण केवल एक तकनीकी उपलब्धि नहीं, बल्कि भारत के निजी अंतरिक्ष उद्योग की बढ़ती क्षमता, आत्मविश्वास और वैश्विक प्रतिस्पर्धात्मकता का भी प्रतीक है। इसरो के नेतृत्व में आरंभ हुई भारत की अंतरिक्ष यात्रा अब एक सशक्त और आत्मनिर्भर अंतरिक्ष पारिस्थितिकी तंत्र के रूप में विकसित हो रही है, जो सरकार के सुधारों की सफलता को रेखांकित करती है। निरंतर नीतिगत समर्थन, सार्वजनिक-निजी भागीदारी और तकनीकी नवाचार के बल पर भारत वैश्विक अंतरिक्ष शक्ति के रूप में अपनी स्थिति को और सुदृढ़ कर रहा है तथा भविष्य की अंतरिक्ष अर्थव्यवस्था का नेतृत्व करने की दिशा में तेज़ी से आगे बढ़ रहा है।

नीतिगत समर्थन

निरंतर नीतिगत समर्थन, सार्वजनिक-निजी भागीदारी और तकनीकी नवाचार के बल पर

वैश्विक अंतरिक्ष शक्ति

भारत वैश्विक अंतरिक्ष शक्ति के रूप में अपनी स्थिति को और सुदृढ़ कर रहा है

भविष्य का नेतृत्व

भविष्य की अंतरिक्ष अर्थव्यवस्था का नेतृत्व करने की दिशा में तेज़ी से आगे बढ़ रहा है



बारिश का पानी जमा करें (कैच द रेन) : जल संरक्षण के लिए एक बार फिर राष्ट्रीय अपील

प्रविष्टि तिथि: 19 JUL 2026 8:55AM by PIB Delhi

बारिश का पानी जमा करें (कैच द रेन) : जल संरक्षण के लिए एक बार फिर राष्ट्रीय अपील





'मन की बात' के 28 जून 2026 को प्रसारित 135वें संस्करण में माननीय प्रधानमंत्री ने देशवासियों से वर्षा की प्रत्येक बूंद बचाने तथा जल संरक्षण अभियान को पूरे देश में लगातार गति देने का आह्वान किया। इसकी प्रतिक्रिया में 4 जुलाई से 4 अगस्त 2026 तक देश भर में एक केन्द्रित राष्ट्रव्यापी अभियान चलाया गया, जिसका उद्देश्य वर्षा जल को जमा करना, भूजल पुनर्भरण, पारंपरिक जल स्रोतों को पहले जैसा करने, वृक्षारोपण गतिविधियों तथा जनभागीदारी को सशक्त बनाना था।



हमें जो काम करने हैं:

वर्षा जल संचयन प्रणाली

प्रत्येक घर, सोसायटी एवं कार्यस्थल **वर्षा जल संचयन प्रणाली** को अपनाए।

रिचार्ज पिट एवं रिचार्ज शाफ्ट

उपयुक्त स्थानों पर **रिचार्ज पिट एवं रिचार्ज शाफ्ट** का निर्माण करना तथा अनुपयोगी बोरवेलों की मरम्मत कर उन्हें भूजल पुनर्भरण के लिए उपयोग में लाना।

पारंपरिक जल स्रोत

बावड़ियों, कुओं तथा पारंपरिक जल स्रोतों को बहाल कर उन्हें पुनः उपयोग योग्य बनाना।

तालाब एवं जलाशय

आसपास के **तालाबों एवं जलाशयों** से गाद हटाकर उनकी जलधारण क्षमता बढ़ाना, ताकि मानसून के जल का अधिकतम संरक्षण सुनिश्चित किया जा सके।

वृक्षारोपण

जल संरक्षण क्षेत्रों में **अधिक से अधिक वृक्षारोपण** कर हरित आवरण को बढ़ावा देना।

जल संचय जन भागीदारी 1.0 (6 सितम्बर 2024)

जल संरक्षण में जनभागीदारी को और अधिक सशक्त बनाने के उद्देश्य से **जल संचय जन भागीदारी** अभियान का शुभारंभ 6 सितम्बर 2024 को गुजरात के सूरत में किया गया। इस अवसर पर माननीय प्रधानमंत्री ने वर्चुअल माध्यम से कार्यक्रम को संबोधित करते हुए जल संरक्षण को राष्ट्रीय प्राथमिकता बनाने का अपना दृढ़ संकल्प पुनः दोहराया।

- ❑ **समुदाय 'कम्युनिटी(+ कॉरपोरेट सामाजिक उत्तरदायित्व 'सीएसआर(और लागत (कौस्ट) – इन तीन 'सी' के सिद्धांतों पर आधारित इस पहल के माध्यम से जनभागीदारी, संस्थागत सहयोग, कॉरपोरेट सामाजिक उत्तरदायित्व (सीएसआर) के योगदान तथा विभिन्न सरकारी योजनाओं के मेलजोल को बढ़ावा देकर जल संरक्षण प्रयासों को गति प्रदान की गई।**



COMMUNES WATER MUSTINS

जल संचय जन भागीदारी 1.0 — उपलब्धियाँ

इस पहल का मुख्य उद्देश्य कम लागत वाली भूजल पुनर्भरण एवं जल भंडारण संरचनाओं का निर्माण, अनुपयोगी बोरवेलों की बहाली तथा वैज्ञानिक एवं स्थानीय परिस्थितियों के अनुरूप उपयुक्त समाधान अपनाना है। इसे 'संपूर्ण सरकार' और 'संपूर्ण समाज' की सहभागिता पर आधारित दृष्टिकोण के साथ क्रियान्वित किया गया।

27 लाख+

कृत्रिम भूजल पुनर्भरण संरचनाएँ

जल संचय जन भागीदारी 2.0 (2025)

जेएसजेबी 1.0' की सफलता के आधार पर 1 जून 2025 को **JSJB 3.1** का शुभारंभ किया गया। इस चरण में कम लागत वाली, स्थानीय परिस्थितियों के अनुरूप पहलों के माध्यम से अतिदोहन तथा संसाधनों का अत्यधिक दोहन करने वाले जिलों में भूजल पुनर्भरण को तीव्र गति प्रदान करने पर विशेष बल दिया गया।

लक्ष्य

देश भर में 31 मई 2026 तक कम-से-कम एक करोड़ भूजल पुनर्भरण संरचनाओं के निर्माण का लक्ष्य निर्धारित किया गया था।

उपलब्धि

निर्धारित लक्ष्य से 50 प्रतिशत से अधिक है। इन संरचनाओं का वर्तमान में भौतिक सत्यापन एवं क्षेत्रीय प्रमाणीकरण किया जा रहा है।

सम्मान

जेएसजेबी 1.0' के अंतर्गत उत्कृष्ट योगदान देने वाले राज्यों, संस्थाओं एवं अन्य हितधारकों को सम्मानित करने के लिए सरकार ने नवम्बर 2025 में आयोजित **छठे राष्ट्रीय जल पुरस्कार** के दौरान उत्कृष्ट प्रदर्शनकर्ताओं को सम्मानित किया।



जल संचय जन भागीदारी : कैच द रेन (2026)

वर्षा जल संचयन, भूजल पुनर्भरण, जल भंडारण तथा जनभागीदारी पर नए सिरे से विशेष बल देते हुए इस अभियान का उद्देश्य प्रत्येक वर्षा को जल संरक्षण के अवसर में परिवर्तित करना है। यह अभियान स्थानीय परिस्थितियों के अनुरूप, कम लागत वाले उपायों को प्रोत्साहित करता है तथा स्थायी जल प्रबंधन के माध्यम से जलवायु परिवर्तन के प्रति लचीलापन सुदृढ़ करने का प्रयास करता है।

अभियान के तहत योजनाएँ एवं जन भागीदारी

अभियान के तहत केन्द्र एवं राज्य सरकार की विभिन्न योजनाओं के साथ मेलजोल सुनिश्चित किया गया है, जिनमें शामिल हैं:

- विकसित भारत – रोजगार और आजीविका मिशन की गारंटी – ग्रामीण (वीबी-जी आरएएम-जी)
- पीएमकैसवाई के अंतर्गत पर ड्रॉप मोर क्रॉप
- पीएमकैसवाई के अंतर्गत जल निकायों की मरम्मत, नवीनीकरण एवं पुनर्स्थापन
- सीएएमपीए
- वित्त आयोग के अनुदान
- राज्य सरकार की योजनाएँ

❑ जेएसजीबी: सीटीआर अभियान का मूल आधार **जन भागीदारी** है। इसके अंतर्गत पंचायती राज संस्थाओं, शहरी स्थानीय निकायों, महिला समूहों, युवाओं, शैक्षणिक संस्थानों, नागरिक समाज संगठनों तथा स्थानीय समुदायों को जल संरक्षण के प्रयासों में सक्रिय रूप से सहभागी बनने के लिए प्रेरित और संगठित किया जा रहा है।



2021 – "जहाँ वर्षा हो, जब वर्षा हो, वहीं वर्षा जल का संचयन करें"

- वर्षा जल संचयन एवं जल संरक्षण।
- जल निकायों का जियो-टैगिंग।
- वैज्ञानिक आधार पर जल संरक्षण की योजना एवं प्रबंधन।
- जल शक्ति केंद्रों की स्थापना तथा जन-जागरूकता गतिविधियों का आयोजन।

2022 – जल संरक्षण गतिविधियों का विस्तार

- पारंपरिक जलाशयों को फिर से चालू करना
- भूजल पुनर्भरण एवं जलग्रहण क्षेत्र का विकास
- आर्द्रभूमियों (वेटलैंड्स) एवं नदियों का कायाकल्प
- झरना-क्षेत्र का विकास एवं जलग्रहण क्षेत्र का संरक्षण

2023 – पेयजल स्रोतों की स्थिरता एवं सतत् संरक्षण

150 जल-संकटग्रस्त जिलों पर विशेष ध्यान

पेयजल स्रोतों को सुदृढ़ बनाना

भूजल पुनर्भरण एवं जल स्रोतों की स्थिरता सुनिश्चित करना

मैदानी स्तर पर निगरानी एवं सामुदायिक सहभागिता





2024 – नारी शक्ति से जल शक्ति

महिलाओं के नेतृत्व में जल संरक्षण पहल

जलाशयों की गाद हटाना एवं सफाई करना

छोड़े हुए बोरवेलों को भूजल पुनर्भरण के लिए फिर से चालू करना

वनीकरण एवं स्थानीय जल संसाधनों का पुनर्जीवन

देशभर में महिलाओं के नेतृत्व में संचालित पहलों ने यह प्रदर्शित किया है कि सामुदायिक नेतृत्व जल सुरक्षा को सुदृढ़ बनाने में महत्वपूर्ण भूमिका निभा सकता है। जल संरक्षण, स्वच्छता एवं स्वच्छ व्यवहार के क्षेत्र में उनके उत्कृष्ट योगदान को **स्वच्छ सुजल शक्ति सम्मान** के माध्यम से निरंतर सम्मानित किया जाता है, जो उनके अनुकरणीय प्रयासों को मान्यता प्रदान करता है।

जल शक्ति केन्द्र (जेएसके)

