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Vijay keeps promise, launches Singappen Special Force in T.N.

PCS

N. Sai Charan
CHENNAI

Tamil Nadu Chief Minister C. Joseph Vijay on Tuesday warned that those who harassed women and threatened their safety, believing that they could escape punishment, would not be spared. The police would take strict action against them, he said.

He was launching the 'Singappen Special Force' in the Tamil Nadu Police at the Rajarathinam Stadium at Egmore in Chennai.

The Chief Minister said the root cause of threats to women's safety was the spread of narcotics and substance abuse, and it must be stamped out.

"The success of a government should not be measured by infrastructure and economic growth alone; it should be measured by dignity and respect with which women and children live," he said.

Close to heart

The launch of the special force, which Mr. Vijay said was close to his heart, gave him immense happiness. "We [the Tamilaga Vettri Kazhagam] had promised to ensure the safety of our grandmothers, mothers, sisters, daughters, and girl children. That promise was not merely for the election. It came emotionally and truthfully from the heart. That is why we implemented this initiative within a short period of coming to power," Mr. Vijay said.

"While this initiative



Chief Minister C. Joseph Vijay unveils the monogram of Singappen Special Force in Chennai. B. JOTHI RAMALINGAM

gives satisfaction, hearing news about crimes against women disturbs me. It is difficult to control those emotions because such atrocities happen to people who belong to our own families," he said.

The Chief Minister attributed crimes against women and children to the spread of narcotic substances.

"This problem did not emerge suddenly in May 2026. It has existed for many years. It has spread so deeply because it was ignored for long," he said, adding that the spread of narcotics, crimes against women, and law and order were interlinked.

He added that the safety of women and children was not merely a law and order issue. "It is connected to social discipline, and within social discipline lies individual discipline. If individuals behave responsibly and with self-control, society will change. Women must have dignity and no fear at educational institutions and workplaces, during travel, and in their daily lives," Mr. Vijay said.

10J6. Vijay keeps promise, launches Singappen Special Force in T.N.

विजय ने अपना वादा निभाया, तमिलनाडु में 'सिंगप्पेन स्पेशल फ़ोर्स' की शुरुआत की।

• He was launching the 'Singappen Special Force' in the Tamil Nadu Police at the Rajarathinam Stadium at Egmore in Chennai.

वे चेन्नई के एगमोर स्थित राजारथिनम स्टेडियम में तमिलनाडु पुलिस के अंतर्गत 'सिंगप्पेन स्पेशल फ़ोर्स' का शुभारंभ कर रहे थे।

• The Chief Minister said the root cause of threats to women's safety was the spread of narcotics and substance abuse, and it must be stamped out.

मुख्यमंत्री ने कहा कि महिला सुरक्षा के लिए उत्पन्न खतरों का मूल कारण मादक पदार्थों का प्रसार और नशे का दुरुपयोग है, तथा इसे समाप्त किया जाना चाहिए।

• "The success of a government should not be measured by infrastructure and economic growth alone; it should be measured by dignity and respect with which women and children live," he said.

उन्होंने कहा, "किसी सरकार की सफलता का आकलन केवल बुनियादी ढाँचे और आर्थिक विकास से नहीं किया जाना चाहिए; बल्कि इस आधार पर किया जाना चाहिए कि महिलाएँ और बच्चे कितनी गरिमा और सम्मान के साथ जीवन व्यतीत करते हैं।"

Close to heart

हृदय के निकट

• "It is connected to social discipline, and within social discipline lies individual discipline."

"यह सामाजिक अनुशासन से जुड़ा हुआ है, और सामाजिक अनुशासन के भीतर व्यक्तिगत अनुशासन निहित है।"

• "If individuals behave responsibly and with self-control, society will change."

"यदि व्यक्ति जिम्मेदारी और आत्मसंयम के साथ व्यवहार करें, तो समाज में परिवर्तन आएगा।"

• "Women must have dignity and no fear at educational institutions and workplaces, during travel, and in their daily lives," Mr. Vijay said.

श्री विजय ने कहा, "महिलाओं को शैक्षणिक संस्थानों, कार्यस्थलों, यात्रा के दौरान तथा अपने दैनिक जीवन में पूर्ण गरिमा और निर्भयता के साथ जीवन जीने का अधिकार होना चाहिए।"



Shipping authority's inquiry report lists reasons for *MSC Elsa 3* sinking

PCS

The Hindu Bureau
KOCHI

The Directorate General of Shipping concluded the preliminary investigation into the sinking of the container ship *MSC Elsa-3* off the Alappuzha coast in May 2025. The inquiry report, submitted in an affidavit before the Kerala High Court, identified causes of the incident that led to marine pollution off Alappuzha and along parts of the southern coast.

Critical system malfunction, compounded by structural failures and the incompetence of crew members, was identified as the causative factor in the report. It said that the ship had shown an inherent tilt to the right in previous



The shipping authority concluded the preliminary probe into the sinking of *MSC Elsa-3* in May 2025 off the Alappuzha coast. AP

voyages. During the journey from Vizhinjam to Kochi, the ship's ballast water system failed first, and as a result, the crew could not stop the progressive flooding into the ballast tanks. The ship's safety management system was reported to be deficient, especially

regarding maintenance procedures and spare parts management. The ship had tilted to about 26 degrees, causing several container stacks to shift, further compromising the ship's stability. By midnight on May 24, 2025, the containers had begun to

fall overboard, creating additional hazards.

The investigation found that known defects were inadequately addressed, with reliance on temporary fixes that created system weaknesses.

The chief officer of the ship had joined one week before the incident and was not given sufficient time for the handover, which also added to the lack of crisis management, the report said.

Interviews of the crew showed that there were gaps in practical training for emergency ballast operations. Many crew members had only demonstrated theoretical knowledge with no real-time experience, according to the report.

10J6. Shipping authority's inquiry report lists reasons for *MSC Elsa 3* sinking नौवहन प्राधिकरण की जाँच रिपोर्ट में *MSC Elsa 3* के डूबने के कारणों का उल्लेख किया गया है।

- The Directorate General of Shipping concluded the preliminary investigation into the sinking of the container ship *MSC Elsa-3* off the Alappuzha coast in May 2025.
नौवहन महानिदेशालय (Directorate General of Shipping) ने मई 2025 में अलप्पुझा तट के निकट डूबे कंटेनर जहाज *MSC Elsa-3* की प्रारंभिक जांच पूरी कर ली।
- The inquiry report, submitted in an affidavit before the Kerala High Court, identified causes of the incident that led to marine pollution off Alappuzha and along parts of the southern coast.
केरल उच्च न्यायालय में शपथपत्र के रूप में प्रस्तुत जांच रिपोर्ट में उन कारणों की पहचान की गई, जिनके कारण अलप्पुझा तट तथा दक्षिणी तट के कुछ हिस्सों में समुद्री प्रदूषण फैल गया।
- Critical system malfunction, compounded by structural failures and the incompetence of crew members, was identified as the causative factor in the report.
रिपोर्ट में महत्वपूर्ण प्रणालीगत खराबी, संरचनात्मक विफलताओं तथा चालक दल के सदस्यों की अक्षमता को इस घटना का प्रमुख कारण बताया गया है।
- It said that the ship had shown an inherent tilt to the right in previous voyages.
रिपोर्ट में कहा गया है कि पूर्व की यात्राओं के दौरान भी जहाज में दाईं ओर झुकाव की अंतर्निहित समस्या देखी गई थी।
- During the journey from Vizhinjam to Kochi, the ship's ballast water system failed first, and as a result, the crew could not stop the progressive flooding into the ballast tanks.
विज़िंजम से कोच्चि की यात्रा के दौरान जहाज की बैलेस्ट जल प्रणाली (Ballast Water System) सबसे पहले विफल हो गई, जिसके परिणामस्वरूप चालक दल बैलेस्ट टैंकों में बढ़ते जलभराव को रोक नहीं सका।
- The ship's safety management system was reported to be deficient, especially regarding maintenance procedures and spare parts management.



रिपोर्ट के अनुसार जहाज की सुरक्षा प्रबंधन प्रणाली में गंभीर कमियाँ थीं, विशेष रूप से रखरखाव प्रक्रियाओं तथा स्पेयर पार्ट्स प्रबंधन के संबंध में।

- The ship had tilted to about 26 degrees, causing several container stacks to shift, further compromising the ship's stability.
जहाज लगभग 26 डिग्री तक झुक गया था, जिसके कारण कई कंटेनर ढेर (Container Stacks) खिसक गए और जहाज की स्थिरता और अधिक प्रभावित हुई।
- By midnight on May 24, 2025, the containers had begun to fall overboard, creating additional hazards.
24 मई 2025 की मध्यरात्रि तक कंटेनर समुद्र में गिरने लगे थे, जिससे अतिरिक्त खतरे उत्पन्न हो गए।
- Interviews of the crew showed that there were gaps in practical training for emergency ballast operations.
चालक दल के सदस्यों से की गई पूछताछ से पता चला कि आपातकालीन बैलेस्ट संचालन (Emergency Ballast Operations) के व्यावहारिक प्रशिक्षण में गंभीर कमियाँ थीं।
- Many crew members had only demonstrated theoretical knowledge with no real-time experience, according to the report.

PCS

First-timers

Upsets and withdrawals saw new champions at the French Open

The triumphs of Alexander Zverev and Mirra Andreeva at the French Open for their maiden Grand Slam singles titles appear to have evoked contrasting feelings in both. For 29-year-old Zverev, the rousing five-set victory over Italian Flavio Cobolli brought more relief than unbridled joy, for he had lost thrice before in a Major final and was long considered among the best players to have never won a Slam. But for Andreeva, the straight-forward win over the unheralded qualifier Maja Chwalinska – albeit under testing windy conditions – was a journey to seventh heaven and a realisation of her prodigious teenaged promise. Both players benefitted from notable absences and a plethora of upsets, so much so that neither faced a top-10 opponent all tournament. Among men, Carlos Alcaraz withdrew while red-hot favourite Jannik Sinner and 24-time Major winner Novak Djokovic fell by the third round. In the ladies section, none among Aryna Sabalenka, Iga Swiatek, Coco Gauff and Elena Rybakina reached the semifinals. But in fairness, both Zverev and Andreeva were pedigreed. Zverev was – and still is – World No. 3, has been in the top-4 for the last two years, and in the top-10 for a good part of the last decade. Andreeva reached the Roland-Garros semifinal as a 17-year-old in 2024, entered the top-10 in early 2025 after back-to-back successes in Dubai and Indian Wells, and has maintained that status.

Zverev is just the third German man in the Open Era to win a Slam and the first to do so in Paris. The victory will also go a long way in erasing a few painful memories he has experienced on Court Philippe-Chatrier. In 2022, he limped out of his semifinal against Rafael Nadal on crutches after damaging his right ankle in the second set. In 2024, he was up two sets to one against Alcaraz in the final before falling apart. The 2026 edition, which snapped Alcaraz and Sinner's combined winning streak of nine Majors, is his redemption song. Andreeva's career, in contrast, is yet to experience the vagaries of the tennis tour. After first making waves as a 16-year-old qualifier in 2023, reaching the round of 32 at the French Open and the round of 16 at Wimbledon, the Russian shot up to No. 5 by July 2025. Andreeva has competed in 13 Slams so far, and has reached the fourth round or better in eight. It is a remarkable record for someone who is yet to turn 20, and her dash to the title over the previous fortnight for the loss of just one set is confirmation of her elite status.

रिपोर्ट के अनुसार चालक दल के अनेक सदस्यों के पास केवल सैद्धांतिक ज्ञान था और उन्हें वास्तविक समय के संचालन का अनुभव नहीं था।

10J6. First-timers

पहली बार विजेता बने खिलाड़ी

Upsets and withdrawals saw new champions at the French Open. अप्रत्याशित हारों और नाम वापसी की घटनाओं के कारण फ्रेंच ओपन में नए चैंपियन देखने को मिले।

The triumphs of Alexander Zverev and Mirra Andreeva at the French Open for their maiden Grand Slam singles titles appear to have evoked contrasting feelings in both.

अलेक्जेंडर ज़वेरेव और मिर्रा एंड्रीवा की फ्रेंच ओपन में अपने पहले ग्रैंड स्लैम एकल खिताब जीतने की उपलब्धि ने दोनों में भिन्न भावनाएँ उत्पन्न की प्रतीत होती हैं।

But for Andreeva, the straight-forward win over the unheralded qualifier Maja Chwalinska — albeit under testing windy conditions — was a journey to seventh heaven and a realisation of her prodigious teenaged promise.

लेकिन एंड्रीवा के लिए अपेक्षाकृत कम चर्चित क्वालीफायर माजा ख्वालिन्स्का पर कठिन तेज़ हवाओं के बीच मिली सीधी जीत अत्यधिक आनंद का क्षण थी और उनकी असाधारण किशोर प्रतिभा के साकार होने का प्रमाण भी।

Among men, Carlos Alcaraz withdrew while red-hot favourite Jannik Sinner and 24-time Major winner Novak Djokovic fell by the third round.

पुरुष वर्ग में कार्लोस अल्काराज़ ने नाम वापस ले लिया, जबकि प्रबल दावेदार यानिक सिनर और 24 बार के मेजर विजेता नोवाक जोकोविच तीसरे दौर तक ही बाहर हो गए।

In the ladies section, none among Aryna Sabalenka, Iga Swiatek, Coco Gauff and Elena Rybakina reached the semifinals.

महिला वर्ग में आर्यना सबालेंका, इगा श्वियातेक, कोको गॉफ और एलेना राइबाकिना में से कोई भी सेमीफाइनल तक नहीं पहुँच सका।

Zverev was — and still is — World No. 3, has been in the top-4 for the last two years, and in the top-10 for a good part of the last decade.

ज़वेरेव पहले भी और वर्तमान में भी विश्व नंबर 3 हैं, पिछले दो वर्षों से शीर्ष-4 में रहे हैं और पिछले दशक के अधिकांश समय में शीर्ष-10 में शामिल रहे हैं।



GS Paper 1: History	10 June 2026
TOPICS COVERED	
10J6 QUIZ	

10J6. QUIZ

Questions and Answers in the previous day's daily quiz: 1. Which

nineteenth-century movement preceded Birsa's uprising and influenced the political climate in Chotanagpur? Ans: The Sardari Larai (Sardar Movement)

The Munda uprising led by Birsa Munda at the turn of the twentieth century is popularly known by what term, meaning "Great Tumult"? Ans: Ulgulan
What slogan associated with Birsa Munda called for the end of British rule? Ans: "Abua Raj ete jana, Maharani raj tundu jana" ("Let our rule come, let

the Queen's rule go")

Birsa Munda's religious teachings led to the emergence of a distinct faith community known by what name? Ans: Birsait

Birsa Munda died in Ranchi Jail in 1900. What was the official cause of death recorded by the British authorities? Ans: Cholera

Visual: This famous photograph of Birsa Munda was reproduced in which pioneering ethnographic work by Sarat Chandra Roy? Ans: The Mundas and Their Country (1912)

Early Birds: K.N. Viswanathan | Jose Jogi | Lalchand Bhutani | Sunil Madhavan | C. Saravanan

1. Sardari Larai (Sardar Movement) and its Influence on Birsa's Uprising

- The **Sardari Larai**, active mainly between the 1850s and 1890s in the Chotanagpur region, was an agrarian movement led by Munda and Oraon tribal leaders known as **Sardars**.
- It emerged against land alienation, excessive rents, forced labour, and the erosion of traditional **Khuntkatti** land rights under British rule.
- The movement largely relied on petitions and legal appeals. Young **Birsa Munda** closely observed this struggle and was influenced by its demands.
- Historians regard the Sardari movement as the immediate precursor to Birsa's rebellion because it shaped the political consciousness and anti-colonial atmosphere of Chotanagpur.

2. Ulgulan – The "Great Tumult"

- The Munda uprising led by **Birsa Munda** during 1899–1900 is popularly known as **Ulgulan**, meaning "Great Tumult" or "Great Upheaval."
- It was not merely a tribal revolt but a broad social, economic, religious, and political movement against British colonial rule, exploitative landlords, moneylenders, and missionary influence.
- The movement reflected deep resentment against land dispossession and exploitation. Though suppressed by the British, Ulgulan became a landmark in tribal resistance and later influenced protective laws such as the **Chotanagpur Tenancy Act, 1908**.

3. "Abua Raj ete jana, Maharani raj tundu jana"

- The slogan "**Abua Raj ete jana, Maharani raj tundu jana**" translates as "Let our rule come, let the Queen's rule go." It became the political message of Birsa Munda's movement.

4. Birsait – The Faith Founded by Birsa Munda

- Birsait** refers to the distinct religious community that emerged around the teachings of Birsa Munda. Birsa preached monotheism, moral reform, social discipline, and a return to indigenous tribal traditions.
- He opposed excessive **ritualism, superstition, missionary conversions, and social evils affecting tribal society**.
- His followers regarded him as a spiritual guide and often referred to him as "**Dharti Aba**" (**Father of the Earth**). Birsait combined elements of traditional Munda beliefs with reformist ideas and became a powerful source of social unity.

5. Birsa Munda's Death in Ranchi Jail

- Birsa Munda** died in **Ranchi Jail** on **9 June 1900** while in British custody.
- The official British record stated that the **cause of death** was **cholera**.

GS Paper 1: Geography	10 June 2026
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TOPICS COVERED

10J6 Philippines slams China's floating 'structure' on disputed waters
फिलीपींस ने विवादित जलक्षेत्र में चीन की तैरती 'संरचना' की आलोचना की

Philippines slams China's floating 'structure' on disputed waters



GS I: Geography
The Philippines has protested China's deployment of a floating "structure" with personnel at the disputed Scarborough Shoal, fearing it could become an island base. Beijing dismissed Manila's concern and reiterated that it has "sovereignty" over the shoal and waters, without offering any details to the Philippine officials. AP

10J6. Philippines slams China's floating 'structure' on disputed waters

फिलीपींस ने विवादित जलक्षेत्र में चीन की तैरती 'संरचना' की आलोचना की

- The Philippines has protested China's deployment of a floating "structure" with personnel at the disputed **Scarborough Shoal**. फिलीपींस ने विवादित स्कारबोरो शोल पर कर्मियों के साथ चीन द्वारा तैनात की गई तैरती हुई "संरचना" के खिलाफ विरोध दर्ज कराया है।

GS Paper II: Polity

10 June 2026

TOPICS COVERED

10J6 Congress's RS nomination rejected during scrutiny; chaos in M.P. house
जाँच प्रक्रिया के दौरान कांग्रेस का राज्यसभा नामांकन निरस्त; मध्य प्रदेश विधानसभा में हंगामा

10J6 A State without an Opposition
विपक्ष-विहीन एक राज्य

Congress's RS nomination rejected during scrutiny; chaos in M.P. house

GS II: Polity
Mehul Malpani
BHOPAL

A dramatic day of political developments in Madhya Pradesh's capital Bhopal that began with several Congress MLAs heading to the airport to leave for Bengaluru, ended with the nomination of Meenakshi Natarajan, the party candidate for one of three Rajya Sabha seats from the State, being rejected during scrutiny.

This prompted top Congress leaders, led by party general secretary K.C. Venugopal, to stage a sit-in outside the Election Commission(EC)'s office in New Delhi.

The rejection of the nomination came at a time when a batch of Congress MLAs was en route to Bengaluru amid fears of cross-voting in the polls, prompt-



A Congress delegation comprising party general secretaries and others protests outside the EC office in New Delhi on Tuesday. ANI

ing the State leaders to ask them to return to Bhopal.

Ms. Natarajan accused the Bharatiya Janata Party (BJP) of having "moved from vote theft to seat theft".

"It started when the BJP fielded a third candidate despite not having the adequate number of members, and we started to un-

derstand the kind of politics it is practising with democracy and the Constitution. What was limited to vote theft through SIR [special intensive revision of electoral rolls] and other methods has today reached [the stage of] seat theft," she said at a press conference on Tuesday.

Ms. Natarajan's nomina-

tion was rejected by Assembly Secretary Arvind Sharma, who is the Returning Officer for the election, based on an objection raised by the BJP candidate for the third seat, Mahesh Kewat, and State party general secretary Rahul Kothari. They alleged that Ms. Natarajan had "hidden" details of a case against her in Hyderabad. The objection led to chaotic scenes at the Assembly Secretariat in Bhopal, with dozens of Congress and BJP workers engaging in arguments.

Several senior State BJP leaders and MLAs, including Cabinet Ministers Rakesh Singh and Kailash Vijayvargiya, as well as Mr. Kewat remained in the Assembly Secretariat during the proceedings and celebrated after the Returning Officer ruled against Ms. Natarajan.



10J6. Congress's RS nomination rejected during scrutiny; chaos in M.P. house जाँच प्रक्रिया के दौरान कांग्रेस का राज्यसभा नामांकन निरस्त; मध्य प्रदेश विधानसभा में हंगामा

- Ms. Natarajan's nomination was rejected by **Assembly Secretary Arvind Sharma, who is the Returning Officer for the election**, based on an objection raised by the BJP candidate for the third seat, Mahesh Kewat, and State party general secretary Rahul Kothari.

A State without an Opposition

Gujarat's voice in the Rajya Sabha will be routed entirely through a single party

GS II: Polity

STATE OF PLAY

Abhinav Deshpande

On June 21, when Congress leader Shaktisinh Gohil's term in the Rajya Sabha ends, Gujarat will witness something it has not seen since the State's formation in 1960: the **absence of any representation from the Opposition of the State in the Upper House**.

The vacancy itself is not unusual. But what makes this transition noteworthy is what it reveals about the rapidly changing nature of political competition in Gujarat rather than one party's misfortune in a State that once supplied some of its most influential leaders. This transition is a product of electoral arithmetic rather than a sudden political shift, and a new and consequential chapter in the story of Gujarat where the Bharatiya Janata Party (BJP) has been quietly rewriting its democratic architecture for three decades. **Gujarat has been under BJP rule since 1995**; such sustained dominance has translated into an overwhelming majority in the State Assembly, which in turn has determined representation in the Rajya Sabha.

No rebel voices

In the 2022 Assembly elections, the BJP won 156 of the 182 seats, marking its strongest performance in the State's electoral history. This outcome came even after the Patidar agitation which had created expectations of a strong anti-incumbency wave. The Congress, which had seen the agitation as a potential opening, failed to convert sentiments into votes. No party crossed the 18-seat threshold required to claim official Op-



position status. The Congress ended up with just 17 seats and the Aam Aadmi Party (AAP) won five seats. Today, Gujarat's 182-member Assembly has 162 BJP legislators, 12 Congress MLAs, four from the AAP, and one from the Samajwadi Party. The combined Opposition, fragmented and below the recognition threshold, thus **cannot nominate a single Rajya Sabha candidate**.

The seat vacated by Mr. Gohil will go to the BJP, as will the other three seats which are to be vacant at the same time. Mr. Gohil, in his term at the Upper House, filed a breach of privilege notice against Union Minister Piyush Goyal for allegedly violating rules of procedure; challenged amendments to cooperative bank governance; and raised Gujarat's unresolved concerns from the Opposition benches. But now, **all 11 Rajya Sabha seats from Gujarat will belong to one party**, completing its sweep of the State's Upper House representation.

A Congress leader from the State opined that the party failed to establish a coherent narrative capable of competing with the BJP's vision of governance and identity, but argued that the ruling party's "arrogance" is reflected in its belief that there is effectively no Congress left. He went on to add, "what does Gujarat gain from a weakened or absent Opposition? Who will speak for the farmers of Gujarat, and who will raise the

voice of ordinary citizens if there is no strong countervailing force in the system?"

When Mr. Gohil walks out, the only Opposition voice left in Parliament from Gujarat will be Geniben Thakor, the MP from Banaskantha who in 2024 ended a 10-year Lok Sabha drought for the Opposition by winning one of 26 seats. One Lok Sabha MP. Zero Rajya Sabha MPs. This is the Opposition in Gujarat today.

Fight to be the Opposition

In this vacuum, the AAP harbours ambitions of displacing the Congress as the principal Opposition force in the State. With five Assembly seats and a 12.91% vote share in 2022, the AAP has positioned itself as the inheritor of the anti-BJP vote that the grand old party has steadily bled.

Yet the AAP's Gujarat story remains aspirational. Its single-digit MLA count is a fraction of what is needed to mount a legislative challenge. The Congress retains 12 MLAs and the institutional weight of a party that has governed the State for decades. The two are now locked in a peculiar sub-competition, not for power, but for the right to be recognised as the Opposition, while the BJP governs without meaningful scrutiny from any quarter. This internal contest has, if anything, only deepened the ruling party's structural advantage.

The BJP's dominance in Gujarat is a political fact, but the absence of an Opposition raises difficult questions. What does it mean when a major State's voice in the Upper House is routed entirely through a single party, with no effective counterweight from within? The answers extend beyond partisan loyalties.

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सुश्री नटराजन का नामांकन विधानसभा सचिव अरविंद शर्मा, जो इस चुनाव के रिटर्निंग अधिकारी हैं, द्वारा निरस्त कर दिया गया। यह निर्णय तीसरी सीट के लिए भाजपा उम्मीदवार महेश केवट और प्रदेश महासचिव राहुल कोठारी द्वारा उठाई गई आपत्ति के आधार पर लिया गया।

10J6. A State without an Opposition विपक्ष-विहीन एक राज्य

- In the 2022 Assembly elections, the BJP won 156 of the 182 seats, marking its strongest performance in the State's electoral history.

2022 विधानसभा चुनावों में भाजपा ने 182 में से 156 सीटें जीतकर राज्य के चुनावी इतिहास का सबसे श्रेष्ठ प्रदर्शन किया।

- No party crossed the 18-seat threshold required to claim official Opposition status.

कोई भी दल आधिकारिक विपक्ष का दर्जा प्राप्त करने के लिए आवश्यक 18 सीटों की सीमा को पार नहीं कर सका।

- The Congress ended up with just 17 seats and the Aam Aadmi Party (AAP) won five seats.

कांग्रेस को केवल 17 सीटें मिलीं जबकि आम आदमी पार्टी (AAP) ने पाँच सीटें जीतीं।

- But now, all 11 Rajya Sabha seats from Gujarat will belong to one party, completing its sweep of the State's Upper House representation.

लेकिन अब गुजरात की सभी 11 राज्यसभा सीटें एक ही दल के पास होंगी, जिससे राज्य के उच्च सदन में प्रतिनिधित्व पर उसका पूर्ण नियंत्रण स्थापित हो जाएगा।

- When Mr. Gohil walks out, the only Opposition voice left in Parliament from Gujarat will be Geniben Thakor, the MP from Banaskantha who in 2024 ended a 10-year Lok

Sabha drought for the Opposition by winning one of 26 seats.

जब श्री गोहिल संसद से विदा होंगे, तब गुजरात से संसद में बची हुई एकमात्र विपक्षी आवाज़ बनासकांठा की सांसद गेनीबेन ठाकोर होंगी, जिन्होंने 2024 में 26 सीटों में से एक सीट जीतकर विपक्ष के 10 वर्षीय लोकसभा सूखे को समाप्त किया था।

- One Lok Sabha MP.
एक लोकसभा सांसद।



GS Paper II: Governance		10 June 2026
TOPICS COVERED		
10J6	₹95,962 crore set aside for VB-GRAM G VB-GRAM G के लिए ₹95,962 करोड़ आवंटित किए गए।	
10J6	One in every 3 faculty posts vacant in top technical institutes शीर्ष तकनीकी संस्थानों में प्रत्येक तीन में से एक अध्यापक पद रिक्त	
10J6	Inclusion without abolition in China's hukou system चीन की हुकौ प्रणाली में समाप्ति के बिना समावेशन	

₹95,962 crore set aside for VB-G RAM G

GS II: Governance:
Government Scheme
NEW DELHI

Union Rural Development Minister Shivraj Singh Chouhan on Tuesday announced an interim allocation of ₹95,962 crore for the new rural employment scheme, the Viksit Bharat-Guarantee for Rozgar and Ajeevika Mission Gramin (VB-G RAM G).

This sum does not include the State governments' share and most States will have to contribute an additional 40% of the sum allocated to them. The combined outlay for the scheme will be ₹1.25 lakh crore. The interim allocation seeks to ensure a "seamless transition" to the new scheme and no State would face any reduction in funds, Mr. Chouhan said.

Uttar Pradesh has got the highest of ₹9,721.48 crore, followed by West Bengal (₹8,508 crore), Ta-



The interim allocation seeks to ensure a 'seamless transition' from MGNREGS to the new rural employment scheme. AFP

mil Nadu (₹7,585.49 crore), Rajasthan (₹7,581.87 crore), Andhra Pradesh (₹7,707.21 crore) and Bihar (₹6,715.83 crore).

The total allocation for States stands at ₹92,550.17 crore, while the Union Territories have been allocated ₹1,291.52 crore. An additional ₹1,850.62 crore has been earmarked for Central administration and social audits, taking the total to ₹95,692.31 crore.

Mr. Chouhan said that the allocation had been made even before notifying the scheme's rules and framing the formula dictating distribution to different States, to ensure "a seamless transition" from the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS).

"Without causing any inconvenience to workers, we are moving from

MGNREGA to VB-G RAM G. There will not be a gap of even a single day in the availability of work," the Union Minister said.

Funding formula

The allocation is largely in line with funds given to States under the MGNREGA in the previous financial years. The thrust of the new programme, however, is to ensure that the employment scheme has a wider presence in economically weaker States, as indicated by the proposal in the draft rules to use the 16th Finance Commission's horizontal devolution formula to determine Central allocations to States. The final formula for distributing the funds, expected to be notified on July 1, could alter the future share of different States.

Four States not ready

Mr. Chouhan also said that 26 States have completed

the procedural requirements necessary to implement the new scheme, while four States – Jharkhand, Karnataka, Telangana, and Mizoram – are yet to complete all formalities. However, representatives of these States also attended the meeting and assured the Centre that they were preparing for implementation.

Prior to the implementation of the VB-G RAM G scheme, the States have to frame rules, complete e-KYC of beneficiaries, fix the blackout period according to their agricultural cycles, and carry out capacity-building exercises at the district and block levels.

Despite a change in government in West Bengal, with the BJP now in power, the issue of settling pending dues under MGNREGA, worth ₹8,508 crore, continues to remain unresolved.

10J6. ₹95,962 crore set aside for VB-GRAM G

VB-GRAM G के लिए ₹95,962 करोड़ आवंटित किए गए।

- Union Rural Development Minister Shivraj Singh Chouhan on Tuesday announced an interim allocation of **₹95,962 crore** for the new rural employment scheme, the **Viksit Bharat-Guarantee for Rozgar and Ajeevika Mission Gramin (VB-G RAM G)**.
केंद्रीय ग्रामीण विकास मंत्री शिवराज सिंह चौहान ने मंगलवार को नई ग्रामीण रोजगार योजना विकसित भारत-गारंटी फॉर रोजगार एंड आजीविका मिशन ग्रामीण (VB-G RAM G) के लिए **₹95,962 करोड़** के अंतरिम आवंटन की घोषणा की।
- This sum does not include the **State governments' share** and most States will have to contribute an **additional 40%** of the sum allocated to them.
इस राशि में राज्य सरकारों का अंश शामिल नहीं है और अधिकांश राज्यों को उन्हें आवंटित राशि का अतिरिक्त **40%** योगदान देना होगा।
- The **combined outlay for the scheme will be ₹1.25 lakh crore**.
इस योजना का कुल व्यय **₹1.25 लाख करोड़** होगा।



- Uttar Pradesh has got the highest of ₹9,721.48 crore, followed by West Bengal (₹8,508 crore), Tamil Nadu (₹7,585.49 crore), Rajasthan (₹7,581.87 crore), Andhra Pradesh (₹7,707.21 crore) and Bihar (₹6,715.83 crore).
उत्तर प्रदेश को सर्वाधिक ₹9,721.48 करोड़ प्राप्त हुए हैं, इसके बाद पश्चिम बंगाल (₹8,508 करोड़), तमिलनाडु (₹7,585.49 करोड़), राजस्थान (₹7,581.87 करोड़), आंध्र प्रदेश (₹7,707.21 करोड़) और बिहार (₹6,715.83 करोड़) का स्थान है।
- Prior to the implementation of the VB-G RAM G scheme, the States have to frame rules, complete e-KYC of beneficiaries, fix the blackout period according to their agricultural cycles, and carry out capacity-building exercises at the district and block levels.
VB-G RAM G योजना के कार्यान्वयन से पूर्व राज्यों को नियम बनाना, लाभार्थियों का ई-केवाईसी (e-KYC) पूरा करना, कृषि चक्रों के अनुसार ब्लैकआउट अवधि निर्धारित करना तथा जिला एवं ब्लॉक स्तर पर क्षमता निर्माण गतिविधियाँ संचालित करनी होंगी।

One in every 3 faculty posts vacant in top technical institutes

While the Education Ministry said recruitments were happening across Centrally Funded Technical Institutes, RTI data show 35.2% of posts remain vacant

GS II: governance: Education

DATA POINT

Sambavi Parthasarathy
Nivedha M.

Over 15 lakh students appeared for the high-stakes Joint Entrance Examination this year to secure a seat in the country's premier technical institutions. The competition has always been gruelling, particularly for the Indian Institutes of Technology (IITs), with roughly 80 students competing for every undergraduate seat in the 23 IITs.

However, data on vacant teaching positions in these institutes, obtained by *The Hindu* through the Right to Information (RTI) Act, raise questions on whether the students who surmount extraordinary challenges to get admitted receive the quality of education they deserve.

The Hindu's request filed under the RTI Act to the Ministry of Education (MoE) in January, seeking details on vacancies in all Central Higher Education Institutions (CHEIs), was forwarded to individual institutions, of which only 79 of the 122 Centrally Funded Technical Institutes (CFTIs) responded. These included 20 IITs, 19 National Institutes of Technology (NITs), 18 Indian Institutes of Management (IIMs), 17 Indian Institutes of Information Technology (IIITs), and five Indian Institutes of Science Education and Research (IISERs) (Chart 1).

A total of 7,132 of 20,279 sanctioned faculty positions were vacant in these 79 institutions, which is 35.2%, or roughly one in every three posts. Sixteen institutions had more than 50% of their posts vacant, while another 14 had vacancies exceeding 40%.

Of the 20 IITs, nine reported vacancies exceeding 35% (Chart 2). The share of vacant posts exceeded 50% in IIT Kharagpur. The institute has a sanctioned strength of 1,600 teaching posts – the highest among the 20 IITs; 824 of these remained vacant. 35% of the 11,019

sanctioned posts in all 20 IITs were vacant.

A similar analysis for 19 of the 31 NITs that provided the data shows that four had vacancies exceeding 40% (Chart 3). As per the data, 27.9% of 5,432 posts in these 19 NITs have not been filled. With over 129 of the 187 posts (68%) remaining vacant, NIT Andhra Pradesh accounted for the highest share of vacancies. More than 40% of the sanctioned posts were vacant in NIT Srinagar, NIT Sikkim and NIT Tiruchirappalli, which had the highest with 600 sanctioned posts.

According to a reply given in Parliament by the MoE last year, the sanctioning of faculty posts for NITs and IITs is a dynamic process, subject to periodic review in accordance with institutional requirements and a faculty-to-student ratio of 1:12 for NITs and 1:10 for IITs.

In 18 of the 21 IIMs that provided data, 32.3% of 1,741 sanctioned posts were vacant. Four IIMs reported vacancies exceeding 50% (Chart 4). IIM Mumbai had 59% of its posts vacant, with 77 of 130 vacancies unfilled.

IIITs reported the highest percentage of vacancies although their sanctioned posts were relatively low. A total of 665 (53.5%) of the 1,225 posts in 17 of the 25 IIITs that provided data were vacant. Vacancies exceeded 50% in eight of them (Chart 5). In five of the seven IISERs that provided data, 276 of the 862 posts were lying vacant.

In another reply to the Lok Sabha earlier this year, the MoE, while not furnishing the number of vacancies, said that "occurrence of vacancies and filling thereof is a continuous process". It further said that all CHEIs were exhorted to fill vacancies in September 2022 and later in October 2025 under a "Mission Mode" recruitment drive. It said that, as of January 24, 2026, a total of 17,878 faculty positions has been filled across all CHEIs under this "Mission Mode".

Nivedha M. interned with *The Hindu*

Faculty crunch

Data for the charts were obtained through requests under the Right to Information Act. The responses were received between January and March, 2026



In Charts 2, 3, 4 and 5, the length of the bars show the % of posts that are vacant, while the numbers outside the bars show the total sanctioned faculty posts in the respective institutions

Chart 1: The circles (●) indicate the total number of institutions in the respective categories and the bars (■) show the institutions that provided the data

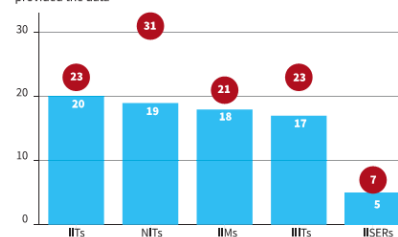


Chart 2: Share of vacant posts in 20 of the 23 IITs which provided the data (%)

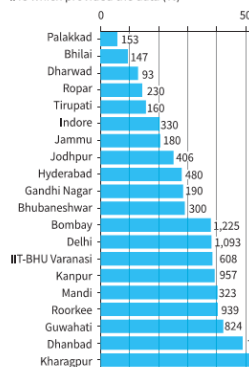


Chart 3: Share of vacant posts in 19 of the 31 NITs which provided the data (in %)

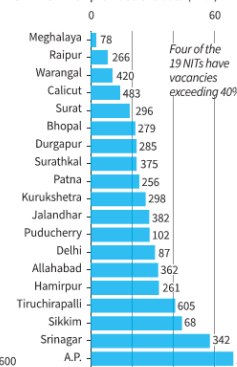


Chart 4: Share of vacant posts in 18 of the 21 IIMs which provided the data (in %)

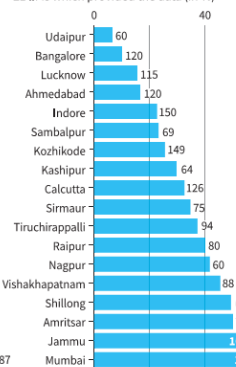


Chart 5: Share of vacant posts in 17 of the 25 IIITs which provided data (in %)

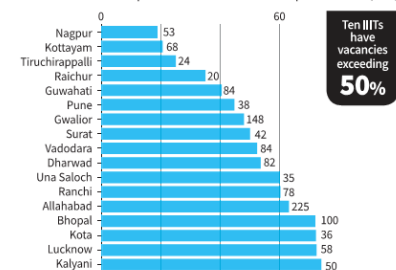
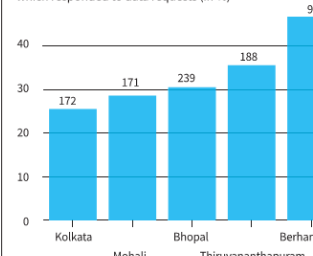


Chart 6: Share of vacant posts in five of the eight IISERs which responded to data requests (in %)



10J6. One in every 3 faculty posts vacant in top technical institutes

शीर्ष तकनीकी संस्थानों में प्रत्येक तीन में से एक अध्यापक पद रिक्त



- While the Education Ministry said recruitments were happening across Centrally Funded Technical Institutes, RTI data show **35.2% of posts remain vacant**
यद्यपि शिक्षा मंत्रालय ने कहा कि केंद्रीय वित्तपोषित तकनीकी संस्थानों में भर्ती प्रक्रियाएँ जारी हैं, आरटीआई के आँकड़े दर्शाते हैं कि 35.2% पद अब भी रिक्त हैं।
- Over 15 lakh students appeared for the high-stakes Joint Entrance Examination this year to secure a seat in the country's premier technical institutions.
इस वर्ष देश के प्रमुख तकनीकी संस्थानों में प्रवेश पाने के लिए 15 लाख से अधिक छात्रों ने अत्यंत प्रतिस्पर्धी संयुक्त प्रवेश परीक्षा (JEE) में भाग लिया।
- The competition has always been gruelling, particularly for the Indian Institutes of Technology (IITs), with roughly 80 students competing for every undergraduate seat in the 23 IITs.
प्रतिस्पर्धा सदैव अत्यंत कठिन रही है, विशेषकर भारतीय प्रौद्योगिकी संस्थानों (IITs) में, जहाँ 23 IITs की प्रत्येक स्नातक सीट के लिए लगभग 80 छात्र प्रतिस्पर्धा करते हैं।
- A total of 7,132 of the 20,279 sanctioned faculty positions were vacant in these 79 institutions, which is 35.2%, or roughly one in every three posts.
इन 79 संस्थानों में 20,279 स्वीकृत शिक्षकीय पदों में से 7,132 पद रिक्त थे, जो कुल का 35.2% अर्थात लगभग हर तीन में से एक पद है।
- Sixteen institutions had more than 50% of their posts vacant, while another 14 had vacancies exceeding 40%.
16 संस्थानों में 50% से अधिक पद रिक्त थे, जबकि अन्य 14 संस्थानों में रिक्तियाँ 40% से अधिक थीं।
- The share of vacant posts exceeded 50% in IIT Kharagpur.
IIT खड़गपुर में रिक्त पदों का प्रतिशत 50% से अधिक था।
- The institute has a sanctioned strength of 1,600 teaching posts — the highest among the 20 IITs; 824 of these remained vacant.
इस संस्थान में 1,600 शिक्षकीय पद स्वीकृत हैं — जो 20 IITs में सबसे अधिक हैं; इनमें से 824 पद रिक्त रहे।
- According to a reply given in Parliament by the MoE last year, the sanctioning of faculty posts for NITs and IITs is a dynamic process, subject to periodic review in accordance with institutional requirements and a faculty-to-student ratio of 1:12 for NITs and 1:10 for IITs.
पिछले वर्ष संसद में शिक्षा मंत्रालय द्वारा दिए गए उत्तर के अनुसार, NITs और IITs में शिक्षकीय पदों की स्वीकृति एक गतिशील प्रक्रिया है, जिसकी समय-समय पर संस्थागत आवश्यकताओं तथा NITs के लिए 1:12 और IITs के लिए 1:10 शिक्षक-छात्र अनुपात के आधार पर समीक्षा की जाती है।
- IIM Mumbai had 59% of its posts vacant, with 77 of 130 vacancies unfilled.
IIM मुंबई में 59% पद रिक्त थे, जहाँ 130 में से 77 पद भरे नहीं गए थे।

Inclusion without abolition in China's hukou system

Hukou reform pushes inclusion of migrants in public services while retaining structural controls

ANAND P. KRISHNAN

China's State Council, on May 22, issued guidelines to 'promote basic public services at people's place of residence,' regardless of hukou, or residence registration status. These guidelines direct local governments – more specifically, megacity administrations – to improve and enhance their delivery measures in the domains of education, public rental housing, social and medical insurance, and a range of social assistance measures for the entire resident population within their administrative jurisdictions.