इस अभियान का एक प्रमुख संस्थागत घटक देशभर के जिलों में **जल शक्ति केन्द्रों 'जेएसके'** की स्थापना है। ये केन्द्र जल संरक्षण के लिए ज्ञान एवं सुविधा केन्द्र के रूप में कार्य करते हैं। इनके माध्यम से वर्षा जल संचयन की तकनीकों की जानकारी का प्रसार किया जाता है, स्थानीय समुदायों एवं जिला प्रशासन को तकनीकी मार्गदर्शन प्रदान किया जाता है तथा जल संरक्षण संबंधी गतिविधियों के प्रभावी क्रियान्वयन में सहयोग दिया जाता है।



वर्षा जल संचयन से ग्रामीन दृढ़ता तक

माननीय प्रधानमंत्री के दूरदर्शी नेतृत्व में **जल संरक्षण एक राष्ट्रीय प्राथमिकता तथा जन, आंदोलन के रूप में उभरा है।** कैच द रेन और जल संचय जन भागीदारी जैसी पहलों से सरकार ने जल संरक्षण को एक क्षेत्र-विशेष कार्यक्रम से आगे बढ़ाकर सामुदायिक सहभागिता, वैज्ञानिक योजना और संसाधनों के मेलजोल पर आधारित राष्ट्रव्यापी जन आंदोलन का स्वरूप प्रदान किया है।

विकसित भारत की कल्पना की दिशा में अग्रसर भारत के लिए वर्षा जल संचयन, भूजल पुनर्भरण, जलाशयों को फिर से चालू करने तथा जल का लाभकारी उपयोग कृषि को मजबूत बनाने, ग्रामीण आजीविका को सहयोग प्रदान करने, जलवायु परिवर्तन के प्रति लचीलापन बढ़ाने तथा भावी पीढ़ियों के लिए जल संसाधनों को सुरक्षित रखने में अत्यंत महत्वपूर्ण रहेंगे।

वैज्ञानिक योजना, स्थानीय स्वामित्व और सामूहिक सहभागिता को बढ़ावा देकर यह अभियान ग्रामीण भारत में टिकाऊ एवं जलवायु-अनुकूल जल परिसंपत्तियों का निर्माण कर रहा है। जलवायु परिवर्तन और पानी की बढ़ती मांग के इस दौर में वर्षा की प्रत्येक बूंद का संरक्षण जल सुरक्षा सुनिश्चित करने की अनिवार्य आवश्यकता है। इससे कृषि को और अधिक मजबूती मिलेगी तथा स्थायी ग्रामीण विकास को भी गति प्राप्त होगी।

प्रधानमंत्री का **क्षमन की बात** सहित विभिन्न मंचों पर जल की प्रत्येक बूंद के संरक्षण पर लगातार दिया गया बल नागरिकों, संस्थाओं तथा शासन के सभी स्तरों को जल सुरक्षा के लक्ष्य की प्राप्ति के लिए सामूहिक रूप से कार्य करने के लिए प्रेरित करता रहा है।



Court rejects plea to transfer Sonam Wangchuk from Safdarjung hospital

The Hindu Bureau
NEW DELHI

A day after climate activist Sonam Wangchuk was moved from the site of his hunger strike to Safdarjung Hospital in New Delhi by the police, the Delhi High Court on Sunday refused any interim order in a petition seeking to transfer Mr. Wangchuk to a hospital of his choice. The petition filed by Gitanjali J. Angmo, wife of Mr. Wangchuk, who is on a hunger strike demanding the resignation of Union Education Minister Dharmendra Pradhan, alleged that the activist was confined to Safdarjung Hospital without his or his family's consent.

Appearing for the peti-



In the spotlight: Gitanjali J. Angmo and CJP founder Abhijeet Dipke at Jantar Mantar in New Delhi on Sunday. SHASHI SHEKHAR KASHYAP

tioner in a special hearing, senior advocate Kapil Sibal submitted that Mr. Wangchuk was neither under detention nor accused of any offence and was therefore entitled to be treated at a hospital of his choice.

He submitted that the family of Mr. Wangchuk wished to shift him to Medanta Hospital in Gurugram, alleging that his own doctors presently had no access to him.

Justice Mini Pushkarna,

hearing the petition, held that the decision to shift Mr. Wangchuk from Jantar Mantar – where he was fasting for 20 days before the police intervention – could not be termed “arbitrary”. Observing that Mr. Wangchuk had chosen not to admit himself to a medical facility despite his deteriorating health, the court held that the authorities were justified in moving him. Justice Pushkarna also issued notices to the Centre, Safdarjung Hospital, and the police on the plea and asked them to file responses within three days. The petition would be heard next on July 24.

RELATED REPORTS ON
» **PAGE 4**

Aroon Deep
NEW DELHI

Activist Sonam Wangchuk will end his indefinite hunger strike if “political leaders meet him and provide an assurance that education accountability” will be the focus of the Monsoon Session of Parliament beginning on Monday, his wife Gitanjali J. Angmo said on Sunday.

Mr. Wangchuk, who had started the strike with the demand of Union Education Minister Dharmendra Pradhan's resignation over exam irregularities on June 28, is currently at Safdarjung Hospital in Delhi.

“If political leaders meet Sonam at the hospital and assure him that they will raise the issue of education accountability during the Monsoon Session, he will end his hunger strike tomorrow. If there is no assurance or accountability, he will continue his fast,” Ms. Angmo said, adding, “He has not broken his fast even after being in the hospital for two days.”

Earlier, thousands gathered at the Jantar Mantar on Sunday ahead of the Cockroach Janta Party



People throng the Jantar Mantar in New Delhi on Sunday ahead of the CJP's planned march to Parliament. SHASHI SHEKHAR KASHYAP

(CJP)'s planned march to the Parliament, demanding resignation of Mr. Pradhan, even as the Delhi Police issued a prohibitory order against marches, demonstrations, and assemblies of five or more people except at the designated protest site with prior permission. Senior AAP leader Manish Sisodia along with many others joined the CJP's protest on Sunday, incidentally the 22nd day since Mr. Wangchuk began his protest.

No permission
The unprecedented turnout spilled over to the streets surrounding Jantar Mantar. However, no permission has been granted

for the march planned by the CJP to the Parliament on Monday, when both Houses will convene for the Monsoon Session, potentially setting up a showdown between the massive crowd and the heavy security arrangements expected to meet them in the morning. Security personnel with riot guns have been deployed in the national capital, prompting the CJP to issue a call for more people to arrive at the site.

“In view of reports of a proposed march to Parliament by CJP on 20.07.2026 (Monday), Delhi Police hereby categorically clarifies that no permission has been sought or granted for

any such protest march or procession,” said Sachin Sharma, Deputy Commissioner of Police (New Delhi).

“Accordingly, protest marches, processions, demonstrations and assemblies of five or more persons are strictly prohibited, except at the designated protest site at Jantar Mantar with prior permission.”

The CJP's 1.5-kilometre march is planned to start from the Jantar Mantar protest site at 9 a.m., before moving through the Patel Chowk roundabout and terminating at the new Parliament building.

Security has been strengthened around Jantar Mantar, Parliament Street, Central Vista, Connaught Place, Shankar Chowk and other key installations, while rapid response teams have been positioned to respond to any contingency. Several police vans, buses and ambulances could be seen at the protest site.

Vigil continues
Meanwhile, CJP founder Abhijeet Dipke's call for a night vigil drew a huge response. Addressing activists

in a video message, Mr. Dipke said they must remain at Jantar Mantar throughout the night and that their presence was important to ensure the march to Parliament proceeded peacefully.

Support marches
Large rallies with hundreds of people also took place in several parts of the country including Mumbai, Nagpur, Bengaluru, Nashik, Guwahati, and Jammu. The march in Mumbai was led by Shiv Sena (UBT) chief Uddhav Thackeray and Maharashtra Navnirman Sena chief Raj Thackeray.

Over a dozen students and others continued their own hunger strikes on Sunday. Earlier in the morning, protesters formed a human chain to prevent fasting members of the AISA from being transferred to a hospital. Several high-profile Opposition figures and celebrities too arrived at Jantar Mantar. Mr. Sisodia, Trinamool Congress MP Kirti Azad, and Trinamool leader Mahua Moitra were among those who showed up.

(With inputs from Shrimansi Kaushik)

Neha, a prominent face of CJP protests, presses on with fast

Nikhil M. Babu
NEW DELHI

As the Cockroach Janta Party (CJP) started its current protest at Jantar Mantar here on June 20, at the peak of Delhi's punishing summer, the focus was mostly on the founder of the party, Abhijeet Dipke.

As the sun went down, the Delhi Police started removing people from Jantar Mantar and the protest was reduced to a small band of people gathered on and around the main stage. But one lesser-known face, standing right next to Mr. Dipke on his left with an “AISA” badge pinned to her kurta, continued chanting slogans louder than most of the others. She was Neha Bora.

Hunger strike

As the protest progressed, the 29-year-old national president of the All India Students' Association (AISA), the students wing of the CPI(ML), began an indefinite hunger strike with five other AISA members on June 28, the same day as activist Sonam Wangchuk.

Over the next three weeks, three of her colleagues gave up the hunger strike and Mr. Wangchuk was forcibly removed on Saturday morning, leaving Ms. Neha and two of her



Neha Bora

colleagues continuing the hunger strike for the 22nd day on Sunday.

Not new to protests

Ms. Neha is not new to protests. She became politically active while pursuing her undergraduate degree from the University of Delhi. Ms. Neha has continued student politics during her Masters' programme from Dr. B.R. Ambedkar University Delhi (AUD) and now during her Ph.D. at the Jawaharlal Nehru University (JNU).

Ms. Neha told *The Hindu* that they had been building this movement for a long time. “The student organisations, specifically of the Left, along with AISA, have built this movement from the ground up,” she said. “When something like the CJP comes up, it's great for us. It's great for the students.”

The stark reality of the missing jobs for India's Gen Z

India has one of the world's largest youth populations (371 million, according to United Nations data of 2025), often described as a demographic dividend. But this demographic dividend is only a promise and does not guarantee an automatic outcome. It pays off only when the transition occurs, enabling young people to move from classrooms into decent, productive work with higher skills. Right now, that transition is faltering, and the evidence is visible in Gen Z's employment patterns.

The term 'Gen Z' refers to individuals born between 1997 and 2012. They succeeded the Millennials (also known as Generation Y), who were born between 1981 and 1996. The working-age population for Gen Z broadly falls within the 15-26 age group, while Millennials are aged between the years 27 to 42. According to the 2023-24 Periodic Labour Force Survey (PLFS), India has an estimated 29.94 crore working-age Gen Z individuals (aged 15-26 years), compared with 35 crore Millennials (aged 27-42 years). Using the same datasets, we analyse their occupational patterns, labour force participation rates, unemployment levels, and access to social security systems.

Gen Z work status

PLFS 2023-24 estimates show that a large share of Gen Z remains engaged in education. The data show that 41.7% of young males and 38.4% of young females are studying. While this partly explains their delayed entry into the labour market, the situation of the remaining youth is a cause for concern.

When young people do enter the labour market, many are absorbed into non-salaried and casual forms of employment. Among young males, 15.8% are engaged as unpaid family workers, 12.3% are in casual work – possibly with segments of the informal economy – and only 14.8% are regular wage earners. Among female Gen Z individuals, about 35% are engaged in domestic duties (out of the labour force), 10.7% work as unpaid family workers, and only 4.7% are regular wage earners.

These patterns underline the fact that women bear this burden disproportionately. Among Gen Z females, 27.1% are engaged in domestic duties only, compared with just 0.32% of males. Even where women want paid work, they face higher unemployment and weaker labour market attachment. This is not only a matter of jobs. It also reflects childcare burdens, safety concerns, mobility constraints and social norms, and the design of work itself. India cannot talk seriously about harnessing its demographic advantage while leaving such a large share of young women outside the paid economy.

What happens when young people try to enter



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Celebrating India's demographic dividend means little when Gen Z faces unemployment, insecurity and shrinking pathways to decent work

the labour market? The answer is concerning: too many of them are unable to find adequate employment opportunities.

The first indicator to consider is the labour force participation rate (LFPR). Among Gen Z, 41.7% are in the labour force, against 75% of Millennials. Within Gen Z, rural participation (44.1%) exceeds urban participation (37.2%), suggesting that rural youth tend to enter the labour market earlier, whereas urban youth spend more time in education and training. A sharp gender divide is also evident. Among young males, labour force participation is 59.3% in rural India and 51.3% in urban India, compared to just 28% and 21.1% respectively for young females.

The unemployment situation is even more alarming. The overall unemployment rate for Gen Z is 11.9%, compared to only 2% among Millennials. In urban India, the situation deteriorates further, with Gen Z unemployment rising to 17.1%.

For urban young women, it reaches a staggering 22.6%. This is not merely a temporary labour-market friction; it is a serious warning sign that the economy is struggling to absorb young jobseekers, particularly in areas where aspirations and educational qualifications are often higher.

The graduate trap, social security mirage

For most of the youth, education offers a gateway of opportunity: more education leading to better jobs and lower unemployment. Instead, our estimate shows the opposite at the top end. Among Gen Z males with graduate-level education or above, unemployment stands at 29%. Among Gen Z females, it is even higher at 36.9%. This is the heart of India's silent jobs crisis. The country is producing educated young people faster than it is producing suitable jobs for them.

A similar disparity persists among Millennials. Only 5.2% of male graduates and above are unemployed, but the corresponding figure for women is significantly higher at 13.8%.

This disconnect perhaps points to a deeper mismatch between the education system and labour market requirements. While part of the problem relates to skill mismatches, it is also increasingly shaped by automation and the growing adoption of artificial intelligence, both of which are altering the nature of available jobs.

That mismatch carries a deeper risk. When higher education no longer improves employment prospects quickly or reliably, frustration rises, family investment in education comes under strain, and confidence in the growth story weakens. A labour market that cannot absorb its educated youth is not just inefficient. It can become socially corrosive and

destabilising. Even for those who do find work, the quality of employment remains deeply concerning. Only 20.1% of Gen Z individuals are covered by social security, and just 14.1% have a formal job contract. Among the remaining 79.9% who lack social security coverage, only 3.2% have a job contract. Overall, only 17.3% of Gen Z workers have any form of contractual employment.

This implies that most are entering the workforce without either. The challenge, therefore, is not merely unemployment but the widespread prevalence of informal, insecure, and weakly protected work. Further, in recent years, there has been growing evidence of the informalisation of formal employment among the Gen Z population.

The situation among Millennials is only marginally better. Merely 26% have a job contract, while only 28.6% are covered by social security.

The recent large-scale violent labour protests in Noida, Uttar Pradesh, led by industrial and factory workers demanding higher wages and better working conditions, reflect the frustration that insecure and poorly protected employment can produce.

A promise deferred

India's jobs debate is too often discussed in silos: unemployment, skilling, women's work and labour force participation, and informality. However, these are not separate problems. They are one connected failure of labour market transition. Young people (Gen Z) are staying in education longer, but the bridge from education to work is weak. Women face structural barriers that keep them out or push them into unpaid roles. And even when work is found, it is too often outside the protections of formal employment.

It is time India moves beyond merely celebrating its large demographic dividend and begins treating the issue with greater urgency. Skill programmes have value, but they cannot substitute for actual job creation. The answer lies in expanding labour-intensive sectors, building stronger school-to-work pathways, linking training more closely to employers, and making it easier for women to enter and remain in paid work. Apprenticeships, formal hiring incentives, urban employment expansion, safe transport and childcare support all need to be part of the response.

The numbers tell a blunt story. India's youth challenge is no longer about whether young people are ready for work. It is about whether the economy is ready for them. Until that changes, the demographic dividend will remain what it has so far been: a promise deferred.

महत्वपूर्ण तथ्य



Standing firm: Amit Bhatnagar and other protesters during their demonstration against irrigation projects. SPECIAL ARRANGEMENT

Police clear protest against Ken-Betwa, other projects in M.P.

Mehul Malpani
BHOPAL

The Madhya Pradesh Police on Sunday cleared a two-week-long protest led by several tribals against the Ken-Betwa river link and other irrigation and development projects in Madhya Pradesh's Chhatarpur district, dispersing protesters and hospitalising protest leader Amit Bhatnagar, who had been on a hunger strike for 14 days.

The action comes a day after the Delhi Police, in a similar move on Saturday, forcibly removed activist Sonam Wangchuk from his Jantar Mantar protest site.

Residents of several tribal villages from Panna and Chhatarpur districts had been protesting on the banks of the Barana river near Kupa village against the ₹44,000-crore project of the Union government, and various State irrigation projects, with several demonstrators tying nooses around their necks and lying on makeshift funeral pyres in the river in a symbolic protest.

Safety concerns

The Madhya Pradesh Police, which entered the protest site on the banks of the Barana river early morning, dismantled the protest site and removed symbolic pyres erected by the villagers. Officials said the protesters were moved out of the riverbed due to

rising water levels following heavy rainfall in the area.

Several protesters, however, refused to move, accusing the police of forcibly evicting them and assaulting women.

Chhatarpur Collector Parth Jaiswal told *The Hindu* that the area had received heavy rain for the past two days, causing the river to overflow and the action was taken to prevent any untoward incident. He also said that Mr. Bhatnagar has been admitted to the Bijawar Civil Hospital and his vitals signs are stable.

"We had also received information from the weather department about more rains in the coming days. This is why the police arrived at the site around 5 a.m. and held dialogues with the protesters," Mr. Jaiswal said, adding that the protesters were dropped to their villages in Panna district in buses.

Mr. Bhatnagar while in the hospital, told *The Hindu* that the police forcibly took him to the hospital. He said the police action came on a day when he was planning on "revealing the details of ₹44,000-crore corruption" related to the compensation process.

"My health was not that bad. My indefinite hunger strike continues. I will not break it. If I am forced, I will not drink water or even breathe," he said.

महत्वपूर्ण तथ्य

केन-बेतवा लिंक परियोजना (Ken-Betwa Link Project)

परिचय

- केन-बेतवा लिंक परियोजना (Ken-Betwa Link Project - KBLP) भारत की पहली राष्ट्रीय नदी जोड़ो परियोजना (Interlinking of Rivers - ILR) है।
- इसका उद्देश्य केन नदी के अतिरिक्त जल को बेतवा नदी में स्थानांतरित करना है।
- यह परियोजना मुख्य रूप से मध्य प्रदेश और उत्तर प्रदेश के बुंदेलखंड क्षेत्र में जल संकट को कम करने के लिए बनाई गई है।

संबंधित नदियाँ

•केन नदी

- उद्गम: कटनी जिला, मध्य प्रदेश
- यमुना नदी की सहायक नदी

•बेतवा नदी

- उद्गम: रायसेन जिला, मध्य प्रदेश
- यमुना नदी की सहायक नदी

प्रमुख घटक

- दौधन (Daudhan) बांध
- केन-बेतवा लिंक नहर
- दो सुरंगें (Tunnels)
- जलविद्युत परियोजना
- सिंचाई अवसंरचना

उद्देश्य

- बुंदेलखंड में सिंचाई सुविधा बढ़ाना।
- पेयजल उपलब्ध कराना।
- जलविद्युत उत्पादन।
- सूखा प्रभावित क्षेत्रों में जल सुरक्षा सुनिश्चित करना।
- कृषि उत्पादन एवं ग्रामीण विकास को बढ़ावा देना।

Ahead of Monsoon Session, MPs seek debate on NEET, delimitation

Opposition parties stage a brief walkout from all-party meet in protest against invitation to breakaway Trinamool faction; seek talks on police action at Jantar Mantar. E20: Rijju tells parties to participate constructively in parliamentary debates

Sobhana K. Nair
NEW DELHI

An invitation extended by Parliamentary Affairs Minister Kiren Rijju to a breakaway Trinamool Congress group prompted Opposition parties to stage a walkout from the all-party meeting held on Saturday, ahead of the Monsoon Session of Parliament.

The protest brought together parties that have often been at odds, including the DMK, the Aam Aadmi Party (AAP), which skipped the INDIA bloc meeting on June 8; and the Left parties, which are ideologically opposed to the Trinamool. They objected to the government's decision to invite the rebel Trinamool MPs, stating that Lok Sabha Speaker Om Birla had not yet recognised the group's claim that it had merged with the Tripura-based Nationalist Citizens Party of India (NCPI).

The Opposition's walkout lasted for a brief while before leaders returned to the meeting and pressed for discussions on a range of issues, including the alleged theft of Ram temple donations, the NEET paper



Setting the stage: Union Parliamentary Affairs Minister Kiren Rijju chairs a meeting with floor leaders of political parties at Parliament House on Sunday. Aa

of Parliament, he said, was in the national interest, while disruptions and dithering ultimately harmed both Parliament and the Opposition.

Trinamool MP Mahua Motra questioned the basis for inviting the 20 rebel MPs. Stating that the disqualification petitions were pending, she said there was no constitutional basis for a separate bloc. Defending the invite, Mr. Rijju said the breakaway group had sought recognition from the Speaker and could not be ignored by the government.

Among other demands, Samajwadi Party MP Dharmendra Yadav sought discussion on the alleged theft of Ram temple donations. CPI(M) leader John Brittas criticised the "BJP-engineered split" in Opposition parties, arguing that they weakened democratic representation. CPI leader P. Sandosh Kumar sought a discussion on "large-scale deletions" of voters' names during the SIR.

A total of 58 leaders from 40 political parties attended the meeting. The Monsoon Session begins on Monday and will conclude on August 13.

Reserve one-third of the Lok Sabha seats for women, which would otherwise happen along with the fresh delimitation after the 2027 Census.

The Bills moved by the government did not align with the oral promises made by Prime Minister Narendra Modi and Home Minister Amit Shah on the floor of Parliament and in interactions with representatives of political parties. The government has publicly maintained that its delimitation plans would not affect the existing proportion of individual States in the Lok Sabha, and that the proposed 50% increase in the size of the Lok Sabha would translate into a 50% increase in the number of seats in each State. Since that promise was in conflict with the text of the proposed amendments in April, no consensus could

Centre has to align what it says on delimitation with what is written in the Bill

NEWS ANALYSIS

Yarghese K. George
NEW DELHI

Though there is no official word on it yet, the Centre appears eager to initiate the delimitation exercise by amending the Constitution and passing a Delimitation Bill. In April, the Centre moved the 131st Constitutional Amendment Bill and the Delimitation Bill, which in combination proposed the following:

Increase the strength of the Lok Sabha to a maximum of 850 seats.