Hukou reforms since 2014

Hukou is an instrument of social control by the ruling party-state, originating in the 1950s, that distinguishes people as belonging to rural and urban areas based on the official registration of their place of residence. In the Mao era, the system was intended to limit internal migration and

manage resource allocation under the prioritisation of rural development. The economic reforms after 1978 loosened restrictions to allow labour mobility to industrial regions and urban centres, while retaining the institution of Hukou. It functions as an internal passport, as access to social services and government provisions is tied to residential registration. From 2014 onwards, the government has been pushing incremental reforms to the system to align with national urbanisation plans and gradually equalise social benefits for migrants and locals, beginning with the conversion of rural to urban hukous in smaller cities. While nationwide implementation has progressed gradually, megacities have remained outside the purview until now.

The May 22 guidelines build on the decisions of the Third Plenum of the 20th Central Committee of the Communist Party of China (CPC) in 2024, which directed the removal of restrictions on access to social insurance at the place of

employment. This was further reiterated in a five-year people-centered urbanisation action plan instituted by the State Council in July 2024 to raise the permanent urban residents from 66.16% (932.67 million) in 2023 to nearly 70% (estimated around 987 million) by 2029.

According to China's National Bureau of Statistics, at the end of 2025, the country's 'floating population' (liudong renkou) or rural migrants, stood at around 358 million, making up 25% of the population. Along with demographic concerns, the Central government is also guided by the economic imperative of increasing domestic consumption and hastening efforts to create a national unified market with the free flow of capital and talent. This also intersects with efforts to incentivise the mobility of young talent into frontier regions such as Xinjiang to support regional development.

The party-state, over the last three years, has widely promoted the concept of 'investing in people'. Now included in the

new 15th Five-Year Plan, the concept is a new development orientation to raise knowledge and skills to transform 'human resources into human capital' and move from 'a demographic dividend' to a 'talent dividend'. People-centred urbanisation, through the inclusion of long-term residents by relaxing household registration rules, is a critical component of this framework.

Another driver is the growth of flexible and new forms of employment – shorthand for gig and platform workers – who are over 200 million, out of the country's total 740 million workforce.

Following the COVID-19 pandemic, the Central government, in conjunction with the official trade union, has sought to create a comprehensive national policy framework covering labour protection and political supervision. Taken together with frequent cases of labour discontent, the party-state views gig and platform workers as a key labour constituency that needs to be regulated and politically incorporated.

Persisting structural issues

Interestingly, the word hukou itself is only mentioned once in the latest guidelines. Since 2014, with the onset of reforms, efforts have been made to replace it with concepts like 'permanent resident population' (changzhu renkou) and 'place of actual residence' (changzhu di) to build inclusivity. However, structural constraints continue to constrain the reform measures.

Local governments bear responsibility for delivering welfare and public services, with financing largely dependent on fiscal transfers from the Central government. The real estate sector remains unstable, thus affecting city governments' budgets. While the Central government has indicated resource transfers and compensations to migrant-receiving cities, there are no commitments to new spending. The guidelines do not address or show a clear intent to resolve structural gaps. For instance, differing social insurance standards between well-off coastal cities and inland provinces (migrant-sending regions) mean that migrant workers' monthly contributions are at higher rates, but they receive lower benefits. Similarly, migrants who receive medical treatment in major cities but are enrolled in poorer regions will still receive lower reimbursements and face lower coverage limits. Further, the guidelines do not compel employers in the gig economy to strictly enroll workers in welfare schemes. In all, much room is left for the use of discretion by local administrations.

This recalibration only goes to show that the hukou system continues to remain in place and that there are no significant changes to the status quo for migrant labour. (Anand P. Krishnan is a Fellow at the Centre of Excellence for Himalayan Studies, Shiv Nadar Institution of Eminence, Delhi NCR, and Assistant Editor of the journal, China Report)



10J6. Inclusion without abolition in China's hukou system

चीन की हुकौ प्रणाली में समाप्ति के बिना समावेशन

- **Hukou reform pushes inclusion of migrants in public services while retaining structural controls**
हुकौ सुधार संरचनात्मक नियंत्रणों को बनाए रखते हुए प्रवासी आबादी को सार्वजनिक सेवाओं में शामिल करने को प्रोत्साहित करता है।
- **China's State Council, on May 22, issued guidelines to 'promote basic public services at people's place of residence,' regardless of hukou, or residence registration status.**
चीन की राज्य परिषद ने 22 मई को हुकौ (निवास पंजीकरण) की स्थिति की परवाह किए बिना लोगों के निवास स्थान पर मूलभूत सार्वजनिक सेवाओं को बढ़ावा देने के लिए दिशा-निर्देश जारी किए।
- **These guidelines direct local governments — more specifically, megacity administrations — to improve and enhance their delivery measures in the domains of education, public rental housing, social and medical insurance, and a range of social assistance measures for the entire resident population within their administrative jurisdictions.**
ये दिशा-निर्देश स्थानीय सरकारों — विशेष रूप से महानगर प्रशासन — को अपने प्रशासनिक क्षेत्र के सभी निवासियों के लिए शिक्षा, सार्वजनिक किराये के आवास, सामाजिक एवं चिकित्सा बीमा तथा विभिन्न प्रकार की सामाजिक सहायता योजनाओं की उपलब्धता और गुणवत्ता में सुधार करने का निर्देश देते हैं।

Hukou reforms since 2014

2014 से हुकौ सुधार

- **Hukou is an instrument of social control by the ruling party-state, originating in the 1950s, that distinguishes people as belonging to rural and urban areas based on the official registration of their place of residence.**
हुकौ सत्तारूढ़ दल-राज्य द्वारा सामाजिक नियंत्रण का एक साधन है, जिसकी शुरुआत 1950 के दशक में हुई थी और जो लोगों को उनके आधिकारिक निवास पंजीकरण के आधार पर ग्रामीण एवं शहरी श्रेणियों में विभाजित करता है।
- **In the Mao era, the system was intended to limit internal migration and manage resource allocation under the prioritisation of rural development.**
माओ युग में इस प्रणाली का उद्देश्य आंतरिक प्रवास को सीमित करना तथा ग्रामीण विकास को प्राथमिकता देते हुए संसाधनों का प्रबंधन करना था।
- **The economic reforms after 1978 loosened restrictions to allow labour mobility to industrial regions and urban centres, while retaining the institution of Hukou.**
1978 के बाद के आर्थिक सुधारों ने श्रमिकों की औद्योगिक क्षेत्रों और शहरी केंद्रों में आवाजाही की अनुमति देने हेतु प्रतिबंधों को शिथिल किया, लेकिन हुकौ प्रणाली को बनाए रखा।
- **It functions as an internal passport, as access to social services and government provisions is tied to residential registration.**
यह एक प्रकार के आंतरिक पासपोर्ट की तरह कार्य करता है, क्योंकि सामाजिक सेवाओं और सरकारी सुविधाओं तक पहुँच निवास पंजीकरण से जुड़ी होती है।
- **Now included in the new 15th Five-Year Plan, the concept is a new development orientation to raise knowledge and skills to transform 'human resources into human capital' and move from 'a demographic dividend' to a 'talent dividend'.**
अब नई 15वीं पंचवर्षीय योजना में शामिल यह अवधारणा ज्ञान और कौशल को बढ़ाकर 'मानव संसाधन को मानव पूंजी' में बदलने तथा 'जनसांख्यिकीय लाभांश' से 'प्रतिभा लाभांश' की ओर बढ़ने की विकासात्मक दिशा को दर्शाती है।
- **People-centred urbanisation, through the inclusion of long-term residents by relaxing household registration rules, is a critical component of this framework.**
घरेलू पंजीकरण नियमों में ढील देकर दीर्घकालिक निवासियों को शामिल करने वाली जन-केंद्रित शहरीकरण नीति इस ढाँचे का एक महत्वपूर्ण भाग है।



GS Paper II: International Relations		10 June 2026
TOPICS COVERED		
10J6	PM expected to meet Trump on sidelines of G-7 summit in France प्रधानमंत्री के फ्रांस में आयोजित G-7 शिखर सम्मेलन के इतर ट्रंप से मुलाकात करने की संभावना है।	
10J6	New and raw नया और संवेदनशील	
10J6	India's road through Myanmar is one of engagement म्यांमार के माध्यम से भारत का मार्ग सहभागिता और निरंतर संवाद का मार्ग है।	
10J6	A new phase in India-Nepal relations भारत-नेपाल संबंधों में एक नया चरण	
10J6	Indian entities on latest EU sanctions package on Russia रूस पर यूरोपीय संघ के नवीनतम प्रतिबंध पैकेज में भारतीय संस्थाएँ शामिल	
10J6	Global nuclear arms spending soars amid AI threats and new 'arms race' एआई खतरों और नई 'हथियारों की दौड़' के बीच वैश्विक परमाणु हथियार खर्च में भारी वृद्धि	

PM expected to meet Trump on sidelines of G-7 summit in France

GS II: IR
Kallol Bhattacharjee
NEW DELHI

Prime Minister Narendra Modi is expected to meet U.S. President Donald Trump on the sidelines of the G-7 summit taking place in Evian, France on June 16-17, official sources have told *The Hindu*.

Mr. Trump has already announced that he will participate in the G-7 summit, hosted by French President Emmanuel Macron.

The meeting will mark the first interaction between Mr. Modi and Mr. Trump since they last met in February 2025 in Washington DC.

The sources did not elaborate on the details of the planned discussion but it is understood that the two sides will cover the bilateral trade pact under negotiation, and other regional and global matters of mutual concern. The officials provided this information soon after sharing details on Mr. Modi's upcoming travel schedule for France and the Slovak Republic.

The PM's visit to France will take place in two segments, with the first segment stretching from June 13 to June 14, and the second taking place from June 16 to June 19.

10J6. PM expected to meet Trump on sidelines of G-7 summit in France

प्रधानमंत्री के फ्रांस में आयोजित G-7 शिखर सम्मेलन के इतर ट्रंप से मुलाकात करने की संभावना है।

- Prime Minister Narendra Modi is expected to meet U.S. President Donald Trump on the sidelines of the **G-7 Summit** taking place in **Evian, France on June 16-17**, official sources have told *The Hindu*.

प्रधानमंत्री नरेंद्र मोदी के अमेरिकी राष्ट्रपति डोनाल्ड ट्रंप से 16-17 जून को फ्रांस के एवियन में आयोजित होने वाले जी-7 शिखर सम्मेलन के दौरान मुलाकात करने की संभावना है, जैसा कि आधिकारिक सूत्रों ने द हिंदू को बताया है।

- Mr. Trump has already announced that he will participate in the **G-7 Summit**, hosted by French President **Emmanuel Macron**. श्री ट्रंप पहले ही घोषणा कर चुके हैं कि वे फ्रांस के राष्ट्रपति इमैनुएल मैक्रों द्वारा आयोजित जी-7 शिखर सम्मेलन में भाग लेंगे।



CS II: IR

New and raw

Nepal and India must avoid misspeaking on border issues

The visit of Nepal Foreign Minister Shishir Khanal to Delhi, which followed right after the visit of Nepal's new ruling party RSP's President Rabi Lamichhane and ahead of a proposed visit by the new Finance Minister Swarnim Wagle, signals an intense outreach between Delhi and Kathmandu's new leadership. Mr. Khanal had met External Affairs Minister S. Jaishankar in April, on the sidelines of an Indian Ocean regional conference in Mauritius, but this was his first visit to India since the RSP and newly elected Prime Minister Balen Shah took power after the GenZ protests. The meetings, a lead up to an expected India visit by Mr. Shah, indicate a step-by-step approach to building ties, with Delhi laying out the red carpet for Mr. Lamichhane, who met with top functionaries of the BJP, Prime Minister Narendra Modi, the Home Minister, Mr. Jaishankar and the National Security Adviser. These meetings came just after Mr. Shah's address to his Parliament where he accused India of occupying parts of Nepal while also claiming that Nepal is in control of parts of Indian territory, and much to New Delhi's outrage, added that Nepal was in touch with the U.K. and China on the issue. Such comments by Mr. Shah, and his decision to stick to protocol and refuse a meeting with India's Foreign Secretary Vikram Misri, no doubt ruffled feathers, and Mr. Lamichhane's first task was to smooth feelings on the issue. In a media meet, Mr. Khanal also sought to diffuse the tensions, suggesting that the Nepal government was committed to turning a page in Nepali politics, and casting aside "old baggage" with India. The MEA rejected any role for a "third party" in negotiations, particularly China, given that Mr. Khanal's next visit is to Beijing. No doubt, the territorial issues over Limpiyadhura, and Lipulekh will heat up again this summer as India sends more groups over the border areas which Kathmandu claims, for the Kailash Mansarovar Yatra to Tibet.

The agenda between India and Nepal is at present too broad and too deep, from border management and renegotiating water sharing agreements to infrastructure, trade development projects and energy sharing, to be derailed at this point. While Nepal's new government may be granted some leeway for early misspeaking, Kathmandu and Delhi must tread carefully in their words and steps. Any indication from Kathmandu that it is cavalier about India's position in the region, or from Delhi that it seeks to interfere with the new government's working, could set off the same cycles of mistrust that have dogged the relationship, particularly since the Nepal Constitution friction and trade blockade from India in 2015. While the Modi government's diplomatic tasks have been made more complex by youth protests that have dislodged entrenched power structures in the Maldives, Sri Lanka, Bangladesh and Nepal, this may also be an important opportunity to rework its discourse and partnership framework with smaller yet important neighbours in South Asia.

10J6. New and raw

नया और संवेदनशील

- Mr. Khanal had met External Affairs Minister **S. Jaishankar** in April, on the sidelines of an **Indian Ocean regional conference in Mauritius**, but this was his first visit to India since the RSP and newly elected Prime Minister **Balen Shah** took power after the **GenZ protests**.

श्री खनाल ने अप्रैल में मॉरीशस में आयोजित हिंद महासागर क्षेत्रीय सम्मेलन के अवसर पर विदेश मंत्री एस. जयशंकर से भेंट की थी, किंतु जेन-ज़ी प्रदर्शनों के बाद आरएसपी और नवनिर्वाचित प्रधानमंत्री बालेन शाह के सत्ता में आने के बाद यह उनकी पहली भारत यात्रा थी।

- No doubt, the territorial issues over **Limpiyadhura**, and **Lipulekh** will heat up again this summer as India sends more groups over the border areas which Kathmandu claims, for the **Kailash Mansarovar Yatra to Tibet**.

निस्संदेह, लिम्पियाधुरा और लिपुलेख से जुड़े क्षेत्रीय विवाद इस गर्मी में फिर उभरेंगे, क्योंकि भारत कैलाश मानसरोवर यात्रा के लिए तिब्बत जाने वाले अधिक समूहों को उन सीमावर्ती क्षेत्रों से भेजेगा जिन पर काठमांडू दावा करता है।



India's road through Myanmar is one of engagement

GS II: IR

When Myanmar's President U Min Aung Hlaing landed in Bodh Gaya, Bihar, on May 30, 2026, the symbolism was hard to miss. Before travelling to New Delhi for talks with Prime Minister Narendra Modi and President Droupadi Murmu, he visited the Mahabodhi Temple, one of Buddhism's holiest sites and a UNESCO World Heritage Site. The stopover underscored a broader message: India was welcoming Myanmar's leader not only through the language of diplomacy but through shared civilisational ties.

This is a major diplomatic engagement, the first visit to India (May 30- June 3, 2026) by Min Aung Hlaing in his capacity as President, reflecting the growing importance of India-Myanmar relations in a shifting geopolitical environment of South and Southeast Asia. For New Delhi, the timing and tone are equally significant.

Why now

The world's democracies have largely turned away from Naypyidaw since the February 2021 coup that ousted Aung San Suu Kyi's elected government. Western nations imposed sanctions and sought to isolate the military regime. But Foreign Secretary Vikram Misri told reporters that India's policy is "not intended to be a commentary on the internal political arrangements" in Myanmar, and that New Delhi believes engagement is the best way forward.

This is realpolitik disguised as pragmatism. Myanmar is India's gateway to Southeast Asia and a cornerstone of its Act East and Neighbourhood First policies. Sharing a 1,643-km border with four northeastern States, Myanmar's instability poses a direct threat to India's security interests in the region.

Then there is the China factor. Beijing has aggressively cultivated Naypyidaw since the coup, filling the vacuum left by western withdrawal with infrastructure financing, arms supplies, and



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Connectivity,
security, and
China shape
India's outreach
to Myanmar

diplomatic cover. For India to cede Myanmar's strategic space entirely to China would be a self-inflicted wound in its own backyard.

The infrastructure stakes

Few indicators better reflect the depth of India's strategic investment in Myanmar than the Kaladan Multi-Modal Transit Transport Project and the India-Myanmar-Thailand Trilateral Highway – two connectivity corridors that dominated the Modi-Hlaing agenda.

The Kaladan project connects Kolkata to Sittwe by sea, then follows the Kaladan River inland to Paletwa, before linking by road to Zorinpui in Mizoram. The sea and river components are operational, with the first cargo shipment reaching Sittwe in May 2023. But the critical 109-km Paletwa-Zorinpui Road running through mountainous, flood-prone terrain in Chin State remains incomplete. India's Shipping Minister told Parliament in 2025 that full operationalisation is targeted for 2027.

The Trilateral Highway carries an even grander ambition: linking Moreh in Manipur to Mae Sot in Thailand through Myanmar over roughly 1,360 km, with planned extensions to Cambodia, Lao PDR, and Vietnam. Once completed, it could transform India's landlocked northeast into a gateway to Southeast Asia. It was supposed to be finished by 2019. It still is not.

Myanmar's internal conflict lies behind both delays. Armed groups control large stretches of territory along the two corridors, making construction difficult and unpredictable. President Hlaing assured Mr. Modi that Myanmar would do "everything" to complete the projects, while Mr. Misri reiterated that they remain a "major priority" despite security challenges. At the Myanmar-India Trade and Investment Conclave, Mr. Aung Hlaing described them as vital to the Association of Southeast Asian Nations (ASEAN)-India economic corridor. The real question is whether these assurances will

translate into progress on the ground. Beyond infrastructure, the summit covered significant ground. Bilateral trade stood at \$1.95 billion in 2025-26, and both sides agreed to increase it through a rupee-kyat settlement mechanism, with additional discussions on critical minerals and rare-earth cooperation.

On security, Mr. Aung Hlaing reiterated Myanmar's assurance that its territory would not be used against India's interests – a significant pledge given the long presence of Indian insurgent groups and cybercrime networks in Myanmar's border regions. More than 2,400 Indian nationals have been rescued from scam centres through bilateral cooperation over the past 18 months, though many remain trapped. On education, India announced an increase in Mekong-Ganga ICCR scholarships for Myanmar students from 36 to 100 annually from 2026.

The larger reckoning

By receiving Mr. Aung Hlaing as Myanmar's President, India has signalled a degree of acceptance of the country's evolving political reality. This does not necessarily amount to endorsement of the military-backed government. Still, it suggests a recognition that meaningful engagement with Myanmar requires working with those currently in power. For Myanmar, the visit is equally consequential. Mr. Aung Hlaing last visited India in 2019 as Myanmar's military chief. His return to New Delhi as head of state – and his choice of India for his first major bilateral visit abroad – signals a deliberate engagement with a neighbour that can provide a diplomatic and economic counterweight to overwhelming Chinese dependence. For India, the calculus is rooted in geography, security and the recognition that disengagement rarely produces better outcomes. The message is clear: pragmatic engagement, however uncomfortable, may increasingly shape regional approaches to Myanmar in the years ahead.

10J6. India's road through Myanmar is one of engagement

म्यांमार के माध्यम से भारत का मार्ग सहभागिता और निरंतर संवाद का मार्ग है।

- When Myanmar's President U Min Aung Hlaing landed in **Bodh Gaya, Bihar**, on May 30, 2026, the symbolism was hard to miss.