Allot those seats among States based on the population figures of the "latest Census" (which happens to be that of 2011) and delimit individual constituencies within each State immediately. As per the existing provisions of the Constitution, a fresh allocation among States and delimitation can happen only after the Census of 2027.

The existing proportion of seats for each State is a constitutional guarantee written into Articles 81 and 82 of the Constitution. That guarantee has a sunset clause – the existing arrangement comes to an automatic end once the data of the first Census after 2026 is published.

In Articles 81 and 82, there are references to three Censuses: the first Census after 2026; the Census of 1971; and the Census of 2001. The next delimitation is tied to the first Census after 2026; the existing proportion of Lok Sabha seats among States is tied to the 1971 Census; and the population of individual constituencies within the States is tied to the 2001 Census. The April amendments and the Delimitation Bill, in combination, proposed to remove all these separate references and tie the allotment of seats to the States and the delimitation of constituencies to the "latest Census".



The 131st Constitutional Amendment Bill and the Delimitation Bill proposes to increase the Lok Sabha strength to 850. Pn

be reached for the passage of the Constitution amendment, which requires a two-thirds majority in the Lok Sabha. The amendment Bill was defeated in the Lok Sabha, and the Delimitation Bill was not put to vote.

The question, therefore, as Parliament convenes for a new session, is how the text of the Constitution can incorporate the promise of maintaining the current proportional distribution of Lok Sabha seats.

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DMK, TDP should uphold their legacy of ensuring fair delimitation: Congress

Sobhana K. Nair
NEW DELHI

Invoking the role played by the Dravida Munnetra Kazhagam (DMK) and the Telugu Desam Party (TDP) in the previous rounds of delimitation, Congress general secretary (communications) Jairam Ramesh said the two parties should not fritter away their legacy of ensuring fairness in the delimitation process.

Speaking to *The Hindu* ahead of the Monsoon Session of Parliament, Mr. Ramesh said continuing with the 1971 Census as the basis for the distribution of Lok Sabha seats is crucial to maintaining the federal balance. He said the Congress favoured extending the freeze for another 25 years, until 2051.

"The DMK played a pivotal role in the Constitutional freeze of 1976. The DMK and the TDP played a crucial role in the Constitutional freeze of 2001. Hopefully both will now continue to play the key role in ensuring there is no unfreezing," he said.

Defeat of Bill

On April 17, the Constitution (131st Amendment) Bill, which sought to redistribute Lok Sabha seats on the basis of the 2011 Census and expedite the implementation of women's reservation, was defeated by



The DMK played a pivotal role in the Constitutional freeze of 1976. The DMK and the TDP played a crucial role in the Constitutional freeze of 2001. JAI RAM RAMESH, General Secretary, Congress

a united Opposition. In a House where 528 members were present and voting, 298 voted in favour of the Bill, falling short of the required two-thirds majority.

There is speculation that the government may amend the legislative package comprising the Constitution (131st Amendment) Bill and the Delimitation Bill to ensure a proportionate 50% increase in the strength of every State in the Lok Sabha, in an effort to address concerns raised by its allies. The speculation has gained traction after the government's strength in the Lok Sabha increased after the split in the Trinamool Congress and the Shiv Sena (UBT).

Since the Congress decided to align with the TVX following the defeat of the DMK-led alliance in the Tamil Nadu Assembly election, the DMK has maintained its distance from the Congress, and it remains unclear how it would vote if the Bill returns to Parliament.

The DMK played a pivotal role in the Constitutional freeze of 1976. The DMK and the TDP played a crucial role in the Constitutional freeze of 2001. JAI RAM RAMESH, General Secretary, Congress

"Optical illusion" The Congress leader said the oral assurance given by Home Minister Amit Shah in the last session regarding a proportionate 50% increase in the Lok Sabha representation of every State was only an "optical illusion" created by the government. The assurance was not reflected in the Bills circulated during the last session. He argued that the issue would not be resolved merely by adding a clause to that effect.

"The talk of a proportionate 50% increase... in the strength of each State is an optical illusion. It is meaningless in the light of Article 81(2)(a) of the Constitution," Mr. Ramesh said, arguing that the government, through the Bills defeated in the last session, had removed the constitutional protection

for maintaining the State-wise proportion of seats in the Lok Sabha.

The legislation sought to amend Article 81(1) to increase the number of Lok Sabha members from 543 to 850 and Article 81(3) to lift the 1971 freeze, while leaving Article 81(2)(a) untouched. This provision maintains that the ratio between a State's population and its number of Lok Sabha seats should be roughly equal across States.

"The Bills circulated by the government in the last session removed the constitutional freeze on the distribution of Lok Sabha seats, which means that it is now a constitutional imperative to reallocate seats in favour of more populous states," Mr. Ramesh said.

This, he argued, leaves a wide ambit for the Delimitation Commission, which is appointed by the government and whose decisions are protected from judicial challenge under Article 329 of the Constitution.

"The Modi government may commit to a proportionate 50% increase for all States in the Lok Sabha for the 2029 elections, however after the elections, the commission can very well change the State-wise distribution of the Lok Sabha seats, favouring the more populous States in allocation of seats," he said.

YouTube Homework

- Parliament
- Houses of Parliament
- Session
- Prorogation
- Adjournment
- Adjournment Sine Die

महत्वपूर्ण तथ्य

Bill in Rajya Sabha to criminalise insulting the National Song

The Hindu Bureau
NEW DELHI

The Centre will begin the Monsoon Session of Parliament on Monday with a move to grant statutory protection to the National Song *Vande Mataram*, listing the Prevention of Insults to National Honour (Amendment) Bill, 2026.

This legislation seeks to amend the Prevention of Insults to National Honour Act, 1971. The statement of objects and reasons of the Bill by Union Home Minister Amit Shah said that the 1971 Act provides that any act of intentionally preventing the singing of the National Anthem or causing disturbance to any assembly engaged in such singing constitutes a punishable offence.

The proposed amendment seeks to extend similar protection to *Vande Mataram*.

According to the Bill, any act causing obstruction in the singing of the National Song or insulting it in any form would become punishable.

“Presently, there is no specific legal provision to prevent insults to the singing of *Vande Mataram*, which is honoured as the National Song. Therefore... it is proposed to amend Section 3 of the said Act to



The Ministry had written to the States directing that it be played at functions where the National Anthem is rendered.

include the National Song also within its ambit, so as to make such acts punishable,” the Bill circulated among Rajya Sabha members said.

Earlier, the Union Home Ministry had written to the States directing that the song be played or sung at official functions where the National Anthem, *Jana Gana Mana*, is rendered.

CPI(M) member in the Rajya Sabha John Brittas has shot off a letter to Mr. Shah seeking withdrawal of the Bill.

“After nearly three years of exhaustive deliberations, the Constituent Assembly consciously refrained from incorporating any provision placing the National Song and the National Anthem on the same legal footing,” it said.

YouTube Homework

- National Anthem
- National Song

M.P. Cabinet approves draft UCC Bill; tribes get exemption

The draft Bill proposes ban on polygamy, *nikah halala*, makes registration of live-in relationships mandatory; CM claims that the proposed law has received support from all religious communities

Mehul Malpani
BHOPAL

The Madhya Pradesh Cabinet on Sunday approved the draft Uniform Civil Code (UCC) Bill, proposing a prohibition on practices like polygamy and *nikah halala*, while introducing strict provisions for live-in relationships. The Bill, however, exempts the State's large tribal population.

The Bill, drafted by a six-member committee and scheduled to be tabled in the Legislative Assembly during the Monsoon Session starting Monday, was approved at a special Cabinet meeting near Bhopal.

Chief Minister Mohan Yadav, who has stepped up his push for the UCC over the past week, claimed that the proposed law had received support from all religious communities and that over 80% of Muslim women and 40% of Muslim men backed the proposal.

Mr. Yadav also slammed the Congress, saying while Opposition parties like the Left and the Aam Aadmi Party attended the consultations on the government's invitations, the principal Opposition party did not.



Madhya Pradesh Chief Minister Mohan Yadav addresses a Cabinet meeting in Bhopal on Sunday along with Deputy Chief Ministers. ANI

"I don't know what the Congress sees in the Hindu-Muslim votes. They always have a dilemma over one nation, one symbol and one law," he said, addressing the media after the Cabinet meeting.

The draft Bill excludes the ST communities to protect their "unique cultural heritage and traditional lifestyle".

"Respecting constitutional safeguards, this law will not apply to Scheduled Tribes (such as Bhil, Gond, Korku, Baiga, Sahariya, and Bharia) covered under Articles 342 and 366 (Clause 25) of the Constitution. Furthermore, communities whose traditional rights are protected under Part XXI of the Constitution have also been specifi-

cally exempted," a government official said.

The Bill seeks to prohibit polygamy across all communities and declares practices like triple talaq and *nikah halala* as illegal and punishable. "Verbal divorce or decisions made by informal panchayats have been declared completely illegal. Now, a marriage can be dissolved only on clear and statutory grounds prescribed by law," the official said.

Mandatory registration
As per the draft Bill, it will be mandatory to register marriages and divorces across all communities through government portals, to ensure marital rights, alimony and other legal protections.

"The Code has removed the term "illegitimate" from the legal framework. Children of married or unmarried parents – whether biological, adopted, or born through surrogacy or Assisted Reproductive Technology – will enjoy equal legal status," he said.

The Bill also seeks to make it mandatory for live-in couples to submit an affidavit to the local registrar within a month of entering such a relationship, failing which could attract legal action.

While the minimum age for entering a live-in relationship remains 18, the proposed legislation provides that if either partner is below 21 years of age, information regarding the commencement and termination of the live-in relationship will be sent to their parents or guardians, and that the registrar will also share the record with the local police.

"Children born out of live-in relationships will be considered legitimate and entitled to full inheritance rights. If the male partner abandons the woman, she can claim maintenance—just like a legal wife—through a competent court," the official said.

YouTube Homework

- UCC

Shah unveils India's first immersive language museum

The Hindu Bureau
KOLKATA

Highlighting that a country's language carries its heritage and offers a window into its culture, Union Home Minister Amit Shah on Sunday inaugurated the Museum of Word at the National Library campus here and called it a step to preserve the *virasat* of India.

Developed by the National Library under the aegis of the Union Culture Ministry, the first immersive language museum in the country, also known as *Shabdlok*, celebrates India's rich linguistic heritage and showcases the evolution of its oral and written traditions through interactive and technology-driven exhibits.

"Our Prime Minister [Narendra Modi] has prioritised both *Vikas* (development) and *virasat* (heritage). This museum is a step to preserve India's rich linguistic and cultural heritage. Our language carries our heritage, and through languages you can understand a country's culture," Mr. Shah said addressing the inauguration event.

The museum features nine galleries exploring different facets of the history of languages and their influence on India's civilisa-



Home Minister Amit Shah at an event in Kolkata on Sunday. PTI

tion and culture. It seeks to present language as a living entity that has continuously shaped society while also being shaped by it.

Linguistic diversity

The first phase of the museum chronicles the diversity of Indian languages, scripts, and literature.