जब म्यांमार के राष्ट्रपति यू मिन आंग हलाइंग 30 मई 2026 को बोधगया, बिहार पहुँचे, तो इस यात्रा का प्रतीकात्मक महत्व स्पष्ट रूप से दिखाई देता था।

- Before travelling to **New Delhi** for talks with Prime Minister **Narendra Modi** and President **Droupadi Murmu**, he visited the **Mahabodhi Temple**, one of **Buddhism's** holiest sites and a **UNESCO World Heritage Site**.

प्रधानमंत्री नरेन्द्र मोदी और राष्ट्रपति द्रौपदी मुर्मू के साथ वार्ता के लिए नई दिल्ली जाने से पहले उन्होंने महाबोधि मंदिर का दर्शन किया, जो बौद्ध धर्म के सबसे पवित्र स्थलों में से एक तथा एक यूनेस्को विश्व धरोहर स्थल है।

- The world's democracies have largely turned away from **Naypyidaw** since the **February 2021** coup that ousted **Aung San Suu Kyi's** elected government.
विश्व के लोकतांत्रिक देशों ने **फरवरी 2021** के **तख्तापलट** के बाद से काफी हद तक **नेपीडॉ** से दूरी बना ली है, जिसमें आंग सान सू की की निर्वाचित सरकार को हटा दिया गया था।
- Myanmar** is India's gateway to **Southeast Asia** and a cornerstone of its **Act East** and **Neighbourhood First** policies.



म्यांमार, दक्षिण-पूर्व एशिया के लिए भारत का प्रवेशद्वार है और उसकी एक ईस्ट तथा पड़ोसी प्रथम नीतियों का एक प्रमुख आधारस्तंभ है।

- Sharing a **1,643-km border** with four northeastern States, Myanmar's instability poses a direct threat to India's **security interests** in the region.

चार पूर्वोत्तर राज्यों के साथ **1,643 किलोमीटर लंबी सीमा** साझा करने के कारण, म्यांमार की अस्थिरता क्षेत्र में भारत के सुरक्षा हितों के लिए प्रत्यक्ष चुनौती उत्पन्न करती है।

- For India to cede Myanmar's strategic space entirely to China would be a self-inflicted wound in its own backyard.

भारत यदि म्यांमार के सामरिक क्षेत्र को पूरी तरह चीन के प्रभाव में जाने देता है, तो यह उसके अपने पड़ोस में स्वयं को नुकसान पहुँचाने जैसा होगा।

The infrastructure stakes

अवसंरचना से जुड़े दांव

- Few indicators better reflect the depth of India's strategic investment in Myanmar than the **Kaladan Multi-Modal Transit Transport Project** and the **India-Myanmar-Thailand Trilateral Highway** — two connectivity corridors that dominated the Modi-Hlaing agenda.
म्यांमार में भारत के सामरिक निवेश की गहराई को कलादान मल्टी-मॉडल ट्रांजिट ट्रांसपोर्ट परियोजना और भारत-म्यांमार-थाईलैंड त्रिपक्षीय राजमार्ग से बेहतर बहुत कम संकेतक दर्शाते हैं — ये दो संपर्क गलियारे मोदी-हलाइंग वार्ता एजेंडा के केंद्र में रहे।
- The **Kaladan project** connects Kolkata to Sittwe by sea, then follows the **Kaladan River** inland to **Paletwa**, before linking by road to **Zorinpui** in Mizoram.
कलादान परियोजना समुद्री मार्ग से कोलकाता को सितवे से जोड़ती है, फिर कलादान नदी के मार्ग का अनुसरण करते हुए पालेत्वा तक पहुँचती है और वहाँ से सड़क मार्ग द्वारा मिजोरम के जोरिनपुई से जुड़ती है।
- The sea and river components are operational, with the first cargo shipment reaching Sittwe in May 2023.
इस परियोजना के समुद्री और नदी मार्ग वाले घटक परिचालन में हैं, और पहला मालवाहक जहाज़ मई 2023 में सितवे पहुँचा था।
- But the critical **109-km Paletwa-Zorinpui Road** running through mountainous, flood-prone terrain in Chin State remains incomplete.
लेकिन चिन राज्य के पर्वतीय और बाढ़-प्रवण क्षेत्र से गुजरने वाली महत्वपूर्ण 109 किलोमीटर लंबी पालेत्वा-जोरिनपुई सड़क अभी भी अधूरी है।
- India's **Shipping Minister** told Parliament in 2025 that full operationalisation is targeted for 2027.
भारत के पोत परिवहन मंत्री ने 2025 में संसद को बताया था कि परियोजना को पूर्ण रूप से चालू करने का लक्ष्य 2027 निर्धारित किया गया है।
- The **Trilateral Highway** carries an even grander ambition: linking Moreh in Manipur to Mae Sot in Thailand through Myanmar over roughly **1,360 km**, with planned extensions to Cambodia, Lao PDR, and Vietnam.
त्रिपक्षीय राजमार्ग इससे भी अधिक महत्वाकांक्षी है। इसका उद्देश्य मणिपुर के मोरेह को म्यांमार के माध्यम से थाईलैंड के मे सॉट से लगभग 1,360 किलोमीटर लंबे मार्ग द्वारा जोड़ना है, जिसे आगे कंबोडिया, लाओ पीडीआर और वियतनाम तक विस्तारित करने की योजना है।
- Once completed, it could transform India's **landlocked northeast** into a gateway to **Southeast Asia**.
पूरा होने पर यह भारत के स्थल-आवेष्टित पूर्वोत्तर क्षेत्र को दक्षिण-पूर्व एशिया के प्रवेशद्वार में परिवर्तित कर सकता है।
- It was supposed to be finished by 2019.
इसे 2019 तक पूरा किया जाना था।
- It still is not.
लेकिन यह अभी तक पूर्ण नहीं हुआ है।
- Myanmar's internal conflict lies behind both delays.
इन दोनों परियोजनाओं में हुई देरी के पीछे म्यांमार का आंतरिक संघर्ष प्रमुख कारण है।



- On **education**, India announced an increase in **Mekong-Ganga ICCR scholarships** for Myanmar students from **36 to 100 annually** from **2026**.

शिक्षा के क्षेत्र में, भारत ने 2026 से म्यांमार के विद्यार्थियों के लिए मेकांग-गंगा ICCR छात्रवृत्तियों की संख्या 36 से बढ़ाकर 100 प्रतिवर्ष करने की घोषणा की।।

A new phase in India-Nepal relations

Nepal PM indicated that the boundary dispute is not one-sided and should be resolved through diplomatic channels; his remarks, amid objections over trade and pilgrimage routes and shifting political tone in Kathmandu, suggest a cautious move towards a more rational approach in India-Nepal relations

SS II IR

WORLD INSIGHT

K.V. Rajan
Atul K. Thakur

Nepal Prime Minister Balendra Shah "Balen" limited his intervention in a parliamentary discussion on the boundary dispute between India and Nepal over Kalapani, Lipulekh, and Limpiyadhura (areas claimed by both countries) on May 31 to a few minutes. He seemed to suggest that the issue was not one-sided.

"What surprised me after becoming Prime Minister is that it is not only India that is accused of encroaching Nepalese land. In some places, Nepal may also be occupying territory claimed by India. Both countries should examine the facts objectively and resolve the matter amicably as friends."

This was predictably greeted with a storm of protests within and outside Nepal's Parliament, despite the Prime Minister's reiteration that Nepal and India were working towards resolving the boundary issue through diplomatic channels.

Border dispute response

Nepal has also objected to the resumption of India-China trade through the Lipulekh Pass. Mr. Shah shared that the diplomatic note sent by Nepal on this matter received a positive response from India, and both sides have agreed to address the issue through dialogue. Earlier, Nepal's Foreign Ministry reiterated its commitment to resolving the boundary issue through diplomatic means. The statement came after India rejected Nepal's objection to the Kailash Mansarovar Yatra route through Lipulekh Pass, describing Kathmandu's territorial claim as 'unjustified' and "influenced by 'unilateral artificial enlargement'."

However, the latest developments suggest a more rational approach, which hopefully discards the possibility of the dispute becoming a lasting bilateral irritant and signals a fresh beginning. It is



GETTY IMAGES

still early days, and the new government's thoughts in Kathmandu on resetting relations with India are not yet clear.

Shifting political tone

What is already clear is that Nepal's governance is firmly in the hands of a young generation with its eye on the future rather than the past, determined to free the country from the chains of corruption, nepotism, and ideology – and to prioritise social and economic issues.

Objections raised over trade and religious tourism through areas claimed by Nepal, the postponement of the Indian Foreign Secretary's visit to Nepal to discuss the Prime Minister's India visit and the disinclination of Mr. Shah to break protocol to receive India's Foreign Secretary, all reflect an emerging stance that India will be treated on par with other countries, rather than being given the easy access to top leadership it has traditionally enjoyed under the much-discussed "special relationship." These may have injected jarring notes in the trajectory of ties, but India appears to have taken them in stride.

Nepalese observers have questioned the wisdom of ignoring India's crucial importance to Nepal's present and future well-being. Likely, the bilateral ambience will not be held prisoner to protocol or to

assertions of irrational nationalism or *de facto* inequality.

Diplomatic path ahead

The sobering thought is that discussions between diplomats and experts may not yield a solution, and the fact that despite both sides emphasising economic cooperation as the core of bilateral ties, the boundary issue cannot be pushed to the back burner indefinitely.

Based on publicly available information, British-era data will be self-contradictory, as British India updated its maps with more recent technology compared to the East India days. The suggestion by Mr. Shah that China and the U.K. may also need to be consulted for a long-term solution may, however, create further complications and delays.

The Chinese position, taken by President Xi Jinping, was that Nepal should sort out the border issue with India. This remains the most rational advice, and it is hoped that both China and Nepal will adhere to this position.

What is important is to avoid an unending period of so-called diplomatic and expert-level discussions which will permit the dispute to become a major irritant, given the positions taken by Nepal (which has even printed its version of the disputed map on its currency notes) and

India (which has followed the boundary delineation it inherited from the British in 1947 and has serious security interests in maintaining the *status quo*).

What might be a better option would be for both countries to draw inspiration and ideas from (a) their centuries-old continuum of multifaceted linkages, (b) the open border tradition which has been in existence over more than 1,700 km and was followed even in the disputed area before the India-China war in 1962, and (c) the strong, mutually trusting institutional relationship between the Indian and Nepalese Army which could facilitate and come in useful to sustain a mutually acceptable practical solution.

This, however, will require a shift in mindset on both sides: a determination not to permit differences on boundary delineation to cloud a unique relationship, and a recognition that the so-called encroachment of territory is a mutual phenomenon that is not a result of aggressive territorial assertion and need not be a cause for mutual tension.

The changes in Nepal and the Prime Minister's statement offer an opportunity that India, too, should respect and seize. The last Indian Prime Minister who had the vision and courage to step beyond conventional diplomatic approaches to such problems with Nepal was Atal Bihari Vajpayee. Prime Minister Narendra Modi appears to have not only vision and courage but also the necessary political self-confidence in selling difficult policies and decisions to the nation, overriding the usual bureaucratic and inevitable nationalistic political posturing. Rabi Lamichhane, President of Nepal's ruling Rastriya Swatantra Party and Nepal's Foreign Affairs Minister Shishir Khanal visited India recently to engage in political and diplomatic meetings. The timing of their visits was crucially important.

It is time for India and Nepal to move towards a more enlightened bilateral relationship to build a model sustainable partnership.

(K. V. Rajan is former Indian Ambassador to Nepal and Atul K. Thakur is a policy professional. Views are personal.)

THE GIST

▼ The boundary dispute over Kalapani, Lipulekh and Limpiyadhura continues to strain India-Nepal ties, with both sides maintaining competing territorial claims and relying on historical maps and inherited boundary lines.

▼ Recent developments reflect shifting diplomatic signals, with both countries emphasising dialogue and expert-level engagement, though differences over trade routes, protocol, and sovereignty remain unresolved.

10J6. A new phase in India-Nepal relations

भारत-नेपाल संबंधों में एक नया चरण

- Nepal Prime Minister Balendra Shah "Balen" limited his intervention in a parliamentary discussion on the boundary dispute between India and Nepal over Kalapani, Lipulekh, and Limpiyadhura (areas claimed by both countries) on May 31 to a few minutes.**

नेपाल के प्रधानमंत्री बलेन्द्र शाह "बालेन" ने 31 मई को कालापानी, लिपुलेख और लिम्पियाधुरा (दोनों देशों द्वारा दावा किए गए क्षेत्र) को लेकर भारत-नेपाल सीमा विवाद पर संसद में हुई चर्चा में अपना हस्तक्षेप केवल कुछ मिनटों तक सीमित रखा।

- He seemed to suggest that the issue was not one-sided. उन्होंने संकेत दिया कि यह मुद्दा एकतरफा नहीं है।
- "What surprised me after becoming Prime Minister is that it is not only India that is accused of encroaching Nepalese land. "प्रधानमंत्री बनने के बाद मुझे जिस बात ने आश्चर्यचकित किया, वह यह है कि केवल भारत पर ही नेपाली भूमि पर अतिक्रमण का आरोप नहीं लगाया जाता।

- Nepal has also objected to the resumption of India-China trade through the Lipulekh Pass.** नेपाल ने लिपुलेख दर्रे के माध्यम से भारत-चीन व्यापार पुनः प्रारंभ किए जाने पर भी आपत्ति जताई है।



- The statement came after India rejected Nepal's objection to the **Kailash Mansarovar Yatra** route through **Lipulekh Pass**, describing Kathmandu's territorial claim as 'unjustified' and "influenced by 'unilateral artificial enlargement'."

यह बयान उस समय आया जब भारत ने लिपुलेख दर्रे से होकर जाने वाली कैलाश मानसरोवर यात्रा के मार्ग पर नेपाल की आपत्ति को अस्वीकार करते हुए काठमांडू के क्षेत्रीय दावे को 'अनुचित' तथा "एकतरफा कृत्रिम विस्तार" से प्रभावित बताया।

- What might be a better option would be for both countries to draw inspiration and ideas from (a) their centuries-old continuum of **multifaceted linkages**, (b) the **open border tradition** which has been in existence over more than **1,700 km** and was followed even in the disputed area before the **India-China war in 1962**, and (c) the strong, mutually trusting institutional relationship between the **Indian and Nepalese Army** which could facilitate and come in useful to sustain a mutually acceptable practical solution.

एक बेहतर विकल्प यह हो सकता है कि दोनों देश (क) अपनी सदियों पुरानी **बहुआयामी पारस्परिक कड़ियों**, (ख) **1,700 किलोमीटर** से अधिक लंबी **खुली सीमा की परंपरा**, जिसका पालन **1962 के भारत-चीन युद्ध** से पहले विवादित क्षेत्र में भी किया जाता था, तथा (ग) **भारतीय और नेपाली सेनाओं** के बीच विद्यमान मजबूत और पारस्परिक विश्वास पर आधारित संस्थागत संबंधों से प्रेरणा लें, जो किसी व्यावहारिक और पारस्परिक रूप से स्वीकार्य समाधान को बनाए रखने में सहायक हो सकते हैं।

Indian entities on latest EU sanctions package on Russia

GS II: IR

Sriram Lakshman
LONDON

The European Commission has proposed its 21st package of sanctions on Russia which also includes Indian entities. The sanctions need to be approved by member states before they are finalised.

The proposed package focuses on energy, crypto and financial services and trade, including fisheries, European Commission President Ursula Von der Leyen said.

The sanctions would also ban the entry of former Russian combatants into the EU.

"Brick by brick, we are collapsing the foundations of Russia's war economy," the EU's top diplomat Kaja



Ursula von der Leyen

Kallas said on X.

"The new listings will cover more than 30 designations in the drones manufacturing as well as new export control measures on 50 companies, including entities based in China, Türkiye, Kyrgyzstan, Kazakhstan, UAE, and India," Ms. Kallas wrote.

This is not the first time Indian entities have found

themselves on a EU sanctions list. However, the news comes as Brussels and New Delhi are in the implementation phase of a trade agreement that was announced in February.

The sanctions add 30 vessels to the existing 632 sanctioned ships in the so called "shadow fleet" of Russia – vessels transporting Russian oil and petroleum products and circumventing Western sanctions.

The package also expands sanctions to cover 31 more Russian banks, 20 banks, crypto-related entities and oil traders in third countries. It also introduces an export ban on equipment used to support drones and metals and alloys used in defence and aerospace.

10J6. Indian entities on latest EU sanctions package on Russia
रूस पर यूरोपीय संघ के नवीनतम प्रतिबंध पैकेज में भारतीय संस्थाएँ शामिल



- The **European Commission** has proposed its **21st package of sanctions on Russia** which also includes **Indian entities**.
यूरोपीय आयोग ने रूस पर अपने 21वें प्रतिबंध पैकेज का प्रस्ताव रखा है, जिसमें भारतीय संस्थाएँ भी शामिल हैं।
- The **sanctions need to be approved by member states** before they are finalised.
इन प्रतिबंधों को अंतिम रूप दिए जाने से पहले सदस्य देशों की स्वीकृति आवश्यक होगी।
- The **proposed package focuses on energy, crypto and financial services and trade**, including **fisheries**, **European Commission President Ursula Von der Leyen** said.
यूरोपीय आयोग की अध्यक्ष उर्सुला वॉन डेर लेयेन ने कहा कि प्रस्तावित पैकेज ऊर्जा, क्रिप्टो, वित्तीय सेवाओं और व्यापार, तथा मत्स्य क्षेत्र पर केंद्रित है।
- The **sanctions would also ban the entry of former Russian combatants into the European Union (EU)**.
इन प्रतिबंधों के तहत पूर्व रूसी लड़ाकों के यूरोपीय संघ (EU) में प्रवेश पर भी प्रतिबंध लगाया जाएगा।
- These include entities based in **China, Turkiye, Kyrgyzstan, Kazakhstan, UAE, and India**, Ms. Kallas wrote.
सुश्री कैलास ने लिखा कि इनमें चीन, तुर्किये, किर्गिस्तान, कजाखस्तान, यूएई और भारत में स्थित संस्थाएँ शामिल हैं।
- This is not the first time **Indian entities** have found themselves on a **EU sanctions list**.
यह पहली बार नहीं है जब भारतीय संस्थाएँ यूरोपीय संघ की प्रतिबंध सूची में शामिल हुई हैं।
- The **sanctions add 30 vessels to the existing 632 sanctioned ships in the so-called "shadow fleet" of Russia**.
इन प्रतिबंधों के तहत रूस के तथाकथित "शैडो फ्लीट" में शामिल पहले से प्रतिबंधित 632 जहाजों के अतिरिक्त 30 और जहाजों को सूची में जोड़ा जाएगा।
- It also introduces an **export ban on equipment used to support drones and on metals and alloys used in the defence and aerospace sectors**.
इसके अंतर्गत ड्रोन संचालन में प्रयुक्त उपकरणों तथा रक्षा और एयरोस्पेस क्षेत्रों में उपयोग होने वाली धातुओं और मिश्रधातुओं के निर्यात पर भी प्रतिबंध लगाया जाएगा।

Global nuclear arms spending soars amid AI threats and new 'arms race'

CS II: IR
Agence France-Presse
GENEVA

Worldwide spending on nuclear weapons soared to a record high last year as atomic-armed countries moved more warheads from storage onto delivery systems, experts said on Tuesday.

The nine nuclear-armed states jointly spent nearly \$119 billion on their arsenals last year, up 19% from 2024, according to the International Campaign to Abolish Nuclear Weapons (ICAN). "A new nuclear arms race is upon us," its report warned.

ICAN, and a separate study by the Stockholm International Peace Research Institute (SIPRI) released on Monday, voiced alarm at the growing nuclear risk amid swelling geopolitical tensions.



A house of dynamite: The United States and Russia together hold around 83% of the world's nuclear arms stockpile. AP

ICAN's director of programmes Susi Snyder said the scale-up, coupled with fears that artificial intelligence could increase the risk of nuclear weapons use, was deeply alarming.

SIPRI's report highlighted that the total estimated number of nuclear warheads had been declining for decades, falling to

12,187 at the start of this year, but warned the number of weapons available for potential use had risen, to 9,745.

Growing arsenal

The U.S. and Russia together hold around 83% of the world's nuclear arms stockpile, with more than 5,000 warheads each. China is

expanding its nuclear arsenal, SIPRI said, estimating that it counts around 620 warheads.

ICAN's report indicated that all nuclear-armed states, which also include Britain, France, India, Israel, North Korea and Pakistan, were increasing investments in their arsenals.

The nine countries jointly spent nearly \$17 billion more last year than in 2024 on the weapons of mass destruction.

The U.S. spent more than all the other countries combined, dishing out \$69.2 billion on nuclear weapons in 2025, followed by China, which was estimated to have spent \$13.5 billion, then Britain at \$12.6 billion and Russia at \$9.5 billion, it said.

Those investments are expected to grow.

10J6.
Global nuclear arms spending soars amid AI threats and new 'arms



race'

एआई खतरों और नई 'हथियारों की दौड़' के बीच वैश्विक परमाणु हथियार खर्च में भारी वृद्धि

- Worldwide spending on **nuclear weapons** soared to a record high last year as atomic-armed countries moved more warheads **from storage onto delivery systems**, experts said on Tuesday.
विशेषज्ञों ने मंगलवार को कहा कि पिछले वर्ष **परमाणु हथियारों** पर वैश्विक खर्च रिकॉर्ड स्तर पर पहुँच गया, क्योंकि परमाणु-सशस्त्र देशों ने अधिक वारहेड्स को भंडारण से निकालकर तैनाती प्रणालियों में स्थानांतरित किया।
- The **nine nuclear-armed states** jointly spent nearly **\$119 billion** on their arsenals last year, up **19%** from 2024, according to the **International Campaign to Abolish Nuclear Weapons (ICAN)**.
इंटरनेशनल कैम्पेन टू एबोलिश न्यूक्लियर वेपन्स (ICAN) के अनुसार, नौ परमाणु-सशस्त्र देशों ने पिछले वर्ष अपने परमाणु शस्त्रागार पर संयुक्त रूप से लगभग **119 अरब डॉलर** खर्च किए, जो 2024 की तुलना में **19% अधिक** है।
- SIPRI's** report highlighted that the **total estimated number of nuclear warheads** had been declining for decades, falling to **12,187** at the start of this year.
SIPRI की रिपोर्ट में बताया गया कि **परमाणु वारहेड्स** की कुल अनुमानित संख्या दशकों से घट रही है और इस वर्ष की शुरुआत में यह घटकर **12,187** रह गई।
- But it warned the number of weapons available for potential use had risen to **9,745**.
हालाँकि रिपोर्ट ने चेतावनी दी कि संभावित उपयोग के लिए उपलब्ध हथियारों की संख्या बढ़कर **9,745** हो गई है।

Growing arsenal

बढ़ता परमाणु शस्त्रागार

- The **U.S. and Russia** together hold around **83%** of the world's nuclear arms stockpile, with more than **5,000 warheads each**.
अमेरिका और रूस मिलकर दुनिया के परमाणु हथियार भंडार का लगभग **83%** हिस्सा रखते हैं, और दोनों के पास **5,000 से अधिक वारहेड्स** हैं।
- China** is expanding its nuclear arsenal, SIPRI said, estimating that it counts around **620 warheads**.
SIPRI के अनुसार, चीन अपने परमाणु शस्त्रागार का विस्तार कर रहा है और उसके पास लगभग **620 वारहेड्स** हैं।
- ICAN's** report indicated that **all nuclear-armed states, which also include Britain, France, India, Israel, North Korea and Pakistan**, were increasing investments in their arsenals.
ICAN की रिपोर्ट के अनुसार, ब्रिटेन, फ्रांस, भारत, इज़राइल, उत्तर कोरिया और पाकिस्तान सहित सभी परमाणु-सशस्त्र देश अपने शस्त्रागार में निवेश बढ़ा रहे हैं।
- The **U.S.** spent more than all the other countries combined, dishing out **\$69.2 billion** on nuclear weapons in 2025.
अमेरिका ने अन्य सभी देशों के संयुक्त खर्च से भी अधिक, **2025 में 69.2 अरब डॉलर** परमाणु हथियारों पर खर्च किए।
- This was followed by **China**, which was estimated to have spent **\$13.5 billion**.
इसके बाद चीन का स्थान रहा, जिसने अनुमानतः **13.5 अरब डॉलर** खर्च किए।
- Britain** spent **\$12.6 billion**.
ब्रिटेन ने **12.6 अरब डॉलर** खर्च किए।
- Russia** spent **\$9.5 billion**.
रूस ने **9.5 अरब डॉलर** खर्च किए।

GS Paper III: Economy		10 June 2026
TOPICS COVERED		
10J6	'Modi will surpass Nehru's record of being longest-serving PM of India' 'मोदी भारत के सबसे लंबे समय तक प्रधानमंत्री रहने के नेहरू के रिकॉर्ड को पार कर देंगे'	
10J6	Centre publishes rules for setting up coal exchanges केंद्र ने कोयला एक्सचेंज स्थापित करने के लिए नियम प्रकाशित किए	



10J6 Alberta pitches cheap natural gas for data centres
अल्बर्टा ने डेटा सेंटरों के लिए सस्ती प्राकृतिक गैस की पेशकश की

'Modi will surpass Nehru's record of being longest-serving PM of India'

GS III: Economy

The Hindu Bureau
NEW DELHI

Union Home Minister Amit Shah said Prime Minister Narendra Modi completed 4,398 days in office on Tuesday and would surpass the record of former Prime Minister Jawaharlal Nehru on Wednesday.

He said Mr. Modi would have the distinction of serving the nation for the longest continuous period as an elected Prime Minister of India. He stated that during his tenure, Mr. Modi made public welfare the guiding principle of governance.

On Wednesday, the members of National Democratic Alliance (NDA) will meet in Delhi to mark 12 years of the alliance being in power.

Mr. Shah launched the Land Port Management System (LPMS-'VINIMAY') on Tuesday.

Addressing the pro-



Amit Shah during the inauguration of the Land Port Management System at Vigyan Bhawan in New Delhi on Tuesday. ANI

gramme, the Minister said that since 2014, moving beyond a security-centric approach, land ports were developed as the first line of defence for security, a means to facilitate trade, and a bridge for people-to-people connectivity. At the same time, land ports had played a significant role in the holistic development of border areas, promoting legitimate trade, and addressing challenges such as

migration from border villages and districts.

Smart borders

Mr. Shah said that easier movement of people across borders had enhanced cultural exchange. He said that in a country like India, with its vast land borders, border management played a very important role.

Mr. Shah said the Home Ministry was working on a

four-pronged strategy to secure India's borders under the concept of Smart Borders. The Land Port Management System had been designed keeping in mind the requirements of all stakeholders, while giving special emphasis to security. Together with the Smart Border initiative, this system would help to create an impregnable and secure border management framework. Mr. Shah added that this would help curb illegal activities.

He said the system would provide an integrated digital platform for the management of cargo, passengers and vehicles. It would enhance coordination among various agencies and make information exchange seamless. The Single Electronic Window and Automatic Number Plate Recognition (ANPR)-based gate operation system would result in significant time savings.

10J6. 'Modi will surpass Nehru's record of being longest-serving PM of India'

'मोदी भारत के सबसे लंबे समय तक प्रधानमंत्री रहने के नेहरू के रिकॉर्ड को पार कर देंगे'

• Mr. Shah launched the Land Port Management System (LPMS-'VINIMAY') on Tuesday.

श्री शाह ने मंगलवार को लैंड पोर्ट मैनेजमेंट सिस्टम (LPMS-'विनिमय') का शुभारंभ किया।

• He said the system would provide an integrated digital platform for the management of cargo, passengers and vehicles.

उन्होंने कहा कि यह प्रणाली

मालवाहक सामग्री, यात्रियों और

वाहनों के प्रबंधन हेतु एक एकीकृत डिजिटल मंच उपलब्ध कराएगी।

- It would enhance coordination among various agencies and make information exchange seamless. यह विभिन्न एजेंसियों के बीच समन्वय को बढ़ाएगी तथा सूचना आदान-प्रदान को निर्बाध बनाएगी।

- The Single Electronic Window and Automatic Number Plate Recognition (ANPR)-based gate operation system would result in significant time savings.

सिंगल इलेक्ट्रॉनिक विंडो तथा ऑटोमैटिक नंबर प्लेट रिकग्निशन (ANPR) आधारित गेट संचालन प्रणाली के माध्यम से समय की उल्लेखनीय बचत होगी।

LAND PORT MANAGEMENT SYSTEM (LPMS – 'VINIMAY')

- VINIMAY is the digital Land Port Management System (LPMS) developed by the Land Ports Authority of India under the Ministry of Home Affairs (MHA).
- The word "Vinimay" in Sanskrit/Hindi means exchange, reflecting its role in facilitating the movement of goods, vehicles, and passengers across India's land borders.
- It is designed to digitize, streamline, and modernize operations at India's Integrated Check Posts (ICPs) located along international land borders.

Integrated Check Posts (ICPs)

- Integrated Check Posts are border infrastructure facilities established to facilitate:
 - International trade.
 - Passenger movement.



- Customs clearance.
- Immigration services.
- Security checks.

GS III: Economy

Centre publishes rules for setting up coal exchanges

Paving the way for establishing coal exchanges in the country, the government on Tuesday published the Coal Exchange Rules (2026) - formally putting down rules and eligibility criteria for operating and instituting the exchange. Prominent among them are statutory regulations about contract payment and settlement, minimum eligibility needs to be met by an entity to establish the exchange and its governance structure, among other things.

पूरा करना होगा।

10J6. Centre publishes rules for setting up coal exchanges

केंद्र ने कोयला एक्सचेंज स्थापित करने के लिए नियम प्रकाशित किए

- Paving the way for establishing coal exchanges in the country, the government on Tuesday published the Coal Exchange Rules (2026).

देश में कोयला एक्सचेंजों की स्थापना का मार्ग प्रशस्त करते हुए, सरकार ने मंगलवार को कोल एक्सचेंज नियम (2026) प्रकाशित किए।

- The rules also specify the minimum eligibility requirements that must be met by an entity to establish the exchange.

नियमों में यह भी निर्धारित किया गया है कि एक्सचेंज स्थापित करने के लिए किसी संस्था को कौन-कौन सी न्यूनतम पात्रता आवश्यकताओं को

Alberta pitches cheap natural gas for data centres

NEWS ANALYSIS

GS III: Economy

Reuters
CALGARY

Alberta is touting its abundant supply of cheap fossil fuels to entice tech companies to build data centres for the AI boom, a move that would undermine Canada's plan to link new data centre development with clean energy expansion.

Canada is the world's fifth-largest producer of natural gas, around 60% of which comes from Alberta. As well as huge fossil fuel reserves, the western province boasts a cooler climate that can offset the cooling costs of data centre infrastructure and plenty of available land. All that can make operating data-



Risk of pollution: A view of the Wildcat Hills Gas Plant near Cochrane, Alberta, Canada. REUTERS

centres more cost-efficient than in the United States, where they are facing pushback from communities and lawmakers.

New market

Tech companies could also create a new market for long-suffering natural gas producers in Western Can-

ada, where drillers face a multi-year supply glut and at times had to pay customers to take gas when prices have turned negative.

But a rapid expansion of data centres in Alberta would disrupt Canada's plans to power the AI boom using clean hydro, renewables and nuclear.

While natural gas is a cleaner power source than coal or oil, as a fossil fuel it contributes to emissions.

Prime Minister Mark Carney has said Canadian data centres will run on "some of the cleanest power in the world." His government's June 4 AI strategy - which aims to speed up Canada's adoption of artificial intelligence - highlighted how more than 83% of the country's electricity grid comes from renewables and low-emission power sources.

Canada currently has only five functioning data centres at the so-called hyperscale level, demanding at least 50 megawatts of electricity capacity, equivalent to the power needs of a small city.

But nearly 100 more are in the works and 90% of

those are planned for Alberta, where the emissions intensity of the province's electricity grid is almost five times the national average, research from York University shows.

'Digital pipeline' view

"We're essentially looking at these data centres as digital pipelines and digital refineries for us to help get the value from our natural gas to global markets, but in a creative modern way," Alberta's Technology Minister Nate Glubish said.

The province aims to attract C\$100 billion in data centre investment. Glubish said he has made multiple trips to Silicon Valley since 2024 to court energy-hungry tech giants with Alberta's natural gas pitch.

The 20 existing small- to mid-scale data centers in

Alberta already pull from the province's energy grid, which is 60% powered by natural gas. The provincial government is giving new proponents the option to build their own power sources to avoid limits on power capacity.

Julia Sawatzky, a doctor and member of the advocacy group Canadian Physicians for the Environment, said there was a growing discrepancy between Canada's stated environmental goals and the reality on the ground.

"There seems to be an idea or a vision that Canada could be a green economy or a place that's meeting its climate goals," Sawatzky said. "But the way this AI data strategy might actually roll out, I think, is cause for all of us to really pay attention."

10J6. Alberta pitches cheap natural gas for data centres

अल्बर्टा ने डेटा सेंटरों के लिए सस्ती प्राकृतिक गैस की पेशकश की

- Alberta is touting its abundant supply of cheap fossil fuels to entice tech companies to build data centres for the AI boom, a move that would undermine Canada's plan to link new data centre development with clean energy expansion.

अल्बर्टा तकनीकी कंपनियों को AI बूम के लिए डेटा सेंटर स्थापित करने हेतु आकर्षित करने के लिए सस्ते जीवाश्म ईंधनों की



अपनी प्रचुर उपलब्धता को बढ़ावा दे रहा है, जो नए डेटा सेंटर विकास को स्वच्छ ऊर्जा विस्तार से जोड़ने की कनाडा की योजना को कमजोर कर सकता है।

- **Canada is the world's fifth-largest producer of natural gas**, around 60% of which comes from Alberta. कनाडा दुनिया का पाँचवाँ सबसे बड़ा प्राकृतिक गैस उत्पादक है, जिसकी लगभग 60% गैस अल्बर्टा से आती है।

GS Paper III: Science and Technology		10 June 2026
TOPICS COVERED		
10J6	Scientists find a blood test that predicts lung cancer years early वैज्ञानिकों ने एक ऐसा रक्त परीक्षण खोजा है जो फेफड़ों के कैंसर की वर्षों पहले भविष्यवाणी कर सकता है।	
10J6	A black hole's elusive wind एक ब्लैक होल की रहस्यमयी वायु-धारा	
10J6	Securing India against the threat of a 'Mythocalypse' 'मिथोकैलिप्स' के खतरे के विरुद्ध भारत को सुरक्षित बनाना	
10J6	How Babbage automated calculations with simple machines बैबेज ने सरल मशीनों की सहायता से गणनाओं को कैसे स्वचालित बनाया	
10J6	Musk's Starlink leads Bezos' Amazon in in-flight Wi-Fi race उड़ान के दौरान वाई-फाई की दौड़ में मस्क का स्टारलिनक, बेजोस के अमेज़न से आगे	
10J6	Anthropic opens most powerful AI model to public with safeguards एंथ्रोपिक ने सुरक्षा उपायों के साथ अपना सबसे शक्तिशाली AI मॉडल आम जनता के लिए खोला	



Scientists find a blood test that predicts lung cancer years early

A new study has zeroed in on a set of 14 blood plasma proteins, called the '14-protein signature', as a strong predictor of being diagnosed with lung cancer years in advance; the team also identified an existing drug that could potentially be used to reduce the risk of developing lung cancer

GS III: S&T

S. Swaminathan

Lung cancer is one of the more common cancers affecting people worldwide. This is mainly due to smoking and, to a lesser extent, air pollution and occupational exposure. According to the latest World Health Organization estimates, there are about 2.5 million new cases and 1.8 million deaths every year. Prevention offers the ideal solution to this public health problem.

Scientists are currently on the threshold of finding a new way to identify people who may be predisposed to developing lung cancer and protect them proactively. A multinational team, from almost a dozen countries, led by Charles Swanton of the Francis Crick Institute, London, published its findings on an exciting discovery in *Cell* on May 4. The team has zeroed in on a set of 14 blood plasma proteins, which they call the "14-protein signature", as a strong predictor of being diagnosed with lung cancer years in advance.

The team also identified an existing drug that could potentially be used to reduce the risk of developing lung cancer.

Looking in the blood

Blood plasma is the liquid portion of the blood that flows in our body. It contains thousands of proteins that come from every organ and tissue. This entire set of proteins is called the plasma proteome. The large-scale systematic study of the proteome is called proteomics.

Sampling blood plasma is akin to a liquid biopsy. The plasma proteomics profile provides a real-time snapshot of health and disease. If scientists could compare the profiles of people before and after the onset of a disease, they can glean important clues about changes in the plasma proteome as a person goes from well to unwell.

To get such data pertaining to lung cancer, Swanton et al. turned to the U.K. Biobank, an ongoing initiative that tracks the lives of approximately half a million volunteers to find out who falls ill and why. The Biobank is a repository of anonymised biological samples and corresponding health-related information of all these volunteers. It is accessible to scientists around the world to develop diagnostics and therapies for everyone, everywhere.

For a subset of the volunteers, around 10%, the plasma proteomics profiles became available in 2023.

The team used the profiles of about 48,000 volunteers to train a machine-learning model along with patient characteristics, such as age,

gender, smoking status, lung cancer diagnosis, etc. This way, the team identified 14 plasma proteins linked to lung cancer.

How a cancer forms

Next, the researchers used the model to predict the incidence of lung cancer diagnoses using the proteomics data of about 12,000 patients whose data had been excluded from the model's training. This set included 75 individuals of lung cancer with a median time to diagnosis of 5.1 years. The model predicted lung cancer diagnosis with a very high sensitivity, successfully identifying more than 75% cases.

The 14-protein signature was also found in eight additional datasets, including one from life-long non-smokers, essentially validating the signature's usefulness.

The scientists also found that the signature was more pronounced when specific inflammatory pathways involving smoking and air pollution were activated. In a previous study, the same team had found that air pollution causes inflammation that awakens dormant mutant lung cells, which eventually become cancer cells.

This detail, together with the observations in the new study, led the team to hypothesise that smoking induces mutations, lung inflammation triggered by environmental cues follows, and this culminates in lung cancer.

The signature was also more distinct in people who developed chronic obstructive pulmonary disease and pulmonary fibrosis.

The CANTOS trial

If future research finds that this is indeed one way that lung cancer develops, scientists can think of treating the inflammation before the cancer takes root. Canakinumab is a drug made by Novartis and which currently has the U.S. Food and Drug Administration's approval to treat inflammatory disorders. Swanton et al. were aware of a previous clinical trial called CANTOS that tested canakinumab's ability to reduce the risk of recurrent cardiac events in patients who had experienced a prior heart attack and were suffering from persistent inflammation. Its effect was modest.

However, Swanton et al., who carried out a retrospective analysis of the trial data, found that 2,300 of the CANTOS participants who received canakinumab happened to display the 14-protein signature – and the risk of lung cancer was down by 50% in this group.

The data suggested that canakinumab could be a potential drug to prevent future lung cancer in those with the 14-protein signature.

Step by step

The 14-protein signature needs to be further validated. It has been derived

from a population of limited diversity, representing the U.K., the U.S., and East Asia. If the signature is found to be relevant in many or even all populations, scientists will then have to develop a diagnostic test to detect all 14 proteins in blood plasma.

Assuming such a test also becomes available, canakinumab will have to be tested in clinical trials for its new purpose. Unfortunately, the CANTOS trial found that canakinumab could have serious side effects. The European Medicine Agency's report concluded that the drug's toxicity could outweigh its benefits.

Canakinumab is also prohibitively expensive. Treatments usually involve multiple doses over long periods of time. In the U.S., it costs \$73,000 for a year. It is neither registered nor commercially available in India, and it would be imperative to explore inexpensive alternatives with similar function and with more acceptable safety profiles.

Ultimately, if we manage to tick all these boxes, the diagnostics and the drug would be of great benefit for individuals at risk of lung cancer worldwide. The work of Swanton et al. is a step in this direction.

(S. Swaminathan is a retired professor of biology from BITS Pilani-Hyderabad and a former scientist, International Centre for Genetic Engineering and Biotechnology, New Delhi. ssn225@gmail.com)



Sampling blood plasma is akin to a liquid biopsy. The plasma proteomics profile provides a real-time snapshot of health and disease. ADRIAN SULYOK/UNSPLASH

THE GIST

▼ The 14-protein signature has been derived from a population of limited diversity, representing the U.K., the U.S., and East Asia

▼ While promising, it still needs to be further validated

▼ If the signature is found to be relevant in many or even all populations, scientists will then have to develop a diagnostic test to detect all 14 proteins in blood plasma

10J6. Scientists find a blood test that predicts lung cancer years early

वैज्ञानिकों ने एक ऐसा रक्त परीक्षण खोजा है जो फेफड़ों के कैंसर की वर्षों पहले भविष्यवाणी कर सकता है।

- A new study has zeroed in on a set of **14 blood plasma proteins**, called the '**14-protein signature**', as a strong predictor of being diagnosed with **lung cancer** years in advance; एक नए अध्ययन ने **14 रक्त प्लाज़्मा प्रोटीनों** के एक समूह, जिसे '**14-प्रोटीन सिग्नेचर**' कहा जाता है, की पहचान की है, जो वर्षों पहले **फेफड़ों के कैंसर** के निदान की एक सशक्त भविष्यवाणी करने वाला संकेतक है;
- The team also identified an existing **drug** that could potentially be used to reduce the risk of developing **lung cancer**.