Rather than a conventional repository, it has been designed as an immersive cultural experience using digital displays, holograms, and motion-sensor technology to engage visitors.

Shabdlok celebrates India's 22 official languages and traces their journey from oral traditions and ancient manuscripts to printed works and modern electronic texts, highlighting the country's enduring linguistic diversity.

YouTube Homework

■ 8th Schedule

महत्वपूर्ण तथ्य

शब्दलोक (Shabdlok) क्या है?

- शब्दलोक (Shabdlok) भारत का पहला इमर्सिव (Immersive) भाषा संग्रहालय है, जिसका उद्घाटन 19 जुलाई 2026 को केंद्रीय गृह मंत्री अमित शाह ने कोलकाता स्थित राष्ट्रीय पुस्तकालय (National Library) परिसर में किया। इसका उद्देश्य भारत की भाषाई, साहित्यिक और लिपि संबंधी विरासत को आधुनिक तकनीक के माध्यम से प्रस्तुत करना है।

मुख्य तथ्य (UPSC/BPSC Prelims)

- नाम: शब्दलोक (Museum of Word)
- स्थान: राष्ट्रीय पुस्तकालय, कोलकाता, पश्चिम बंगाल
- उद्घाटन: 19 जुलाई 2026
- उद्घाटनकर्ता: केंद्रीय गृह मंत्री अमित शाह
- विकास: राष्ट्रीय पुस्तकालय द्वारा, संस्कृति मंत्रालय के अधीन।

प्रमुख उद्देश्य

- भारत की भाषाई विविधता को प्रदर्शित करना।
- भारतीय भाषाओं, बोलियों और लिपियों के विकास की यात्रा को दिखाना।
- मौखिक परंपरा से लेकर आधुनिक डिजिटल युग तक भाषा के विकास को समझाना।
- नई पीढ़ी को भारतीय साहित्य और भाषा विरासत से जोड़ना।

प्रमुख विशेषताएँ

- भारत का पहला Immersive Language Museum।
- 22 अनुसूचित भाषाओं तथा भारतीय भाषाई विरासत को प्रदर्शित करता है।
- 9 थीम आधारित गैलरियाँ।
- डिजिटल स्क्रीन, होलोग्राम, मोशन सेंसर और इंटरैक्टिव डिस्प्ले का उपयोग।
- प्राचीन पांडुलिपियों से लेकर आधुनिक इलेक्ट्रॉनिक पाठ (e-text) तक की यात्रा को दर्शाया गया है।

महत्वपूर्ण तथ्य

Maturing approach

India needs to use market access in the U.K. to raise its market share

The India-U.K. Comprehensive Economic and Trade Agreement (CETA) reflects New Delhi's more mature approach to free trade negotiations. Unlike its 2009 free trade agreement (FTA) with ASEAN, which tilted the trade balance against India, New Delhi has approached the U.K. pact by attempting to balance liberalisation with domestic sensitivities amid an increasingly fragmented global trading system. A similar shift was evident in the New Zealand FTA, where India succeeded in protecting its sensitive dairy sector despite dairy products being one of New Zealand's biggest exports. While the India-U.K. CETA is expected to strengthen India's export competitiveness, its benefits are likely to be uneven across sectors and could place competitive pressure on already cost-disadvantaged MSMEs. The pact, an attempt to secure long-term market access and integrate India further into global value chains, offers zero-duty access on 99% of India's exports, covering almost the entire value of bilateral trade. However, smaller firms often lack the documentation and compliance capacity needed to claim these benefits. Despite the deal including some agreements on non-tariff aspects, MSMEs may find it difficult to comply with the U.K.'s stringent sanitary, phytosanitary, technical and sustainability standards, which could prove a bigger hurdle than tariffs. Globally, such agreements have accelerated export diversification, attracted investment and facilitated technology transfer, but only when supported by robust industrial ecosystems and competitive firms.

India has historically underutilised several trade agreements because of low awareness, cumbersome administration and high compliance costs. The trade deficit with ASEAN widened from about \$10 billion in 2017 to nearly \$44 billion in 2023. Similarly, the U.K. agreement's benefits may remain below expectations unless India strengthens regulatory administration, intellectual property protection and dispute resolution. Although the U.K. accounts for only about 3% of India's merchandise exports and around 1% of its imports, the U.K. pact expands India's access to a high-income market where it enjoys a merchandise trade surplus. However, this advantage could narrow if imports of the U.K.'s relatively price-inelastic exports, such as luxury vehicles, grow faster than India's largely labour-intensive, price-sensitive exports. The Double Contribution Convention benefits Indian IT and professional services firms, but its economy-wide benefits may remain modest. The pact also faced a hurdle over the U.K.'s steel safeguard quotas before implementation, underlining how non-tariff measures can dilute market access. India's carbon-intensive exports could face challenges as climate-related trade regulations become more stringent. Ultimately, CETA's success lies in turning market access into market share.

YouTube Homework

■ India-UK Relation

महत्त्वपूर्ण तथ्य

महत्वपूर्ण तथ्य

Much more than ‘Melbourne meets Modi’

In terms of rock star performances by foreign leaders, it would be hard to beat Prime Minister Narendra Modi's magnetic engagement with a Melbourne crowd in Australia in the second week of July. As one of those in the crowd, I can attest that the audience revelled in Mr. Modi's energy, and the messages of aspiration for the diaspora and for the Australia-India partnership.

Mr. Modi's visit to Australia took place from July 8 to 10. But this visit was a lot more than a rock star performance. It opened new chapters in the India-Australia story – in investment, strategic trust, culture, sports and people.

Beyond symbolic diplomacy

A short call of the board is warranted. The leaders, Mr. Modi and Australian Prime Minister Anthony Albanese agreed on: a new Joint Declaration on Defence and Security Cooperation that deepens our work together as a force for peace, stability and prosperity in the Indo-Pacific; a new Partnership on Cyber, Critical Technologies and Supply Chains that strengthens our respective cyber capabilities, improves regional and global cyber resilience, and boosts our industrial and business linkages; a sports playbook that leverages Australia's expertise in major sporting events, as India seeks to demonstrate its global leadership by hosting the Commonwealth Games and bidding for the Olympic and Paralympic Games; a statement on energy security that commits Australia and India to more resilient energy supply chains, while making possible Australian uranium exports to India for peaceful purposes, and a Maritime Security Collaboration Roadmap that charts the way forward for Australia and India to expand



Philip Green

Australia's High
Commissioner
to India

The ‘Melbourne momentum’ is opening new chapters in security, business, education and culture

cooperation on maritime security in the vast Indian Ocean that lies between our shores.

Business, education, cricket

That is a lot for a single visit. And business leaders chipped in – Australia's largest pension fund, Australian Super, decided to invest half a billion dollars (that is ₹3,360 crore) in India's National Investment and Infrastructure Fund Limited. That is on top of Australia's leading hyperscalers committing to build tens of billions of dollars in data centres across India.

Our education sectors reminded us that eight Australian universities have now undertaken to open foreign branch campuses in India, including the University of New South Wales (UNSW), which is a global top 20 university. When its campus opens later this year, UNSW will be the highest-ranking university in India.

And a big next step in our relationship was also foreshadowed, with the plans for an annual showcase of the best of Australian culture and business under the banner “G'Day - Namaste”. G'Day - Namaste will coincide with the Australian Big Bash League playing its first game (cricket) on foreign soil in December this year.

To me, this rich set of outcomes represents more than a fair bit of work in preparation for the visit. It shows that there is a lot more headroom to deepen and expand our collaboration. That is because of three underlying drivers that are impelling our partnership forward: The fact that we are reliable partners at a time when our region, and the world more broadly, is in flux, and when each of us needs to find deeper international connections to safeguard our interests; the fact that we have highly complementary economies – Australia's

strengths in energy, mining, and education and skills fit neatly with India's rapidly growing manufacturing industry, and the fact that the Indian diaspora in Australia – Australia's fastest-growing – is a source of pride and dynamism for our two governments.

Leadership drives partnership

Relationships grow when the objective conditions are fertile. They flourish when each nation sees in the other, solutions to some of its problems, and pathways to maximise their opportunities. That is where Australia and India are.

They also flourish when they have leadership with a shared vision and ambition for the relationship.

That shared ambition was much on display between Prime Ministers Narendra Modi and Anthony Albanese. Stability and continuity are on the side of our leaders too, with each focused on fixing long-term problems and seizing opportunities.

The two leaders have a deep respect and admiration for each other.

The genuine warmth between our Prime Ministers was on unmistakable display over two days in Melbourne – from their banter about cricket in quiet moments, to their attentive consideration of each other's viewpoints, to the bear-hugs that caught the attention of the cameras.

The visit is a vivid demonstration of what a positive place we find ourselves in, in the India-Australia partnership. Not all bilateral relationships have that just now, so we should celebrate it. Celebrate it, and recommit ourselves to maximising the opportunities of a special moment of alignment of interests.

YouTube Homework

■ India-Australia

What is the legal tussle surrounding the Taj Mahal?

What controversial claims have been made about the monument over the years?

Ziya Us Salam

The story so far

Taj Mahal, the seventeenth-century tomb, is once again in the news. Earlier this month, the Allahabad High Court issued notices to the Centre and the Archaeological Survey of India, asking for their response to a plea challenging an Agra trial court order refusing a survey of the Taj Mahal. A Bench of Justice Rohit Ranjan Agarwal passed the order on a petition filed by advocate Harishankar Jain contending that the Taj, a UNESCO World Heritage monument, is actually 'Tejo Mahalaya'.

Mr. Jain pleaded for a declaration that the Taj Mahal is a Hindu temple and sought permission for Hindus to offer prayers there. The petitioners also sought the appointment of an Advocate Commissioner to inspect the monument. Built by Mughal emperor Shah Jahan as

a tomb for his favourite wife Arjumand Bano, the Taj Mahal took 22 years to be completed. Constructed under chief architect Ustad Ahmed Lahori, the first time it faced a controversy was when it was claimed by many in the West that the architect of the Taj was Venetian Geronimo Veroneo, a jeweller by profession. That was in the 17th Century. Then came the claim by Mughal Beg in Tarikh-e-Taj Mahal that the Taj was designed by Muhammad Effendi, an architect supposedly sent by the Sultan of Turkey. Effendi, however, was not an architect as subsequent revelations proved.

What was P.N. Oak's claim?

Then in the mid-19th Century, it was claimed that the monument was the result of the genius of Frenchman Austin de Bordeaux, a jeweller by profession. However, Austin died in 1632, the year the work on the Taj began.

No historian of medieval India has contested the fact of the Taj being a tomb of the Mughal emperor Shah Jahan's wife. This includes the illustrious historians Irfan Habib and Athar Ali, besides noted names like Satish Chopra and Syed Ali Nadeem Rezavi. The first person to cast aspersions on the tomb's authenticity was a non-historian, P.N. Oak, a teacher-turned-lawyer-turned-journalist, who, through his book *Taj Mahal is a Temple Palace*, claimed in 1965 that the Taj was originally a Rajput palace built in the 4th century. In 1989, Oak revised his opinion and claimed it was originally a Hindu temple built in the early 12th century. Again, he penned a book, *Taj Mahal: The True Story*, to buttress his contention. It was the first time anybody associated the monument with a Hindu deity. The historians rejected his claims as lacking credibility in the absence of any evidence. Oak's claim, however, was heard in the Supreme Court, which

rejected it outright in 2000.