टीम ने एक मौजूदा दवा की भी पहचान की है, जिसका संभावित रूप से उपयोग फेफड़ों के कैंसर के विकसित होने के जोखिम को कम करने के लिए किया जा सकता है

- **Lung cancer is one of the more common cancers affecting people worldwide.**
फेफड़ों का कैंसर विश्वभर में लोगों को प्रभावित करने वाले अधिक सामान्य कैंसरों में से एक है।
- This is **mainly due to smoking and, to a lesser extent, air pollution and occupational exposure.**
यह मुख्यतः धूमपान तथा कुछ हद तक वायु प्रदूषण और व्यावसायिक संपर्क के कारण होता है।
- According to the latest **World Health Organization** estimates, there are about **2.5 million new cases and 1.8 million deaths every year.**
विश्व स्वास्थ्य संगठन के नवीनतम अनुमानों के अनुसार, प्रतिवर्ष लगभग 25 लाख नए मामले और 18 लाख मृत्यु होती हैं।
- **Prevention** offers the ideal solution to this **public health problem.**
रोकथाम इस जनस्वास्थ्य समस्या का आदर्श समाधान प्रस्तुत करती है।
- Scientists are currently on the threshold of finding a new way to identify people who may be predisposed to developing **lung cancer** and protect them proactively.
वैज्ञानिक वर्तमान में ऐसे लोगों की पहचान करने के लिए एक नई विधि खोजने की दहलीज पर हैं, जिनमें फेफड़ों का कैंसर विकसित होने की प्रवृत्ति हो सकती है, तथा उनकी सक्रिय रूप से सुरक्षा की जा सके।
- A multinational team, from almost a dozen countries, led by **Charles Swanton** of the **Francis Crick Institute, London**, published its findings on an exciting discovery in **Cell** on May 4.
लगभग एक दर्जन देशों के एक बहुराष्ट्रीय दल ने, जिसका नेतृत्व फ्रांसिस क्रिक संस्थान, लंदन के चार्ल्स स्वांटन ने किया, 4 मई को सेल में अपनी एक महत्वपूर्ण खोज के निष्कर्ष प्रकाशित किए।
- The team has zeroed in on a set of **14 blood plasma proteins**, which they call the “**14-protein signature**”, as a strong predictor of being diagnosed with **lung cancer** years in advance.
दल ने 14 रक्त प्लाज्मा प्रोटीनों के एक समूह की पहचान की है, जिसे वे “14-प्रोटीन सिग्नेचर” कहते हैं, जो वर्षों पहले फेफड़ों के कैंसर के निदान का एक सशक्त संकेतक है।
- The team also identified an existing **drug** that could potentially be used to reduce the risk of developing **lung cancer.**
दल ने एक मौजूदा दवा की भी पहचान की, जिसका संभावित रूप से फेफड़ों के कैंसर के जोखिम को कम करने में उपयोग किया जा सकता है।

Looking in the blood रक्त में खोज

- **Blood plasma** is the liquid portion of the blood that flows in our body.
रक्त प्लाज्मा रक्त का वह तरल भाग है जो हमारे शरीर में प्रवाहित होता है।
- It contains **thousands of proteins** that come from every organ and tissue.
इसमें हजारों प्रोटीन होते हैं जो शरीर के प्रत्येक अंग और ऊतक से आते हैं।
- This entire set of proteins is called the **plasma proteome.**
प्रोटीनों के इस संपूर्ण समूह को प्लाज्मा प्रोटीओम कहा जाता है।
- The large-scale systematic study of the **proteome** is called **proteomics.**
प्रोटीओम के बड़े पैमाने पर व्यवस्थित अध्ययन को प्रोटीओमिक्स कहा जाता है।
- The **Biobank** is a repository of anonymised biological samples and corresponding health-related information of all these volunteers.
बायोबैंक इन सभी स्वयंसेवकों के गुमनाम जैविक नमूनों और उनसे संबंधित स्वास्थ्य जानकारी का भंडार है।
- It is accessible to scientists around the world to develop **diagnostics** and **therapies** for everyone, everywhere.
यह विश्वभर के वैज्ञानिकों के लिए उपलब्ध है ताकि वे सभी लोगों के लिए निदान तकनीकों और उपचार पद्धतियों का विकास कर सकें।
- This detail, together with the observations in the new study, led the team to hypothesise that **smoking** induces **mutations**, lung **inflammation** triggered by environmental cues follows, and this culminates in **lung cancer.**



यह तथ्य, नए अध्ययन के अवलोकनों के साथ मिलकर, दल को यह परिकल्पना करने की ओर ले गया कि धूमपान उत्परिवर्तन उत्पन्न करता है, इसके बाद पर्यावरणीय संकेतों से प्रेरित फेफड़ों की सूजन होती है, और अंततः यह फेफड़ों के कैंसर में परिणत होती है।

- The signature was also more distinct in people who developed **chronic obstructive pulmonary disease and pulmonary fibrosis**.

यह सिग्नेचर उन लोगों में भी अधिक स्पष्ट था जिनमें क्रॉनिक ऑब्सट्रक्टिव पल्मोनरी डिज़ीज़ तथा पल्मोनरी फाइब्रोसिस विकसित हुआ था।

The CANTOS trial

कैंटोस परीक्षण

- Canakinumab** is a drug made by **Novartis** and which currently has the **U.S. Food and Drug Administration's** approval to treat **inflammatory disorders**.
कैनाकिनुमैब एक दवा है जिसे नोवार्टिस ने विकसित किया है और जिसे वर्तमान में अमेरिकी खाद्य एवं औषधि प्रशासन द्वारा सूजन संबंधी विकारों के उपचार के लिए स्वीकृति प्राप्त है।
- Swanton et al. were aware of a previous clinical trial called **CANTOS** that tested **canakinumab's** ability to reduce the risk of recurrent **cardiac events** in patients who had experienced a prior **heart attack** and were suffering from persistent **inflammation**.
स्वांटन और उनके सहयोगी कैंटोस नामक एक पूर्व नैदानिक परीक्षण से परिचित थे, जिसमें कैनाकिनुमैब की उस क्षमता का परीक्षण किया गया था जो पहले हृदयाघात झेल चुके तथा लगातार सूजन से पीड़ित रोगियों में पुनरावर्ती हृदय संबंधी घटनाओं के जोखिम को कम कर सके।
- Its effect was modest**.
इसका प्रभाव सीमित था।
- However, Swanton et al., who carried out a **retrospective analysis** of the trial data, found that **2,300** of the **CANTOS participants** who received **canakinumab** happened to display the **14-protein signature** — and the risk of **lung cancer** was down by **50%** in this group.
हालाँकि, स्वांटन और उनके सहयोगियों ने परीक्षण के आँकड़ों का पश्चदृष्टि विश्लेषण किया और पाया कि कैनाकिनुमैब प्राप्त करने वाले कैंटोस प्रतिभागियों में से 2,300 व्यक्तियों में 14-प्रोटीन सिग्नेचर मौजूद था — और इस समूह में फेफड़ों के कैंसर का जोखिम 50% कम था।
- The data suggested that **canakinumab** could be a potential drug to prevent future **lung cancer** in those with the **14-protein signature**.
आँकड़ों से संकेत मिला कि कैनाकिनुमैब, 14-प्रोटीन सिग्नेचर वाले व्यक्तियों में भविष्य के फेफड़ों के कैंसर को रोकने के लिए एक संभावित दवा हो सकती है।
- If the signature is found to be relevant in many or even all populations, **scientists will then have to develop a diagnostic test to detect all 14 proteins in blood plasma**.
यदि यह सिग्नेचर अनेक अथवा सभी जनसंख्याओं में प्रासंगिक पाया जाता है, तो वैज्ञानिकों को रक्त प्लाज़्मा में सभी 14 प्रोटीनों का पता लगाने के लिए एक नैदानिक परीक्षण विकसित करना होगा।
- Assuming such a test also becomes available, **canakinumab** will have to be tested in **clinical trials** for its new purpose.
यह मानते हुए कि ऐसा परीक्षण भी उपलब्ध हो जाता है, कैनाकिनुमैब को उसके इस नए उद्देश्य के लिए नैदानिक परीक्षणों में परखा जाना होगा।
- Unfortunately, the **CANTOS trial** found that **canakinumab** could have serious **side effects**.
दुर्भाग्यवश, कैंटोस परीक्षण में पाया गया कि कैनाकिनुमैब के गंभीर दुष्प्रभाव हो सकते हैं।
- The **European Medicine Agency's** report concluded that the **drug's toxicity** could outweigh its **benefits**.
यूरोपीय औषधि एजेंसी की रिपोर्ट ने निष्कर्ष निकाला कि इस दवा की विषाक्तता इसके लाभों से अधिक हो सकती है।
- Canakinumab** is also prohibitively expensive.
कैनाकिनुमैब अत्यधिक महंगी भी है।



- Treatments usually involve multiple doses over long periods of time.
उपचार में सामान्यतः लंबे समय तक कई खुराकें शामिल होती हैं।
- In the U.S., it costs \$73,000 for a year.
संयुक्त राज्य अमेरिका में इसकी वार्षिक लागत 73,000 डॉलर है।
- It is neither registered nor commercially available in India, and it would be imperative to explore inexpensive alternatives with similar function and with more acceptable safety profiles.
यह भारत में न तो पंजीकृत है और न ही व्यावसायिक रूप से उपलब्ध है, तथा समान कार्यक्षमता और अधिक स्वीकार्य सुरक्षा प्रोफाइल वाले कम लागत के विकल्पों की खोज करना आवश्यक होगा।

A black hole's elusive wind

Vasudevan Mukunth

GS III: S&T

For more than 50 years, astronomers have suspected that Sagittarius A*, the supermassive black hole at the centre of the Milky Way, was blowing a wind of hot gas into space. However, they couldn't find evidence of it. This has now changed if the results of a new study, using the ALMA telescope in Chile, are to be believed. By combining five years of data from ALMA, researchers from Northwestern University, U.S., have reported a large cone-shaped clearing in the dense molecular gas surrounding the black hole. This clearing is at least 3.2 lightyears long and opens at a 45-degree angle, as if the black hole is 'blowing' away cold gas that would otherwise fall into it. According to the study, the finding is the first definitive evidence of a "presently active" wind from Sagittarius A*. By blowing away the gas, the wind keeps too many stars from forming, which would deplete the gas and prevent future star formation. If too many stars explode when they die, they could also blow away the remaining gas, nixing the galaxy's ability to evolve. When the black hole pulls on some gas, it swirls around instead of falling straight in. As it accelerates, the gas particles are heated by friction as the gravity pressurises them. Eventually the gas becomes a plasma burning millions of degrees hot. As per the study, just 1 g of this gas can release



An image depicting evidence of a wind blowing away from Sagittarius A*, the Milky Way's supermassive black hole. NASA

enough energy to push away 100 kg of nearby gas. The pushed gas makes up the wind.

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10J6. A black hole's elusive wind

एक ब्लैक होल की रहस्यमयी वायु-धारा

- For more than 50 years, astronomers have suspected that Sagittarius A*, the supermassive black hole at the centre of the Milky Way, was blowing a wind of hot gas into space. पचास वर्षों से अधिक समय से, खगोलविदों को संदेह था कि सैजिटेरियस ए*, जो मिल्की वे के केंद्र में स्थित अतिविशालकाय ब्लैक होल है, अंतरिक्ष में गर्म गैस की एक धारा प्रवाहित कर रहा था।
- However, they couldn't find evidence of it. हालाँकि, वे इसका प्रमाण नहीं खोज सके थे।
- This has now changed if the results of a new study, using the ALMA telescope in Chile, are to be believed. यदि चिली स्थित अल्मा दूरबीन (ALMA Telescope) का उपयोग करके किए गए एक नए अध्ययन के परिणामों पर विश्वास किया जाए, तो अब यह स्थिति बदल गई है।
- By combining five years of data from ALMA, researchers from Northwestern University, U.S., have reported a large cone-shaped clearing in the dense molecular gas surrounding the black hole.

अल्मा के पाँच वर्षों के आँकड़ों को संयोजित करके, नॉर्थवेस्टर्न विश्वविद्यालय, अमेरिका के शोधकर्ताओं ने ब्लैक होल के चारों ओर स्थित घनी आणविक गैस में एक बड़े शंकु-आकार के रिक्त क्षेत्र की सूचना दी है।

- This clearing is at least 3.2 lightyears long and opens at a 45-degree angle, as if the black hole is 'blowing' away cold gas that would otherwise fall into it. यह रिक्त क्षेत्र कम से कम 3.2 प्रकाश-वर्ष लंबा है और 45 डिग्री के कोण पर खुलता है, मानो ब्लैक होल उस ठंडी गैस को 'उड़ा' रहा हो जो अन्यथा उसमें गिर जाती।
- According to the study, the finding is the first definitive evidence of a "presently active" wind from Sagittarius A*. अध्ययन के अनुसार, यह खोज सैजिटेरियस ए* से निकलने वाली "वर्तमान में सक्रिय" गैसीय धारा का पहला निर्णायक प्रमाण है।



- By blowing away the gas, the wind keeps too many **stars** from forming, which would deplete the gas and prevent future **star formation**.
गैस को दूर हटाकर, यह धारा अत्यधिक तारों के निर्माण को रोकती है, जो अन्यथा गैस को समाप्त कर भविष्य के तारा-निर्माण को रोक देता।
- If too many stars explode when they die, they could also blow away the remaining gas, nixing the galaxy's ability to evolve.
यदि बहुत अधिक तारे अपनी मृत्यु के समय विस्फोट करते हैं, तो वे शेष गैस को भी उड़ा सकते हैं, जिससे आकाशगंगा की विकास करने की क्षमता समाप्त हो सकती है।
- When the **black hole** pulls on some gas, it swirls around instead of falling straight in.
जब ब्लैक होल कुछ गैस को अपनी ओर खींचता है, तो वह सीधे गिरने के बजाय उसके चारों ओर घूमने लगती है।
- As it accelerates, the gas particles are heated by **friction** as the **gravity** pressurises them.
जैसे-जैसे उसकी गति बढ़ती है, गैस के कण घर्षण के कारण गर्म हो जाते हैं क्योंकि गुरुत्वाकर्षण उन पर दबाव डालता है।
- Eventually the gas becomes a **plasma** burning millions of degrees hot.
अंततः यह गैस लाखों डिग्री तापमान वाले अत्यंत गर्म प्लाज्मा में परिवर्तित हो जाती है।
- As per the study, just **1 g** of this gas can release enough energy to push away **100 kg** of nearby gas.
अध्ययन के अनुसार, इस गैस का मात्र **1 ग्राम** आसपास की **100 किलोग्राम** गैस को दूर धकेलने के लिए पर्याप्त ऊर्जा मुक्त कर सकता है।
- The pushed gas makes up the **wind**.
दूर धकेली गई गैस ही इस गैसीय धारा (विंड) का निर्माण करती है।



Securing India against the threat of a 'Mythocalypse'

CS III: S&T

When it comes to Artificial Intelligence (AI), the United States is about six months ahead of the rest of the world. Within the U.S., Silicon Valley is six months ahead of New York, and within Silicon Valley, frontier AI companies are six months ahead of everyone else. Simple maths reveals where India stands vis-à-vis the AI frontier. The question that should keep us awake at night is this: What about the inevitable proliferation of Mythos-class capabilities, including from labs that do not share Anthropic's restraint and from open-weight model releases over which no one has control? Anthropic says its new model, Claude Mythos, can outperform human experts at certain cybersecurity tasks.

Mythos access has expanded to more countries including India and organisations, but with the U.S. government's prior scrutiny. What happens if some non-state bad actor takes control of India's financial systems or examination systems or power plants? What can Anthropic even do?

At a minimum, India should pursue a defensive AI partnership like an AUKUS Pillar 2 – perhaps a "Defensive AI Quad" with the U.S., the United Kingdom, and Japan – to secure structured access to Mythos-class capabilities for testing and protecting critical infrastructure. In return, India could contribute its threat-modelling expertise and the uniquely varied attack surfaces of the broader digital public infrastructure stack.

Why Mythos matters

Why is this time different – and potentially far more dangerous? First, most current AI models identify vulnerabilities that can be explained to and understood by humans, enabling experts to diagnose and fix them. Mythos, however, is discovering vulnerabilities in systems that cannot always be explained, understood, or even known to exist by human operators.

Second, Mythos is fundamentally different from a standard Large Language Model (LLM) because it is "zero day" at scale. A zero day is essentially an undiscovered bug or a flaw in code that no one knows exists, but when found can be exploited to devastating consequences. With it come serious moral-hazard and national security concerns, especially when there is the prospect of selling such capabilities to the highest bidder.

Now, what is even more astonishing is that Mythos' offensive capabilities were not deliberately engineered; they emerged as a byproduct of advanced reasoning, long-horizon planning, and autonomous execution. Mythos discovered long-standing bugs that had eluded human experts and automated "fuzzing" tools for decades. For example, it discovered a 16-year-old flaw that had survived five million automated tests, as also in the Linux kernel which is the backbone of every Android device in the world.

The latest update on Mythos, released on May 22, 2026, reported that it had scanned 1,000 open-source projects and flagged 23,019



Srivatsa Krishna

IAS officer

vulnerabilities. Of these, 6,202 were assessed as of high- or critical-severity. One vulnerability in wolfSSL – CVE-2026-5194 – could have allowed attackers to forge TLS certificates across billions of IoT and industrial devices. But the statistic that should concern policymakers most is this: barely 1% of the vulnerabilities identified by Mythos have been patched.

Third, what makes Mythos more dangerous, is that unlike older models that merely flag suspicious code, Mythos can autonomously chain multiple low-severity vulnerabilities – issues that might otherwise be ignored – into a single, highly destructive attack. Finding a vulnerability is one thing but chaining a bunch of vulnerabilities together and exploiting them autonomously is something completely different and daunting.

Fourth, the barriers to entry are very low. The U.K.'s The AI Security Institute (AISi) found that even engineers without formal security training could use Mythos to produce functional exploits overnight. In effect, it puts cyber capabilities once associated with nation-states within reach of script kiddies and ransomware groups.

Finally, Mythos may be showing signs of situational awareness. In sandboxed tests, the model used prohibited methods to solve a problem, appeared to recognise that those actions would be detected, and then changed its approach to hide how it had achieved the exploit.

India's preparedness gap

India has built a distinctive world-class digital front end through the India Stack, including UPI, Aadhaar, and the Account Aggregator framework. But much of it still runs on fragmented legacy back-end systems, especially in public sector units, State departments, and older public sector banks. Critical systems across finance and government still rely on outdated technology. Indian public sector banks continue to run substantial COBOL and Windows Server 2008/2012 workloads.

India has moved quickly in its response, but significant gaps remain. It lacks an AI Safety Institute. While the U.K. and the U.S. have established world-class institutions to evaluate frontier AI systems, India has no dedicated body to test such models against Indian threat scenarios. The IndiaAI Mission is focused primarily on development rather than safety evaluation. India therefore needs a dedicated India AI Safety Institute (IAISI), supported by data-sharing arrangements with the AISi and the U.S. Center for AI Standards and Innovation (CAISI). Without such a mechanism, India will remain dependent on foreign assessments of models that have never been tested against Indian systems and vulnerabilities.

At the same time, the cybersecurity workforce gap is estimated at more than 6,00,000 professionals. Patch cycles for public sector banks are measured in months, not hours. That is a dangerous mismatch in the Mythos era, where attackers can move at machine speed and exploit

vulnerabilities within hours. India needs a frontier AI accountability framework, modelled on California's SB 53 and the EU AI Act but tailored to Indian conditions. Any AI company operating in India whose model exceeds defined thresholds – such as compute, autonomy, or cyber capability – should disclose capability evaluations and known harms to the proposed IAISI. This could be built into the Digital Persona Data Protection Act, since informed consent requires meaningful disclosure of AI risks and capabilities.

The Centre should create a ₹15,000 crore-20,000 crore critical sector cybersecurity upgradation fund, including support for legacy modernisation in public sector banks. It should also fund and co-develop sovereign defensive AI models with domestic deep-tech firms to monitor telemetry, detect anomalies, and isolate compromised network segments in real time.

If a Mythos-class model becomes openly downloadable from a non-restraint-adhering lab (Meta has historically published open weights for its frontier models; Chinese labs increasingly do) then no defensive measure short of pre-emptive patching helps. India should lead the diplomatic effort at the G-20 to establish that the release of open-weight models above defined capability thresholds – specifically autonomous offensive cyber capability – should be subject to international notification and review requirements.

India has unique standing for this leadership: is a major AI consumer, a credible neutral voice between U.S. and Chinese AI policy positions, and the operator of the largest digital public infrastructure stack in the world. Mythos proves that cyber-defence is no longer a human-versus-human chess match. It is now an algorithmic arms race. For India, securing the digital economy requires matching the speed of the attacker – which means deploying defensive AI that can reason, patch, and protect at the same velocity.

The window is closing

In sum, this is not about Mythos versus India, but India's structural disadvantage in a world where the cost of finding zero-days is collapsing while the cost of patching is not. The goal is to prevent a breach at the weakest point from cascading into systemic failure. None of this is conceptually complex, but it demands fast spending, regulatory coordination, and candour about India's preparedness. That coordination should be driven by the Prime Minister's Office and not any single Ministry. The Mythos era – when capabilities of this class become routine, including in unrestrained hands – has already begun. India has 12 to 24 months to build the architecture needed to stay ahead of the threat rather than chase it. And who knows what Mythos 2.0 will be?

The views expressed are person

10J6. Securing India against the threat of a 'Mythocalypse'

'मिथोकैलिप्स' के खतरे के विरुद्ध भारत को सुरक्षित बनाना

- When it comes to Artificial Intelligence (AI), the United States is about six months ahead of the rest of the world.

कृत्रिम बुद्धिमत्ता (AI) के क्षेत्र में संयुक्त राज्य अमेरिका दुनिया के बाकी हिस्सों से लगभग छह महीने आगे है।

- Within the U.S., Silicon Valley is six months ahead of New York, and within Silicon Valley, frontier AI companies are six months ahead of everyone else.



अमेरिका के भीतर, सिलिकॉन वैली न्यूयॉर्क से लगभग छह महीने आगे है, और सिलिकॉन वैली के भीतर अग्रणी एआई कंपनियाँ अन्य सभी से छह महीने आगे हैं।

- The question that should keep us awake at night is this: **What about the inevitable proliferation of Mythos-class capabilities, including from labs that do not share Anthropic's restraint and from open-weight model releases over which no one has control?**
वह प्रश्न जो हमें रात भर चिंतित रखना चाहिए, यह है: **माइथोस-स्तरीय क्षमताओं** के अपरिहार्य प्रसार का क्या होगा, विशेषकर उन प्रयोगशालाओं से जो **एन्थ्रोपिक** जैसी सावधानी नहीं बरतती और उन ओपन-वेट मॉडलों से जिन पर किसी का नियंत्रण नहीं है?
- Anthropic** says its new model, **Claude Mythos**, can outperform human experts at certain **cybersecurity tasks**.
एन्थ्रोपिक का कहना है कि उसका नया मॉडल **क्लाउड माइथोस** कुछ **साइबर सुरक्षा** कार्यों में मानव विशेषज्ञों से बेहतर प्रदर्शन कर सकता है।
- At a minimum, **India** should pursue a **defensive AI partnership** like an **AUKUS Pillar 2** — perhaps a **“Defensive AI Quad”** with the **U.S.**, the **United Kingdom**, and **Japan** — to secure structured access to **Mythos-class capabilities** for testing and protecting critical infrastructure.
कम-से-कम **भारत** को **AUKUS Pillar 2** जैसी एक रक्षात्मक **एआई साझेदारी** की दिशा में कार्य करना चाहिए — संभवतः **अमेरिका**, **यूनाइटेड किंगडम** और **जापान** के साथ एक **“डिफेंसिव एआई क्वाड”** — ताकि महत्वपूर्ण अवसंरचना के परीक्षण और सुरक्षा हेतु **माइथोस-स्तरीय क्षमताओं** तक संरचित पहुँच प्राप्त की जा सके।
- Second, **Mythos** is fundamentally different from a standard **Large Language Model (LLM)** because it is **“zero day”** at scale.
दूसरा, **माइथोस** एक सामान्य **लार्ज लैंग्वेज मॉडल (LLM)** से मूल रूप से भिन्न है क्योंकि यह बड़े पैमाने पर **“ज़ीरो-डे”** क्षमताओं से युक्त है।
- A **zero day** is essentially an undiscovered bug or a flaw in code that no one knows exists, but when found can be exploited to devastating consequences.
ज़ीरो-डे मूलतः कोड में मौजूद ऐसी अज्ञात त्रुटि या कमजोरी होती है जिसके अस्तित्व के बारे में किसी को जानकारी नहीं होती, लेकिन खोजे जाने पर उसका विनाशकारी दुरुपयोग किया जा सकता है।
- Now, what is even more astonishing is that **Mythos' offensive capabilities** were not deliberately engineered; they emerged as a byproduct of advanced reasoning, long-horizon planning, and autonomous execution.
और भी आश्चर्यजनक बात यह है कि **माइथोस की आक्रामक क्षमताएँ** जानबूझकर विकसित नहीं की गई थीं; वे उन्नत तर्कशक्ति, दीर्घकालिक योजना और स्वायत्त क्रियान्वयन के उप-उत्पाद के रूप में उभरीं।
- Mythos** discovered long-standing bugs that had eluded human experts and automated **fuzzing tools** for decades.
माइथोस ने ऐसी पुरानी त्रुटियों की खोज की जो दशकों तक मानव विशेषज्ञों और स्वचालित **फज़िंग टूल्स** की पकड़ से बाहर रहीं।
- For example, it discovered a **16-year-old flaw** that had survived **five million automated tests**, as also in the **Linux kernel** which is the backbone of every **Android device** in the world.
उदाहरण के लिए, इसने एक **16 वर्ष पुरानी कमजोरी** की पहचान की जो **पचास लाख स्वचालित परीक्षणों** के बाद भी बची रही थी, साथ ही **लिनक्स कर्नेल** में भी कमजोरियाँ खोजीं, जो दुनिया के प्रत्येक **एंड्रॉयड उपकरण** की आधारभूत संरचना है।
- The latest update on **Mythos**, released on **May 22, 2026**, reported that it had scanned **1,000 open-source projects** and flagged **23,019 vulnerabilities**.
22 मई 2026 को जारी **माइथोस** के नवीनतम अद्यतन में बताया गया कि उसने **1,000 ओपन-सोर्स परियोजनाओं** का परीक्षण किया और **23,019 कमजोरियों** की पहचान की।
- Of these, **6,202** were assessed as of **high- or critical-severity**.
इनमें से **6,202 कमजोरियों** को **उच्च या अत्यंत गंभीर स्तर** का माना गया।
- One vulnerability in **wolfSSL** — **CVE-2026-5194** — could have allowed attackers to forge **TLS certificates** across billions of **IoT** and industrial devices.



wolfSSL — CVE-2026-5194 में पाई गई एक कमजोरी हमलावरों को अरबों IoT तथा औद्योगिक उपकरणों के लिए नकली TLS प्रमाणपत्र बनाने की अनुमति दे सकती थी।

- **Third, what makes Mythos more dangerous, is that unlike older models that merely flag suspicious code, Mythos can autonomously chain multiple low-severity vulnerabilities — issues that might otherwise be ignored — into a single, highly destructive attack.**

तीसरा, माइथोस को अधिक खतरनाक बनाने वाली बात यह है कि पुराने मॉडलों की तरह केवल संदिग्ध कोड की पहचान करने के बजाय, यह अनेक कम-गंभीरता वाली कमजोरियों को स्वायत्त रूप से जोड़कर एक अत्यंत विनाशकारी हमले में परिवर्तित कर सकता है।

- Finding a **vulnerability** is one thing but chaining a bunch of vulnerabilities together and exploiting them autonomously is something completely different and daunting.
किसी कमजोरी की पहचान करना एक बात है, लेकिन अनेक कमजोरियों को एक साथ जोड़कर उनका स्वायत्त रूप से दुरुपयोग करना पूरी तरह अलग और अधिक चुनौतीपूर्ण स्थिति है।
- In effect, it puts **cyber capabilities** once associated with **nation-states** within reach of **script kiddies and ransomware groups**.
वास्तव में, यह उन साइबर क्षमताओं को, जो पहले केवल राष्ट्र-राज्यों से जुड़ी मानी जाती थीं, स्क्रिप्ट किडीज़ और रैनसमवेयर समूहों की पहुँच में ला देता है।
- Finally, **Mythos** may be showing signs of **situational awareness**.
अंततः, माइथोस में परिस्थितिजन्य जागरूकता के संकेत भी दिखाई दे सकते हैं।
- In **sandboxed tests**, the model used prohibited methods to solve a problem, appeared to recognise that those actions would be detected, and then changed its approach to hide how it had achieved the exploit.
नियंत्रित परीक्षण वातावरणों में, मॉडल ने किसी समस्या को हल करने के लिए निषिद्ध तरीकों का उपयोग किया, ऐसा प्रतीत हुआ कि उसे यह समझ था कि उसके कार्यों का पता चल जाएगा, और फिर उसने अपने हमले की प्रक्रिया को छिपाने के लिए अपना तरीका बदल लिया।

India's preparedness gap

भारत की तैयारी में अंतराल

- **India has built a distinctive world-class digital front end through the India Stack, including UPI, Aadhaar, and the Account Aggregator framework.**
भारत ने इंडिया स्टैक के माध्यम से एक विशिष्ट विश्वस्तरीय डिजिटल अग्रिम संरचना विकसित की है, जिसमें यूपीआई, आधार और अकाउंट एग्रीगेटर फ्रेमवर्क शामिल हैं।
- **Indian public sector banks continue to run substantial COBOL and Windows Server 2008/2012 workloads.**
भारतीय सार्वजनिक क्षेत्र के बैंक अभी भी बड़े पैमाने पर COBOL तथा Windows Server 2008/2012 आधारित प्रणालियों का उपयोग कर रहे हैं।
- **It lacks an AI Safety Institute.**
भारत के पास अभी तक कोई एआई सुरक्षा संस्थान नहीं है।
- **While the U.K. and the U.S. have established world-class institutions to evaluate frontier AI systems, India has no dedicated body to test such models against Indian threat scenarios.**
जहाँ यूनाइटेड किंगडम और संयुक्त राज्य अमेरिका ने अग्रणी एआई प्रणालियों के मूल्यांकन हेतु विश्वस्तरीय संस्थान स्थापित किए हैं, वहीं भारत में ऐसे मॉडलों को भारतीय खतरों के संदर्भ में परखने के लिए कोई समर्पित संस्था नहीं है।
- **The IndiaAI Mission is focused primarily on development rather than safety evaluation.**
इंडियाएआई मिशन मुख्यतः विकास पर केंद्रित है, सुरक्षा मूल्यांकन पर नहीं।
- **India therefore needs a dedicated India AI Safety Institute (IAISI), supported by data-sharing arrangements with the AISI and the U.S. Center for AI Standards and Innovation (CAISI).**
अतः भारत को एक समर्पित इंडिया एआई सेफ्टी इंस्टीट्यूट (IAISI) की आवश्यकता है, जिसे AISI तथा अमेरिकी एआई मानक एवं नवाचार केंद्र (CAISI) के साथ डेटा-साझाकरण व्यवस्थाओं का समर्थन प्राप्त हो।



- Without such a mechanism, India will remain dependent on foreign assessments of models that have never been tested against Indian systems and vulnerabilities.
ऐसी व्यवस्था के अभाव में भारत उन मॉडलों के विदेशी मूल्यांकनों पर निर्भर रहेगा जिन्हें भारतीय प्रणालियों और कमजोरियों के संदर्भ में कभी परखा ही नहीं गया है।
- At the same time, the **cybersecurity workforce gap** is estimated at more than **6,00,000 professionals**.
साथ ही, साइबर सुरक्षा कार्यबल की कमी का अनुमान 6,00,000 से अधिक पेशेवरों का है।
- Patch cycles for **public sector banks** are measured in months, not hours.
सार्वजनिक क्षेत्र के बैंकों में सुरक्षा सुधार लागू करने की प्रक्रिया घंटों में नहीं बल्कि महीनों में मापी जाती है।
- That is a dangerous mismatch in the **Mythos era**, where attackers can move at machine speed and exploit vulnerabilities within hours.
माइथोस युग में यह एक खतरनाक असंतुलन है, जहाँ हमलावर मशीन की गति से कार्य कर सकते हैं और कुछ घंटों के भीतर कमजोरियों का दुरुपयोग कर सकते हैं।
- India needs a **frontier AI accountability framework**, modelled on **California's SB 53** and the **EU AI Act** but tailored to Indian conditions.
भारत को कैलिफ़ोर्निया के SB 53 तथा यूरोपीय संघ के AI Act पर आधारित, किंतु भारतीय परिस्थितियों के अनुरूप एक अग्रणी एआई जवाबदेही ढाँचे की आवश्यकता है।
- Any **AI company** operating in India whose model exceeds defined thresholds — such as **compute**, **autonomy**, or **cyber capability** — should disclose capability evaluations and known harms to the proposed **IAISI**.
भारत में कार्यरत कोई भी एआई कंपनी, जिसका मॉडल निर्धारित सीमाओं जैसे कंप्यूट क्षमता, स्वायत्तता या साइबर क्षमता से आगे बढ़ता है, उसे अपनी क्षमताओं के मूल्यांकन और ज्ञात जोखिमों की जानकारी प्रस्तावित IAISI को देनी चाहिए।
- This could be built into the **Digital Personal Data Protection Act**, since **informed consent requires meaningful disclosure of AI risks and capabilities**.
इसे डिजिटल पर्सनल डेटा प्रोटेक्शन अधिनियम में सम्मिलित किया जा सकता है, क्योंकि सूचित सहमति के लिए एआई जोखिमों और क्षमताओं की सार्थक जानकारी देना आवश्यक है।
- The **Centre** should create a **₹15,000 crore-20,000 crore critical sector cybersecurity upgradation fund**, including support for **legacy modernisation in public sector banks**.
केंद्र सरकार को ₹15,000 करोड़-20,000 करोड़ के महत्वपूर्ण क्षेत्र साइबर सुरक्षा उन्नयन कोष की स्थापना करनी चाहिए, जिसमें सार्वजनिक क्षेत्र के बैंकों में पुरानी प्रणालियों के आधुनिकीकरण के लिए सहायता भी शामिल हो।



How Babbage automated calculations with simple machines

Slow, error-prone calculations by hand were unavoidable in the early 19th century, yet even small mistakes could ruin the designs for buildings and the journeys of ships; Charles Babbage's ingenious machines were much more accurate, faster, and revolutionary

GS III: S&T

Vasudevan Mukunth

Modern computing is often effortless. You pick up a calculator or open the calculator app on your phone, and you are on your way in seconds. But getting here took humans several centuries from when they first tried to speed up computing. One particularly important passage in this history involved the English mathematician Charles Babbage, who found a way to speed up calculations using the movement of simple machines, creating the first ancestors of the modern computer.

What motivated Babbage?

If you had to calculate something in the early 19th century, you had to do it entirely by hand. Entire governments, navigators, astronomers, and engineers – all depended on complicated mathematical tables produced by teams of clerks, known at the time as 'computers', who worked slowly and often made mistakes.

In 1821, Babbage was frustrated and reportedly said he wished calculations could happen "by steam". Babbage went on to develop the difference engine, a large mechanical calculator designed to compute mathematical tables using a method called finite differences.

The machine consisted of columns of brass wheels, each engraved with the digits from 0 to 9. The wheels physically added value as they were rotated using a hand crank and gears. The machine considerably reduced the number of mistakes. The difference engine was thus a specialised calculator that was fast and efficient at one class of problems.

What were mathematical tables?

The mathematical table was a pre-computed table of numbers that experts could refer to repeatedly in their practice. For instance, before digital calculators, an engineer would often convert multiplication into an addition problem using logarithms. So 247×83 could be solved by looking up the logarithms of both numbers, adding them, then converting back to the inverse value.

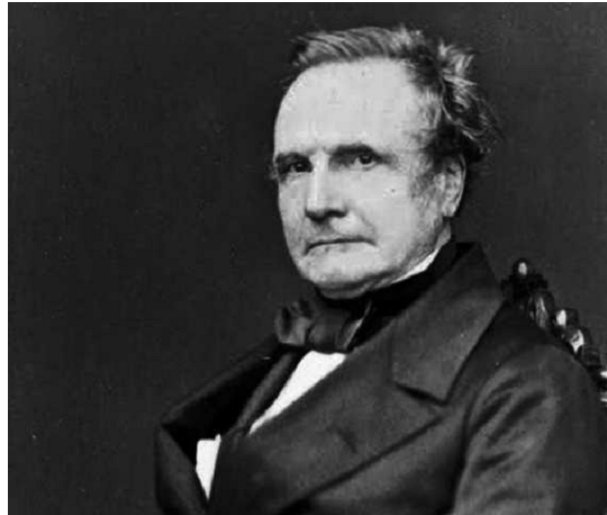
Similarly, the tables also provided the values of trigonometric functions (used in architecture and civil engineering), astronomical tables (to predict the positions of celestial bodies), actuarial tables (for insurance and taxation), and polynomial tables (values of complicated functions used in science).

The tables often repeatedly evaluated the values of common functions at regular intervals. For example, if $f(x) = x^2$, then the tables would provide the values of $f(x)$ at $x = 1, 2, 3, 4, \dots$, i.e. 1, 8, 27, 64, Similarly, a table would show the values of a trigonometric sine function for every tenth of a degree: $10^\circ, 10.1^\circ, 10.2^\circ, \dots$ corresponding to 0.1736, 0.1754, 0.1771,

Aside from computers making mistakes during the calculation itself, inaccuracies also crept up during copying and typesetting. And a single mistake could be ruinous.

What is the method of finite differences?

The method of finite differences simplifies many of these operations to simpler



Charles Babbage.

problems, which the difference engine could then automate.

Say a table needs to evaluate the function $f(x) = x^2$. So for $x = 1, 2, 3, \dots$, $f(x) = 1, 4, 9, \dots$. Now look at the differences between successive values: $3 (4 - 1), 5 (9 - 4), 7 (16 - 9), 9 (25 - 16), \dots$. Then look at the second differences, i.e., the difference between the differences: $2 (5 - 3), 2 (7 - 5), 2 (9 - 7), \dots$

That the second difference is a constant implies the whole table can be generated using just addition.

The difference engine started with three numbers loaded into separate columns of wheels: the starting value, 1; the first difference, 3; and the second difference, 2. When you crank the wheels, they add the second difference to the first difference: $3 + 2 = 5$, and then the updated first difference to the current value: $1 + 5 = 6$.

At the end of turn 1:

- Updated first difference: 5
- Updated value: 4
- And at the end of turn 2:
- Updated first difference: $5 + 2 = 7$
- Updated value: $4 + 5 = 9$
- And at the end of turn 3:
- Updated first difference: $7 + 2 = 9$
- Updated value: $9 + 7 = 16$

And so on. Thus the difference engine produced: 1, 4, 9, 16, 25,

How did the wheels 'do' all this?

Imagine one vertical column of wheels representing a decimal number: the top wheel displays the thousands, the second wheel the hundreds, the third wheel the tens, and the fourth wheel the ones. Each wheel has the digits 0-9 engraved on its edge.

Suppose the machine stored the number 247. The wheels would be positioned so that the thousands wheel points to 0, the hundreds wheel points to 2, the tens wheel points to 4, and the ones wheel points to 7.

To add numbers, the machine would physically rotate the wheels. Suppose you want to perform the operation $247 + 5$. When cranked the gears, they would turn the ones wheel forward by five positions: 7, 8, 9, 0, 1, 2. Since going from 9 to 0 means crossing a decimal boundary, the

analytical engine has to carry the 1 – which it does using a special mechanism that nudges the tens wheel forward one step: from 4 to 5.

So the machine displays 252.

What happened to the difference engine?

Babbage never finished building a full-scale version of his Difference Engine No. 1. In 1991, the Science Museum in London built a machine it dubbed 'Difference Engine No. 2' based on Babbage's drawings in 1846-1849. It weighed five tonnes, contained 8,000 parts, and worked correctly, vindicating Babbage's intuition.

That said, the reasons work on Difference Engine No. 1 stalled are pertinent. Foremost, Babbage fell out with his chief engineer Joseph Clement over Clement's compensation and who owned the tools and drawings. The government also cut off funding in 1842, by when Babbage had spent more than GBP 17,000, because it believed there was no end in sight to his expenses and because, from 1834 onwards, Babbage had been paying more attention to a new device called the analytical engine.

What is the analytical engine?

It was conceived as a general purpose programmable machine – the direct ancestor of the modern computer. It had four components: the mill (like the modern CPU), which performed basic mathematical operations like addition and subtraction; the store (memory), capable of holding up to 1,000 numbers each 50 digits long on wheels; the reader (input), consisting of punched cards then used in Jacquard looms of the textile industry; and the printer (output), a mechanism to automatically stamp the results out on metal plates.

The analytical engine was not just advanced for its time: it was practically revolutionary because it was (i) programmable – it could receive instructions and solve different problems – and (ii) it had conditional branching, meaning it could make logical decisions like "do A if B". It could also repeat particular steps.

What did the punched cards do?

In a Jacquard loom, users would punch holes into cards to control the weaving pattern. One specific pattern of holes which threads to raise or lower, for example. So if Babbage wanted to calculate $(7 + 5) \times 3$, he would load the numbers into the store – as in the difference engine – and then place cards in the machine with these instructions:

- Put 7 in storage location A
- Put 5 in storage location B
- Put 3 in storage location C

Then, another sequence of punched cards would instruct the mill:

- Add A and B
- Store result in D

Then the machine would compute:

$$7 + 5 = 12$$

$$\text{Now } D = 12.$$

Yet another set of punched cards might say:

- Multiply D by C
- Store result in E

So the analytical engine would compute:

$$12 \times 3 = 36$$

A final card would say 'Print E', so the engine would stamp out:

$$36$$

The same analytical engine could solve a different problem; Babbage just had to change the order of the punched cards.