What legal challenges followed?

In 2005, Amarnath Mishra, now a member of Ayodhya Sadbhavna Samiti, went to Allahabad High Court claiming the Taj was a temple built by the Chandela rulers in 1189. The court dismissed his contention too.

The opponents did not give up. In 2015, a civil suit filed at an Agra trial court sought to declare the Taj Mahal a Hindu temple. The court, however, didn't agree with the claim. After it refused to order a survey of the Taj premises, like the one ordered in Gyanvapi and Bhojshala, the petitioners went to Allahabad High Court. The court then sought response from the Union Government and the Archaeological Survey of India (ASI).

What was the ASI's stand?

In 2017, the ASI stated unambiguously that the Taj was a 17th-century tomb. The technology used in its construction and design, including pietra dura, did not exist in pre-medieval days. It should have ended any vestiges of controversy. However, a PIL was filed by a BJP leader in the Supreme Court in 2022. It was dismissed too. Two years later, some activists tried to offer Gangajal at the Taj. That attempt, too, was foiled. Now, following the Allahabad HC ruling, the ball is in the Centre's court, besides the ASI yet again.

THE GIST

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▼
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YouTube Homework

■ World Heritage Sites

On the second phase of U.S.-Iran war

The second phase of the Iran-U.S. war is primarily centred on the future of the Strait of Hormuz. The MoU stipulated that Iran would allow 60 days of free passage for ships through the strait and define its future administration with Oman. Subsequent talks in Doha broke down over U.S. resistance to a formal management plan

EXPLAINER

M. Kalyanaraman

The second phase of the Iran-U.S. war is being fought almost exclusively over the future of the Strait of Hormuz. The sequence of events leading to the restart of hostilities suggests there was no genuine meeting of minds when the MoU was signed. As before, by holding out and retaliating, Iran has forced the issue — shipowners now seem resigned to paying a “logical” toll, even as they worry about the precedent it sets for other straits.

Events that led to the war

The two countries agreed to a ceasefire on June 14 and the terms of the MoU were finalised, which stipulated that Iran would allow ships to pass “with no charge for 60 days only” and that Iran would work with Oman to “define the future administration and maritime services” in the strait. Two days later, the Persian Gulf Strait Authority — set up by Iran in May to handle transits — circulated terms reasserting itself as the nodal transit authority, requiring every vessel to hold a passage permit and PGSA-approved insurance, free for now but with fees reserved for later. Iran was formalising its stake as a legal outcome of the MoU.

U.S. and Iranian delegations met in Switzerland on June 21, and sanctions were lifted the next day. But the PGSA, already sanctioned, was never explicitly relieved — leaving shipping firms wary of dealing with it.

U.S. Secretary of State Marco Rubio then toured the UAE, Kuwait and Bahrain from June 23-25, culminating in a Gulf Cooperation Council (GCC) meeting in Bahrain. Amid that visit, on June 24, the International Maritime Organization (IMO) — working with Oman — formally announced a temporary corridor: a southern one via Oman, alongside the northern route Iran championed. This effectively formalised the Omani route.



The second phase of the war is fought almost exclusively over the future of the Strait of Hormuz. REUTERS

Iran complained it had not been consulted and said any other route barring the route it had specified was “unauthorised and dangerous.”

The next day in Bahrain, Mr. Rubio said accepting a toll near a country’s territorial waters “will spread throughout the world like a contagion,” adding that no Gulf state supported one. The U.S. and GCC signed a statement opposing Iran’s control of the strait. Iran did not take this quietly. The IRGC threatened vessels on non-Iranian routes, and the IMO’s governing council “strongly condemned” Iran’s bid to “establish an entity purporting to control traffic through the strait.”

On June 30, U.S. and Iranian officials met in Doha. Reports said Iran and Oman had floated a plan to monetise transits — a voluntary toll modelled on the Malacca-Singapore Straits — which Washington rejected in favour of the pre-war status quo.

A Maritime and Port Authority of Singapore spokesperson, responding exclusively to *The Hindu*, said the Straits of Malacca and Singapore are, like

Hormuz, Straits Used for International Navigation, and that Indonesia, Malaysia and Singapore accordingly levy no fees or tolls on ships exercising transit passage. A voluntary Aids to Navigation Fund exists, backed by contributors including The Nippon Foundation, but the spokesperson stressed its “contributions are not for the exercise of transit passage and should not be misconstrued as fees, tolls or payment imposed on transiting ships.” Talks in Doha broke down over U.S. resistance to any formal management arrangement — effectively a bid to walk back the MoU’s own Hormuz clauses.

Hostilities resume

The first week of July brought the mourning period for Ayatollah Ali Khamenei. As the NATO summit opened in Turkey on July 7 — where U.S. officials restated their Hormuz position, and Donald Trump complained European allies weren’t helping keep the strait free for navigation — Iran struck three ships on the Omani route, among them the India-bound *Al Bakayra*, one of the largest LNG carriers built. An exploding

LNG tanker at a chokepoint ranks among shipping’s worst-case scenarios. Mr. Trump declared the ceasefire over. War had resumed.

On July 11, 2026, Iranian Foreign Minister Abbas Araghchi met with Omani Foreign Minister Badr Albusaidi in Muscat to discuss the strait but the meeting apparently produced no agreement. A few hours later, Iran attacked the *DPS Galaxy*, in which one Indian seafarer died, bringing the recent Iranian attacks on ships to six. The U.S. began attacking merchant ships too, as part of its blockade against Iranian oil trade. It has restated the sanctions it had briefly lifted.

Washington keeps claiming it has degraded Iran’s capacity to strike shipping — a claim repeated after nearly every strike, rebutted each time by a fresh attack. For instance, on July 13, CENTCOM said strikes on six Iranian sites would “further degrade” that capability; the IRGC responded the same day by claiming it had disabled two tankers.

Strikes on Greater Tumb Island on July 15 drew the same claim. Yet on July 16, the Joint Maritime Information Center raised its Hormuz risk rating to “severe,” and nine Greek-operated LNG tankers stayed put rather than risk transit — insurers, the most reliable independent judges, are pricing in continued Iranian capability. Lloyd’s List data shows weekly transits that nearly doubled to 262 for June 22-28 have since fallen to 164 for July 6-12, concentrated on the Omani route.

Iran has now turned to alternatives to the strait — targeting ship-to-ship transfers off UAE’s Fujairah pipeline and pushing the Hourthis to shut off Saudi Arabia’s East-West pipeline route by attacking ships taking the Red Sea route.

“Shipping companies are super tired [of] all this back and forth,” said Dimitris Maniatis, CEO of Greek maritime risk firm Marisks, at a Lloyd’s List webinar. “Most would accept a toll amount that is logical, not 20% though which is ludicrous. If a legitimate arrangement is formulated, shippers would welcome the development.”

THE GIST

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U.S. strikes Iran over troop deaths; Israel warns of ‘full force’ response

Washington says strikes meant to degrade Iran’s ability to control the strait; Iran responds with attacks on Kuwait, Jordan, and Bahrain; Jordan’s military says it shot down several incoming Iranian missiles with no reported casualties or damage

Associated Press
DUBAI

The United States launched more air strikes at Iran on Sunday in response to the killing of U.S. troops, and Iran fired missiles toward Jordan that risked widening the conflict into neighbouring Israel.

Step by step, the U.S. and Iran have returned closer to all-out war as last month’s interim deal meant to permanently end the fighting has crumbled and shipping traffic in the Strait of Hormuz has largely stalled. Both sides have targeted civilian infrastructure relied on by millions of people.



A heavily-damaged bridge which was hit by a U.S. strike along the road connecting Roudan and Bandar Abbas in Iran on Saturday. AFP

The U.S. military said the latest strikes targeted Iran’s paramilitary Revolutionary Guard to retaliate for Friday’s killing of troops in Jordan. The campaign, now in its second

week, has seen the U.S. target bridges, water desalination plants and electrical facilities in Iran. Tehran has hit U.S.-allied countries throughout the West Asia.

Kuwait, Jordan and Bah-

rain again activated air defences for incoming Iranian drones and missiles. Kuwait said one of its power and water desalination plants was attacked for the second time in two days, causing fires.

Jordan’s military said it shot down several Iranian missiles. The country hosts major U.S. bases and relies on U.S. air-defence systems. The missiles did not cause casualties or damage, according to Jordan’s military.

Israel warned that missiles launched toward neighbouring Jordan could cause fire to spill over into Israeli territory for the first time in weeks.

Israel’s Defence Minister

Israel Katz said that his country would respond powerfully to any attack by Iran, after Israeli and Jordanian forces intercepted an Iranian missile launched towards the Jordanian city of Aqaba. “If Iran fires missiles at Israel, we will attack them with full force.”

The United States military’s Central Command said it hit “Iranian military coastal surveillance and air defence facilities, maritime capabilities and missile and drone storage sites”.

It said the attack was designed to degrade Iran’s ability to control the strait and “swiftly punish Islamic Revolutionary Guard Corps forces”.

KEYWORD

Making sense of embodied AI: the next frontier in robotics

Unlike the AI chatbots that learn from texts, images, and videos, embodied AI must master gravity and balance, which are more difficult due to the countless physical scenarios a robot must face and the 'simulation-to-real gap', where success in simulation rarely translates perfectly to the real world

John Xavier

On April 14, Boston Dynamics and Google DeepMind announced that Spot, the yellow-colour robot dog that spent most of its life running narrowly scripted routines, is getting an AI brain. Gemini Robotics-ER 1.6 is being folded into Spot and into Boston Dynamics' Orbit inspection platform, giving both stronger spatial reasoning, autonomous decision-making, and the ability to keep learning inside complex industrial sites. Spot's hardware has been good for years, but the intelligence needed to make it useful in a messy factory, without a human driving it frame by frame, is only arriving now. That gap – between a machine that can move and a machine that understands what it is moving through – is exactly what a decades-old field called embodied AI has been trying to close.

What 'embodied' actually means
The easy mistake is to think embodied AI just means "AI in a robot body." The deeper claim by experts working on this field is that a body is not a delivery mechanism for intelligence, but a part of the computation itself.
In their book *How the Body Shapes the Way We Think*, Rolf Pfeifer, longtime director of the Artificial Intelligence Laboratory at the University of Zurich, and Josh Bongard, computer science professor at the University of Vermont, argue that thought is not independent of the body but is tightly constrained, and at the same time enabled, by it.
Pfeifer has worked extensively on building physical robots to test behaviours that emerge from the body's design and look for results that tell something about intelligence in general.
Australian roboticist Rodney Brooks, who wrote the foreword for the book and whose own work at MIT in the late 1980s and 1990s made the case even more provocatively, asserting against the dominant symbolic-AI paradigm of the time, that robots didn't need internal world-models and elaborate planning to act intelligently. A layered "subsumption architecture" of simple reflexes, tightly coupled to sensors and motors, could produce robust, real-time behaviour without anyone programming a representation of the world at all.
You don't need to build an abstract map of a room if your sensors and body can just react to the room as it actually is, moment to moment. Practically, this plays out as "morphological computation" – offloading work that would otherwise require a brain, onto the physical structure of the body.
A passive-dynamic walker can stroll down a slight incline with no motors or control system at all, purely because the leg geometry and joints are shaped to do the computing. A soft, compliant robot hand can grasp an oddly shaped object without a controller that has explicitly modelled that shape, because the material itself deforms and adapts.
A common thread connecting Pfeifer's Zurich lab, Brooks's robots, and today's humanoid is that intelligence is distributed between brain, body, and environment, not confined to just one part.