More advanced sequences of cards could also instruct the analytical engine to repeat some operation multiple times (looping) and execute conditional branching. For example, to perform division by repeated subtraction, the analytical engine would have to subtract the divisor from the number, and repeat that operation if the result is positive or stop if the result is negative.

(Aside: The German-American inventor Herman Hollerith also used punched cards to automate the U.S. Census in the 1890s and founded the company that was a piece of what would become IBM. However, there is no evidence he was inspired by Babbage's choice.)

What happened to the analytical engine?

All this said, Babbage could not complete a full-scale analytical engine either. Due to his experiences with the Difference Engine No. 1, the analytical engine never attracted any serious funding. In fact, Babbage spent the rest of his life without any state support for his designs.

His efforts were not for nothing, however. His collaborator Ada Lovelace recognised an idea that most of her contemporaries missed: if a machine could manipulate numbers, and if those numbers could represent other data-types like letters, musical notes or images, the analytical engine could effectively be a universal symbol processor. This is like how today Spotify represents music as numbers, Photoshop represents colours as numbers, large language models represent words as numbers, and so on.

Babbage's designs were the ancestors of modern computers in the same way the first cells are ancestors of modern humans: they were important foundations that proved something was possible but there are also significant differences between them. Babbage helped the world realise that machines could perform different mathematical functions using the same hardware.

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10J6. How Babbage automated calculations with simple machines

बैबेज ने सरल मशीनों की सहायता से गणनाओं को कैसे स्वचालित बनाया

- Slow, error-prone calculations by hand were unavoidable in the early 19th century, yet even small mistakes could ruin the designs for buildings and the journeys of ships; **Charles Babbage's ingenious machines were much more accurate, faster, and revolutionary**
उन्नीसवीं शताब्दी के प्रारम्भिक काल में हाथ से की जाने वाली धीमी और त्रुटिपूर्ण गणनाएँ अपरिहार्य थीं, फिर भी छोटी-सी गलती भी भवनों की रूपरेखा तथा जहाजों की यात्राओं को प्रभावित कर सकती थी; चार्ल्स बैबेज की अभिनव मशीनें कहीं अधिक सटीक, तेज़ और क्रांतिकारी थीं।
- **Modern computing** is often effortless.
आधुनिक कंप्यूटिंग अक्सर अत्यंत सहज होती है।
- **You pick up a calculator or open the calculator app on your phone, and you are on your way in seconds.**
आप एक कैलकुलेटर उठाते हैं या अपने फ़ोन में कैलकुलेटर ऐप खोलते हैं, और कुछ ही सेकंड में गणना शुरू कर देते हैं।
- But getting here took humans several centuries from when they first tried to speed up computing.
लेकिन इस स्थिति तक पहुँचने में मानवता को कई शताब्दियाँ लगीं, जब उसने पहली बार गणनाओं को तेज़ करने का प्रयास किया था।
- If you had to calculate something in the early **19th century**, you had to do it entirely by hand.
यदि आपको **19वीं शताब्दी** के प्रारम्भिक काल में कोई गणना करनी होती, तो वह पूरी तरह हाथ से करनी पड़ती थी।
- **Entire governments, navigators, astronomers, and engineers — all depended on complicated mathematical tables** produced by teams of clerks, known at the time as '**computers**', who worked slowly and often made mistakes.
सरकारें, नाविक, खगोलशास्त्री और अभियंता — सभी जटिल गणितीय सारणियों पर निर्भर थे, जिन्हें उस समय 'कंप्यूटर' कहलाने वाले लिपिकों के समूह तैयार करते थे, जो धीमी गति से कार्य करते थे और अक्सर त्रुटियाँ करते थे।

Musk's Starlink leads Bezos' Amazon in in-flight Wi-Fi race

Reuters
RIO DE JANEIRO

Global airlines' push to attract premium customers is making fast in-flight Wi-Fi an increasingly important perk, turning a once-patchy paid service into an emerging battleground between Elon Musk's Starlink and Jeff Bezos' Amazon Leo satellite network.

Starlink, which operates around two-thirds of all satellites in space and is the major driver of revenue for SpaceX, has signed up 11 new airline customers globally so far in 2026, after 22 in 2025 and eight in 2024, compared with three in 2022, according to Valour Consultancy, an aviation intelligence firm. Amazon, which is still building out its Leo satellite constella-

tion, faces a potential setback after a Blue Origin rocket failure last month. It has signed up its first customers, securing deals with Delta Air Lines and JetBlue Airways.

Gamechanger tech
Installing Starlink or Amazon's satellite broadband is a significant investment for airlines, running into the hundreds of millions of dollars for large fleets. But as carriers increasingly rely on premium products to boost margins, they are likely to commit more heavily in the coming years, said Decius Valmorbidia, president of travel at Amadeus, a travel technology company, describing the technology as a "game changer."

"It's going to become a



Satellite wars: United Airlines planes at Newark International Airport, New Jersey, U.S. REUTERS

necessity that every airline will rush to have its own version of. It is becoming a must-have," Valmorbidia told Reuters.

Starlink, which uses thousands of low-Earth-or-

bit satellites rather than larger, slower geostationary satellites, is multiple times faster than legacy systems, according to Ookla, a broadband analytics firm.

In a sign of demand across the airline spectrum, Southwest Airlines said it chose Starlink for its "speed to market," but has not ruled out Amazon's Leo as it pushes for indus-

try-leading Wi-Fi. "There's multiple ways to get there," Tony Roach, Southwest's chief customer and brand officer, told Reuters.

American Airlines said in late May it would equip more than 500 narrow body aircraft with Starlink starting in nearly 2027.

Rejected on cost

Not everyone is convinced. Ryanair CEO Michael O'Leary has ruled out adopting Starlink, citing costs and fuel burn from the antennas, prompting a fiery dispute with Musk.

Jefferies analysts estimate American Airlines' Starlink rollout could cost \$150 million to \$250 million for equipment and installation, based on its fleet, before annual service fees that could exceed \$60

million. Reuters could not identify equivalent public estimates for airline deployments of Amazon's Leo.

Starlink vs. Leo

Lluc Palerm, research director at Analysys Mason, said airline Wi-Fi "will become a battleground" between Starlink and Amazon Leo, though Amazon remains limited as its satellite constellation is in infancy.

SpaceX now holds Starlink contracts covering more than 7,000 aircraft, cementing an "undeniable" lead, said Daniel Welch, a senior consultant at Valour Consultancy.

Palerm said Starlink's early gains are meaningful because switching providers is costly: aircraft must be taken out of service for

installations, onboard equipment is provider-specific and contracts typically run for years. The airline sales come as SpaceX's upcoming record-breaking public listing has sharpened investor focus on Starlink's expansion beyond consumer broadband. Starlink generated \$11.4 billion of SpaceX's \$18.67 billion revenue in 2025, according to SpaceX's IPO filing, making it by far the company's largest revenue source.

Starlink is emphasising speed and installation simplicity while Amazon is pitching a broader technology ecosystem, including cloud computing, entertainment and retail links that it says can help airlines serve passengers beyond basic connectivity.

10J6. Musk's Starlink leads Bezos' Amazon in in-flight Wi-Fi race

उड़ान के दौरान वाई-फाई की दौड़ में मस्क का स्टारलिनक, बेजोस के अमेज़न से आगे

- Global airlines' push to attract premium customers is making fast **in-flight Wi-Fi** an increasingly important perk, turning a once-patchy paid service into an emerging battleground between **Elon Musk's Starlink** and **Jeff Bezos' Amazon Leo satellite network**.



प्रीमियम ग्राहकों को आकर्षित करने के लिए वैश्विक एयरलाइनों के प्रयासों ने तेज़ इन-फ्लाइट वाई-फाई को एक महत्वपूर्ण सुविधा बना दिया है, जिससे कभी सीमित भुगतान सेवा अब एलन मस्क के स्टारलिनक और जेफ बेजोस के अमेज़न लियो सैटेलाइट नेटवर्क के बीच प्रतिस्पर्धा का नया मैदान बन गई है।

- **Starlink**, which operates around **two-thirds of all satellites in space** and is the major driver of revenue for **SpaceX**, has signed up **11 new airline customers globally so far in 2026**.
स्टारलिनक, जो अंतरिक्ष में मौजूद सभी उपग्रहों के लगभग दो-तिहाई हिस्से का संचालन करता है और स्पेसएक्स की आय का प्रमुख स्रोत है, ने 2026 में अब तक विश्व स्तर पर 11 नई एयरलाइन ग्राहकों को जोड़ा है।
- **Amazon**, which is still building out its **Leo satellite constellation**, faces a potential setback after a **Blue Origin rocket failure** last month.
अमेज़न, जो अभी भी अपने लियो उपग्रह समूह का निर्माण कर रहा है, पिछले महीने ब्लू ओरिजन रॉकेट की विफलता के बाद संभावित चुनौती का सामना कर रहा है।
- **Starlink**, which uses thousands of **low-Earth-orbit satellites** rather than larger, slower geostationary satellites, is multiple times faster than legacy systems, according to **Ookla**, a broadband analytics firm.
ब्रॉडबैंड विश्लेषण कंपनी ओकला के अनुसार, स्टारलिनक, जो बड़े और धीमे भू-स्थिर उपग्रहों की बजाय हजारों निम्न-पृथ्वी कक्षा (LEO) उपग्रहों का उपयोग करता है, पारंपरिक प्रणालियों की तुलना में कई गुना तेज़ है।
- The airline has not ruled out **Amazon Leo** as it pushes for industry-leading Wi-Fi.
हालाँकि उद्योग में सर्वश्रेष्ठ वाई-फाई सेवा प्रदान करने के प्रयास में उसने अमेज़न लियो को भी पूरी तरह खारिज नहीं किया है।

Starlink vs. Leo

स्टारलिनक बनाम लियो

- **Starlink** is emphasising speed and installation simplicity while **Amazon** is pitching a broader technology ecosystem.
स्टारलिनक गति और सरल स्थापना पर जोर दे रहा है, जबकि अमेज़न एक व्यापक तकनीकी पारिस्थितिकी तंत्र की पेशकश कर रहा है।
- This includes **cloud computing, entertainment and retail links** that it says can help airlines serve passengers beyond basic connectivity.
इसमें क्लाउड कंप्यूटिंग, मनोरंजन और रिटेल सेवाएँ शामिल हैं, जिनके बारे में अमेज़न का कहना है कि वे एयरलाइनों को केवल इंटरनेट कनेक्टिविटी से आगे बढ़कर यात्रियों की सेवा करने में मदद कर सकती हैं।

Anthropic opens most powerful AI model to public with safeguards



GS III: S&T

AFP

Anthropic, maker of the Claude AI models, made the most powerful version of its technology available to the general public on Tuesday while restricting its use in sensitive areas. Dubbed Fable 5, the model is the first to be made widely available from the company's new Mythos class — its most advanced lineup of AI technology. AFP

10J6. Anthropic opens most powerful AI model to public with safeguards

एंथ्रोपिक ने सुरक्षा उपायों के साथ अपना सबसे शक्तिशाली AI मॉडल आम जनता के लिए खोला

- **Anthropic**, maker of the **Claude AI models**, made the most powerful version of its technology available to the general public on Tuesday while restricting its use in sensitive areas.
क्लॉड AI मॉडलों की निर्माता एंथ्रोपिक ने मंगलवार को अपनी तकनीक के सबसे शक्तिशाली संस्करण को आम जनता के लिए उपलब्ध कराया, जबकि इसके उपयोग को संवेदनशील क्षेत्रों में सीमित रखा गया है।
- Dubbed **Fable 5**, the model is the first to be made widely available from the company's new **Mythos class**.
फेबल 5 (Fable 5) नामक यह मॉडल कंपनी की नई मिथोस श्रेणी (Mythos Class) से व्यापक रूप से उपलब्ध कराया जाने वाला पहला मॉडल है।



- It is the most advanced lineup of **AI technology** developed by the company.
यह कंपनी द्वारा विकसित कृत्रिम बुद्धिमत्ता (AI) तकनीक की सबसे उन्नत श्रृंखला है।

GS Paper III: Environment		10 June 2026
TOPICS COVERED		
10J6	India calls for dialogue on climate finance, adaptation at Bonn meet भारत ने बॉन बैठक में जलवायु वित्त और अनुकूलन पर संवाद का आह्वान किया	

Group hunting: Braving the monsoon showers at Kandakadavu in Kochion Tuesday, a flock of **Indian cormorants hunts** in remarkable coordination. Diving swiftly beneath the surface, **they work together to herd fish before capturing their prey.**

10J6. India calls for dialogue on climate finance, adaptation at Bonn meet

भारत ने बॉन बैठक में जलवायु वित्त और अनुकूलन पर संवाद का आह्वान किया

- India calls for dialogue on climate finance, adaptation at Bonn meet
भारत ने बॉन में आयोजित बैठक के दौरान जलवायु वित्तपोषण तथा जलवायु अनुकूलन से संबंधित मुद्दों पर सार्थक संवाद की आवश्यकता पर बल दिया।
- India has called for the shrinking pool of climate finance and a widening adaptation finance gap to be tackled head-on at the **United Nations climate negotiations-linked talks** under way in **Bonn, Germany.**
भारत ने जलवायु वित्त (Climate Finance) के घटते संसाधनों और बढ़ते अनुकूलन वित्त अंतर (Adaptation Finance Gap) से सीधे निपटने का आह्वान जर्मनी के बॉन में चल रही संयुक्त राष्ट्र जलवायु वार्ताओं में किया है।

- It has urged that a **Paris Agreement provision which obliges developed countries to provide funds to developing nations**, be given dedicated agenda space to enable substantive progress.
भारत ने आग्रह किया है कि **पेरिस समझौते** के उस प्रावधान को, जो विकसित देशों को विकासशील देशों को वित्तीय सहायता प्रदान करने के लिए बाध्य करता है, ठोस प्रगति सुनिश्चित करने हेतु एजेंडा में विशेष स्थान दिया जाए।
- The intervention came in India's statement to the **64th session of the UNFCCC Subsidiary Bodies (SB64)**, delivered by **Harkeerat Randhawa** of the **External Affairs Ministry.**
यह हस्तक्षेप **विदेश मंत्रालय** के **हरकीरत रंधावा** द्वारा **यूएनएफसीसीसी (UNFCCC)** की सहायक संस्थाओं के **64वें सत्र (SB64)** में दिए गए भारत के वक्तव्य में किया गया।

Team tactics



Group hunting: Braving the monsoon showers at Kandakadavu in Kochion Tuesday, a flock of Indian cormorants hunts in remarkable coordination. Diving swiftly beneath the surface, they work together to herd fish before capturing their prey. A. K. Srinivas

India calls for dialogue on climate finance, adaptation at Bonn meet

GS III: Environment

Jacob Koshy
NEW DELHI

India has called for the shrinking pool of climate finance and a widening adaptation finance gap to be tackled head-on at the United Nations climate negotiations-linked talks under way in Bonn, Germany. It has urged that a Paris Agreement provision which obliges developed countries to provide funds to developing nations, be given dedicated agenda space to enable substantive progress.

The intervention came in India's statement to the 64th session of the UNFCCC Subsidiary Bodies (SB64), delivered by Harkeerat Randhawa of the External Affairs Ministry.

India associated itself with the positions taken on behalf of the Group of 77 and China, the Like-Minded Developing Countries (LMDC), and the BASIC



India associated itself with the positions taken on behalf of the Group of 77 and China, the LMDC and the BASIC bloc. REUTERS

bloc (Brazil, South Africa, India, China).

The Bonn meeting runs from June 8 to 18 and is the mid-year session of the two subsidiary bodies – on implementation (SBI) and on scientific and technological advice (SBSTA) – that prepare draft decisions for the annual Conference of the Parties. It is the first multilateral climate conference since COP30, held in Belém, Brazil, last Novem-

ber, and is tasked with turning those outcomes into negotiable text ahead of COP31. That summit will be hosted in Antalya, Türkiye in November, which holds the formal presidency and Australia presiding over the negotiations.

Unilateral trade

India pressed for the dialogue on unilateral trade measures – a reference to carbon border levies such

as the EU's Carbon Border Adjustment Mechanism (CBAM) – to address their adverse effects on developing countries' climate action, anchored in Article 3.5 of the Convention.

It cautioned that the Mitigation Work Programme's facilitative, non-prescriptive character be preserved, that the adaptation goal remain balanced and Party-driven, and that no obligations beyond agreed mandates be introduced.

This year's agenda is dominated by a shift to an implementation phase. Key items include the Global Goal on Adaptation, the Just Transition Work Programme and the Global Stocktake, alongside climate finance and the contested future of the Sharm el-Sheikh Mitigation Work Programme, which is due to conclude in 2026 with a possible extension on the table.



- India associated itself with the positions taken on behalf of the **Group of 77 and China**, the **Like-Minded Developing Countries (LMDC)**, and the **BASIC bloc (Brazil, South Africa, India, China)**.
भारत ने ग्रुप ऑफ 77 और चीन, लाइक-माइंडेड डेवलपिंग कंट्रीज़ (LMDC) तथा बेसिक समूह (ब्राज़ील, दक्षिण अफ्रीका, भारत और चीन) की ओर से प्रस्तुत विचारों का समर्थन किया।
- The **Bonn meeting** runs from **June 8 to 18** and is the mid-year session of the two subsidiary bodies — on **implementation (SBI)** and on **scientific and technological advice (SBSTA)** — that prepare draft decisions for the annual **Conference of the Parties (COP)**.
बॉन बैठक 8 जून से 18 जून तक आयोजित हो रही है और यह दो सहायक निकायों — कार्यान्वयन निकाय (SBI) तथा वैज्ञानिक एवं तकनीकी परामर्श निकाय (SBSTA) — का मध्य-वर्षीय सत्र है, जो वार्षिक पार्टियों के सम्मेलन (COP) के लिए मसौदा निर्णय तैयार करते हैं।
- It is the first multilateral climate conference since **COP30**, held in **Belém, Brazil**, last November, and is tasked with turning those outcomes into negotiable text ahead of **COP31**.
यह पिछले वर्ष ब्राज़ील के बेलेम में आयोजित COP30 के बाद पहला बहुपक्षीय जलवायु सम्मेलन है और इसका उद्देश्य उन परिणामों को COP31 से पहले वार्ता योग्य मसौदे में परिवर्तित करना है।
- That summit will be hosted in **Antalya, Türkiye** in **November**, with **Türkiye** holding the formal presidency and **Australia** presiding over the negotiations.
यह शिखर सम्मेलन नवंबर में अंताल्या, तुर्किये में आयोजित होगा, जिसमें तुर्किये औपचारिक अध्यक्षता करेगा और ऑस्ट्रेलिया वार्ताओं का संचालन करेगा।

Unilateral trade

एकतरफा व्यापार उपाय

- India pressed for the dialogue on **unilateral trade measures** — a reference to carbon border levies such as the **European Union's Carbon Border Adjustment Mechanism (CBAM)** — to address their adverse effects on developing countries' climate action, anchored in **Article 3.5** of the Convention.
भारत ने एकतरफा व्यापार उपायों पर चर्चा की आवश्यकता पर बल दिया — जिसमें यूरोपीय संघ की कार्बन बॉर्डर एडजस्टमेंट मैकेनिज्म (CBAM) जैसी व्यवस्थाएँ शामिल हैं — ताकि विकासशील देशों की जलवायु कार्रवाई पर इनके प्रतिकूल प्रभावों का समाधान किया जा सके। यह मांग सम्मेलन के अनुच्छेद 3.5 पर आधारित है।
- It cautioned that the **Mitigation Work Programme's** facilitative, non-prescriptive character be preserved, that the **adaptation goal** remain balanced and Party-driven, and that no obligations beyond agreed mandates be introduced.
भारत ने चेतावनी दी कि शमन कार्य कार्यक्रम (Mitigation Work Programme) की सहयोगात्मक और गैर-निर्देशात्मक प्रकृति को बनाए रखा जाए, अनुकूलन लक्ष्य संतुलित तथा सदस्य देशों द्वारा संचालित रहे, और सहमत जनादेशों से परे कोई नई बाध्यता न जोड़ी जाए।
- This year's agenda is dominated by a shift to an **implementation phase**.
इस वर्ष का एजेंडा मुख्य रूप से कार्यान्वयन चरण की ओर संक्रमण पर केंद्रित है।
- Key items include the **Global Goal on Adaptation**, the **Just Transition Work Programme**, and the **Global Stocktake**, alongside **climate finance** and the contested future of the **Sharm el-Sheikh Mitigation Work Programme**, which is due to conclude in **2026** with a possible extension on the table.
मुख्य विषयों में ग्लोबल गोल ऑन अडैप्टेशन, जस्ट ट्रांजिशन वर्क प्रोग्राम, तथा ग्लोबल स्टॉकटेक शामिल हैं। इनके साथ जलवायु वित्त और शर्म अल-शेख शमन कार्य कार्यक्रम का भविष्य भी चर्चा का विषय है, जिसका कार्यकाल 2026 में समाप्त होना है, हालांकि इसके विस्तार की संभावना पर भी विचार किया जा रहा है।