Boston Dynamics' Atlas robot makes a yoga pose on the football field. SPECIAL ARRANGEMENT

Why this matters now, and why it's hard
The current wave of interest is precisely about discovering how hard that distribution problem is at scale. Unlike the AI chatbots that learn from texts, images, and videos, embodied AI must master gravity and balance, which are profoundly difficult because of the countless physical scenarios a robot must face and the "simulation-to-real gap," where success in simulation rarely translates perfectly to the real world.
Industry data bears this out starkly. If the embodied AI market is projected to reach \$22 billion by 2030, most humanoid robots still last only about 90 minutes on a charge, and policies that succeed 95% of the time in the lab drop to roughly 60% in the real world. The gap between demo and deployment is the field's central, unglamorous problem.

Embodied AI vs. neuromorphic AI
In common discussions, people tend to conflate embodied AI with neuromorphic AI as both take biology seriously. But they answer different questions.
Embodied AI is about where intelligence lives. The field views cognition distributed across brain, and body, meaning computational work is not fixed to the brain. It is largely agnostic about what kind of processor sits inside the robot; you could run an embodied robot's "brain" on an ordinary GPU cluster.
Neuromorphic AI is about how the processor itself is built – it is a hardware and algorithm paradigm that tries to mimic the physical mechanics of biological neurons, most commonly through spiking neural networks (SNNs).
SNNs operate through discrete spikes: each neuron integrates incoming signals and fires only when a threshold is exceeded, which makes them well suited to time-sensitive tasks like motion

search body-and-brain design space automatically, letting simulated populations of robotic forms compete and replicate based on task performance before anything is built.

The unresolved problems
Even as capital and models pour into the field of embodied AI, a fairly consistent list of hard problems keeps surfacing. For instance, the gap between simulation and real-world experience in using robotic systems is still not narrow. Policies trained in simulation that can be run millions of times cheaply, degrade sharply when deployed onto real hardware.
Sophisticated reasoning models are often too slow to keep pace with a robot arm or leg that needs to react in milliseconds, forcing a split between heavy "thinking" done off-device and lighter reflexive control on it. Short runtimes due to extensive battery use and vulnerable components keep undercutting otherwise successful pilots.
These systems also lack data. Test and image models were scaled on troves of internet data; embodied systems have no equivalent. Efforts like the Open X-Embodiment dataset and Generalist AI's GEN-O, pretrained on hundreds of thousands of hours of manipulation data, are attempts to build that missing corpus. But to put these systems in real world situations they need to be trained on at least tens of millions of hours of data.
Embodied AI should be viewed as a systems challenge rather than only a software challenge as safe deployment depends on sensors, hardware robustness, operational design limits, human interaction, cybersecurity, and organisational processes, not algorithms alone. Regulators must start asking for evidence of what counts as proof for allowing learning-enabled robotics systems to be deployed in real world.
All of these problems cannot be solved by a single breakthrough. They're being chipped away in parallel with better simulators to narrow the simulation-to-real gap, larger shared datasets to address data scarcity, split "brain in the cloud, reflex on the robot" architectures to handle the speed mismatch, and slowly maturing safety frameworks to handle governance.
Evolutionary methods of the kind Mr. Jin champions add another angle to that effort.

Where evolution comes in
If bodies do computational work, an obvious question follows: how do you design the right body for the task, instead of bolting an AI model onto whatever frame engineers have built?
This is the terrain of evolutionary computation.
Yaochu Jin, an Alexander von Humboldt Professor at Bielefeld University, makes the case that neural control and physical form should not be designed separately and then combined. Instead, the two have to be developed together, the way biological organisms grow nervous systems and bodies in tandem.
Mr. Jin's research sits at the intersection of evolutionary algorithms, developmental biology, and computational neuroscience, focused on the interaction between evolution, learning, and artificial systems.
His research focuses on co-evolving nervous systems and morphology, and modelling how feedback from the environment shapes an organism's sensory distribution.
This matters directly for embodied AI's central bottleneck: robot bodies are frequently mismatched to the tasks and environments they end up in, and manually re-engineering hardware every time a task changes is slow and expensive. Evolutionary methods offer a way to

बिंदु	जानकारी
नाम	Spot Robot
निर्माता	Boston Dynamics (USA)
प्रकार	Quadruped Robot
तकनीक	AI, LiDAR, Computer Vision
प्रमुख उपयोग	औद्योगिक निरीक्षण, सुरक्षा, आपदा प्रबंधन, अनुसंधान

महत्वपूर्ण तथ्य



ILLUSTRATION: SAM

Electronic Gold Receipts: a new way to own gold

The yellow metal has long gone digital, but this time it is offering the convenience of electronic investing along with ownership of physical gold

NEW AGE GOLD

Vaishali R. Venkat

In May 2025, the National Stock Exchange of India (NSE) introduced Electronic Gold Receipts (EGRs), a new exchange-traded segment for buying and selling gold in electronic form. The initiative aims at improving transparency in gold pricing, standardise quality, and provide investors with a regulated and secure way to own the yellow metal, while making India's gold market more efficient. It enables investors to own physical gold without the need to store it at home or in a bank locker.

Gold exchange journey

On September 28, 2021, the Securities and Exchange Board of India (SEBI) approved the framework for Gold Exchange and SEBI (Vault Managers) Regulations, 2021. The Centre notified EGRs as securities under the Securities Contracts (Regulation) Act, 1956, in December 2021. Further, on April 11, 2022, SEBI issued a 'Comprehensive Risk Management Framework' for EGRs. Together, they laid the regulatory foundation for EGR trading in India.

In September 2022, the Bombay Stock Exchange (BSE) received SEBI's final nod to unveil the EGR segment. It became the first bourse in India to launch EGR on October 24, 2022 on Muhurat trading ses-



Retail investors, jewellers, bullion traders, refiners, institutional investors and other eligible market participants can buy EGRs via registered stockbrokers

sion. Initially, BSE introduced two EGR products backed by 995 and 999 purity gold with trading in multiples of 1 gram and physical delivery in multiples of 10/100 grams.

What are EGRs?

Electronic Gold Receipts (EGRs) are exchange-traded securities representing ownership of physical gold (specified purity) stored in SEBI-regulated vaults. They can be held electronically in a demat account, bought and sold in different denominations on the bourse and converted into physical gold via prescribed process.

Buying/selling EGRs

EGRs can be traded from Monday to Friday during market hours. Trading is available from 9 a.m. to 11:30 p.m., or up to 11:55 p.m., during the U.S. daylight saving period. Like shares, EGRs follow a T+1 settlement cycle with the receipts credited to the buyer's demat account the next trading day. Retail investors, jewellers, bullion traders, refiners, institutional investors and other eligible market partic-



One of the biggest advantages is, EGRs enable transparent price discovery via exchange trading, ensuring uniform price across India at any point in time

pants can buy EGRs via registered stockbrokers. Investors need both trading and demat accounts to buy and sell EGRs.

Benefits of EGRs

EGRs combine the advantages of physical gold with the convenience of electronic investing. As a SEBI-recognised security, each EGR is backed by a specified quantity of gold of a defined purity, securely stored in SEBI-regulated vaults. This offers a transparent and standardised way to own gold while removing concerns over purity and personal storage.

One of the biggest advantages is EGRs enable transparent price discovery via exchange trading, ensuring uniform price across India at any given point in time. Investors can buy and sell EGRs during market hours, hold them in a demat account and choose from denominations based on budget. The gold backing an EGR is stored safely in regulated vaults, so investors need not worry about its purity. Those who prefer physical gold can convert EGRs into gold whenever need-

ed. EGRs offer liquidity, settlement guarantee, fungibility and can help diversify investment portfolios.

The EGRs are available in two purity standards: 999 (99.9% pure gold) and 995 (99.5% pure gold). In each purity category, investors have six different denominations such as 10 mg, 100 mg, 1 g, 10 g, 100 g and 1 kg. Whether you want to test the waters with a tiny investment or accumulate over time, EGRs offer denominations to suit first-time buyers and seasoned investors.

Costs to bear

Apart from the cost of purchasing EGRs, investors may also incur brokerage, demat (depository) and vault-storage charges and other applicable transaction charges. Those opting for physical delivery of gold may also have to bear purity testing and transportation charges. There is no GST for EGR trading. However, investors opting for physical delivery must pay 3% GST on gold value.

Buying and selling EGRs is only one part of the story. The real questions lie behind the scenes: Why did India create a Gold Exchange? How does physical gold become an Electronic Gold Receipt? And should EGRs find a place in your portfolio? Behind every EGR lies a vault. The story behind its doors will unfold in the next part.

(The writer is an NISM & CRRIL-certified Wealth Manager and certified in NISM's Research Analyst module)

YouTube Homework

■ Sovereign Gold Bond (SGB)

महत्वपूर्ण तथ्य

इलेक्ट्रॉनिक गोल्ड रसीद (Electronic Gold Receipt - EGR)

- **Electronic Gold Receipt (EGR)** एक डिजिटल प्रतिभूति (Electronic Security) है, जो इलेक्ट्रॉनिक रूप में जमा किए गए सोने के स्वामित्व (Ownership) का प्रमाण होती है। इसे भारतीय प्रतिभूति एवं विनिमय बोर्ड (SEBI) ने भारत में **Gold Exchange** के लिए शुरू किया है।

क्या है EGR?

- यदि आपके पास **शुद्ध सोना (Gold Bars/Bullion)** है, तो आप उसे SEBI-मान्यता प्राप्त **Vault Manager** के पास जमा कर सकते हैं। सत्यापन के बाद आपको उसी मूल्य के बराबर **Electronic Gold Receipt (EGR)** जारी की जाती है।
- EGR को शेयरों की तरह **स्टॉक एक्सचेंज** पर खरीदा और बेचा जा सकता है।
- EGR का धारक चाहे तो बाद में इसे वापस **भौतिक सोने (Physical Gold)** में बदल सकता है।
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EGR कैसे काम करता है?

1. निवेशक अपना सोना SEBI-मान्यता प्राप्त Vault में जमा करता है।
2. सोने की शुद्धता और वजन की जांच की जाती है।
3. निवेशक के **Demat Account** में Electronic Gold Receipt जारी होती है।
4. इस EGR की एक्सचेंज पर ट्रेडिंग की जा सकती है।
5. आवश्यकता पड़ने पर EGR के बदले वास्तविक सोना प्राप्त किया जा सकता है।

प्रमुख उद्देश्य

- भारत में **पारदर्शी Gold Market** विकसित करना।
- सोने की खरीद-बिक्री को सुरक्षित और डिजिटल बनाना।
- सोने की गुणवत्ता (Standardisation) सुनिश्चित करना।
- निवेशकों को विश्वसनीय ट्रेडिंग प्लेटफॉर्म उपलब्ध कराना।

Challenges ahead for Andy Burnham as he takes over as U.K. Prime Minister

He faces the same challenges as his predecessor in trying to temper a cost-of-living crisis and improve overstretched public services; scrutiny owing to wars in Ukraine and West Asia also awaits; he vowed to provide details about how he will fund a domestic agenda to kick-start a sluggish economy

NEWS ANALYSIS

Associated Press
LONDON

Andy Burnham will enter 10 Downing Street on Monday with a wave of enthusiasm behind him and a mountain of challenges ahead.

His coronation as British Prime Minister may be short-lived as he faces the same struggles as his predecessor in trying to temper a cost-of-living crisis, improve overstretched public services, and step into the international spotlight during major wars in Ukraine and West Asia.

He arrives after spending most of the past decade running Greater Manchester, in northwest England, before winning his ticket back to Parliament in a special election last month.

Leading a government delivering services for 70 million people will be a monumentally larger task with problems on a larger scale and facing issues foreign to a leader of a region with 3 million residents.

Here are the main issues confronting Mr. Burnham and some hints to how he may approach them:

Mr. Burnham has been vague, but promised to provide details this week about how he would fund a

domestic agenda to kick-start a sluggish economy, enhance services and raise living standards.

"This change today is the most significant change moment in our politics for 40 years," he said Friday as he became Labour Party leader. "It will take us to a country where life is more affordable, and all people and places are lifted from where they are now."

Mr. Burnham inherits an economy that was improving until the Iran war upended forecasts and growth is now widely predicted to slow sharply over this year while inflation rises.

'Equalise opportunities'

He has said he wants to equalise opportunities around the U.K., particularly by decentralising government, funnelling money to local governments and taking back some services that were privatised four decades ago.

His brand of business-friendly socialism – known as "Manchesterism" and aiming to harness private and public money to invest in areas like transportation, housing and infrastructure – could take years to put in place.

Joshi Herrmann, founder of Manchester news site The Mill, who has covered Mr. Burnham for years, said he may be able



People demonstrate outside Downing Street in London, calling on Andy Burnham to stand up for the Palestinian cause. REUTERS

to soften the blow for some people who are struggling. "But if the essay question is who can get economic growth and who can remodel the economy in the post-Brexit, post-financial crash era, I'd be very surprised if the answer to that question is Andy Burnham," Mr. Herrmann said.

With the uncertain state of public finances, Mr. Burnham won't have much room to raise spending. He is replacing Prime Minister Keir Starmer, who was elected on a manifesto that ruled out increases in the government's major tax rates, so he's locked in unless he breaks those pledges.

Mr. Burnham said he would not rule out a wealth tax, telling Gary Li-

neker on the Goalhanger podcast last week that the government "might be having to ask for a little more."

Mr. Burnham has little foreign policy experience, but has promised to continue the government's NATO commitment and support for the U.K.'s nuclear deterrent. He said Britain will remain a strong booster of Ukraine and a firm United States ally.

Relations with the U.S. could depend on how he interacts with a capricious President Donald Trump, who initially gave Mr. Starmer glowing reviews only to sour on him for not supporting his war with Iran. Mr. Burnham has publicly criticised Mr. Trump in the past but has said he

would deal with him respectfully, as he does with others, but would also be willing to disagree.

"I like to think I've got some personality myself and I'll just, you know, I'll deal with him very upfront in the same way," he told Mr. Lineker.

Mr. Trump has pushed NATO members to significantly boost military spending, and Mr. Burnham will be under pressure to exceed the defense spending goals set out by Mr. Starmer.

The defence plan calling for a 15 billion pound (\$20 billion) spending boost is much smaller than military leaders had sought and has been criticised for not being fully funded under the current budget. Mr. Burnham has criticised Mr. Starmer's approach to Israel's war with Hamas and the devastation of Gaza.

Sensitive stands

Mr. Burnham condemned the October 7, 2023, attacks on southern Israel by Hamas militants, who killed around 1,200 people and took 251 others hostage, but said the British government waited too long to call for a ceasefire.

More than 73,000 Palestinians have been killed, according to the Gaza Health Ministry, which is part of the Hamas-led government. The Ministry,

which does not differentiate between civilians and combatants, is staffed by medical professionals who maintain detailed records viewed as generally reliable by United Nations agencies and independent experts. Mr. Burnham said the U.K. would consider further sanctions against Israelis involved in Gaza violence and illegal West Bank settlements.

The issue is a sensitive one for Labour, which was found to be tainted with anti-semitism before Mr. Starmer took over, and also relies on the support of a large Muslim population.

His comments drew a backlash from Jewish groups, but he's also been criticised by pro-Palestinian groups for not declaring Israel's bombardment of Gaza a genocide.

During his acceptance speech as Labour's leader on Friday, Mr. Burnham did not mention immigration, which is a top issue for many voters. Like much of Europe and other wealthier nations, the U.K. has seen an influx of migrants fleeing war-torn areas, famine, climate-driven crises, political persecution and poverty. He wants to continue reducing net migration and voted in support of a Bill that aims to further cut English Channel crossings and direct people to legal routes.

महत्वपूर्ण तथ्य



Selfie time: Sindhu and Yamaguchi on the podium after the women's singles final. AFP

Sindhu wins maiden Japan Open title

The 31-year-old combines relentless attack with tactical discipline and composure to tame Yamaguchi and end a 19-month title drought

BADMINTON

Press Trust of India
TOKYO

P.V. Sindhu produced a vintage display of attacking badminton to outclass local favourite Akane Yamaguchi in straight games, clinching her maiden Super 750 title at the Japan Open here on Sunday.

The 31-year-old became the first Indian to win the Japan Open, combining relentless attack with tactical discipline and composure in the decisive moments to register a 21-17, 21-17 victory over the three-time World champion and end a title drought.

"I'm very happy. I'm out of words as it has been 19 months since I won a title," said Sindhu after the

match. "I think this one was very important to me because playing in the finals, coming to the finals is one thing but I think to win, stand on the podium and get that gold is a different thing.

"I'm happy that I'm on the positive side of the result and I think this will give me a lot of confidence. I'm very thankful to my coach, my parents, my support staff and of course my husband."

Sindhu's previous title came at the Syed Modi International in 2024.

The triumph is her biggest title since winning the World Championships in 2019.

She had won the Singapore Super 500 in 2022.

Yamaguchi was appearing in her sixth Japan Open final, while Sindhu had not beaten the Japanese in a

completed match in four years. Their meeting at the Malaysia Open earlier this year ended with Yamaguchi retiring after the opening game.

Sindhu's last full-match victory over her came at the Thailand Open in 2022.

On Sunday, however, the Indian dictated terms from the outset.

She controlled the forecourt superbly, attacked with purpose rather than sheer power and repeatedly found answers whenever Yamaguchi threatened a comeback.

Along with her powerful smashes, Sindhu's precise net play proved decisive. She repeatedly worked the shuttle tight to the net, forcing Yamaguchi to lift and creating opportunities to unleash her trademark cross-court and body smashes.

प्रधानमंत्री कार्यालय



प्रधानमंत्री ने जापान ओपन 2026 का खिताब जीतने पर पीवी सिंधु को बधाई दी

प्रविष्टि तिथि: 19 JUL 2026 7:13PM by PIB Delhi

प्रधानमंत्री श्री नरेन्द्र मोदी ने आज भारत की बेहतरीन शटलर पीवी सिंधु को जापान ओपन 2026 का खिताब जीतने पर बधाई दी। वे यह ऐतिहासिक उपलब्धि हासिल करने वाली पहली भारतीय खिलाड़ी बन गई हैं। श्री मोदी ने कहा कि पूरे टूर्नामेंट के दौरान पीवी सिंधु का दृढ़ संकल्प और असाधारण कौशल देखने को मिला और वे देश भर के अनगिनत युवा खिलाड़ियों को खेलने और शानदार प्रदर्शन करने के लिए प्रेरित करेंगी।

महत्वपूर्ण तथ्य



प्रधानमंत्री कार्यालय

प्रधानमंत्री ने 58वें अंतरराष्ट्रीय केमिस्ट्री ओलंपियाड में स्वर्ण पदक जीतने पर भारतीय छात्रों को बधाई दी

प्रविष्टि तिथि: 19 JUL 2026 7:09PM by PIB Delhi

प्रधानमंत्री श्री नरेन्द्र मोदी ने आज देबदत्ता प्रियदर्शी, हर्षित सिंघल, कबीर छिल्लर और संदीप कुची की भारतीय टीम को 58वीं अंतरराष्ट्रीय केमिस्ट्री ओलंपियाड में चार गोल्ड मेडल जीतने पर बधाई दी। यह इस प्रतिष्ठित वैश्विक प्रतियोगिता में भारत का अब तक का सबसे अच्छा प्रदर्शन है। श्री मोदी ने कहा कि टीम की काबिलियत, लगन और विज्ञान के प्रति जुनून ने पूरे देश को गौरवान्वित किया है और यह अनगिनत युवा मस्तिष्कों को रसायन विज्ञान पढ़ने और उसमें बेहतरीन प्रदर्शन करने के लिए प्रेरित करेगा।



प्रधानमंत्री कार्यालय

प्रधानमंत्री ने 37वें अंतरराष्ट्रीय बायोलॉजी ओलंपियाड में शानदार प्रदर्शन के लिए भारतीय टीम को बधाई दी

प्रविष्टि तिथि: 19 JUL 2026 7:11PM by PIB Delhi

प्रधानमंत्री श्री नरेन्द्र मोदी ने आज लिथुआनिया के विलनियस में आयोजित 37वें अंतरराष्ट्रीय बायोलॉजी ओलंपियाड में शानदार प्रदर्शन के लिए भारतीय टीम को बधाई दी। इस प्रतियोगिता में टीम के सभी चार सदस्यों ने पदक जीते, जिनमें एक स्वर्ण पदक भी शामिल है। श्री मोदी ने कहा कि भव्या गुनवाल, सौमिल माइती, निशित कलानी और अनमोल कुमार ने मॉलिक्यूलर बायोलॉजी, बायोकेमिस्ट्री, सिस्टमैटिक्स और प्लांट कम्प्यूटेशनल बायोलॉजी जैसे विषयों में बेहतरीन जानकारी का प्रदर्शन किया है और उनकी यह सफलता कई अन्य युवाओं को प्रेरित करेगी।

महत्वपूर्ण तथ्य

सहकारिता मंत्रालय



केन्द्रीय गृह एवं सहकारिता मंत्री श्री अमित शाह ने कोलकाता में अमूल बंगाल डेयरी परियोजना के अंतर्गत विश्व के सबसे बड़े देही उत्पादन संयंत्र का भूमि पूजन किया

प्रधानमंत्री श्री नरेन्द्र मोदी जी के नेतृत्व में समृद्ध, सुरक्षित, शिक्षित और संस्कारित 'सोनार बांग्ला' का संकल्प धरातल पर उतारा जा रहा है

Overview

- Vikram-I
- Catch the Rain
- Sonam Wangchuk
- Missing Jobs (India's Zen G)
- Ken Betwa Link Project
- Mansson Session
- Insults to national Honour
- UCC
- Shabdlok
- Maturing Approach (India-UK)
- India-Australia
- Tajmahal Issue
- USA-Iran War
- Spot Robot
- EGR
- Andy burnhan
- Japan Open
- PIB

Thank You
Result Mitra