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19 February 2026

19F. The counterintuitive beauty of skiing
स्कीइंग की अप्रत्याशित सुंदरता

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The counterintuitive beauty of skiing

Skiing's origins stretch back over 5,000 years: rock carvings in Norway and ancient ski fragments across Scandinavia suggest humans were strapping boards to their feet long before anyone thought to do it for fun

SS 1. History
Dinesh Arab

Every instinct tells you to lean back. You're standing at the top of a slope that drops away beneath you like the edge of the world, and every fibre of your being screams to press your weight into the mountain behind you. To hold on. To stay safe. And that's exactly how you fall.

Something bigger

Skiing is perhaps the most counterintuitive sport ever devised. The first lesson any instructor will drill into you is this: lean downhill. Commit your weight forward, into the void, into the very thing that terrifies you. Lean into the mountain, and you lose your edges, your skis slide out from under you, and the mountain wins. Lean into the abyss, and suddenly you're in control. Your edges bite. Your turns carve. The mountain becomes yours.

It's a metaphor that extends far beyond the slopes. In medicine, business, relationships, and in life itself, the instinct to retreat to safety is often the most dangerous thing you can do. Growth lives on the other side of discomfort. The safe place, the familiar lean into what feels secure, is frequently where stagnation breeds and, paradoxically, where the real danger lies. You have to commit forward. You have to lean into the abyss.

The outside ski

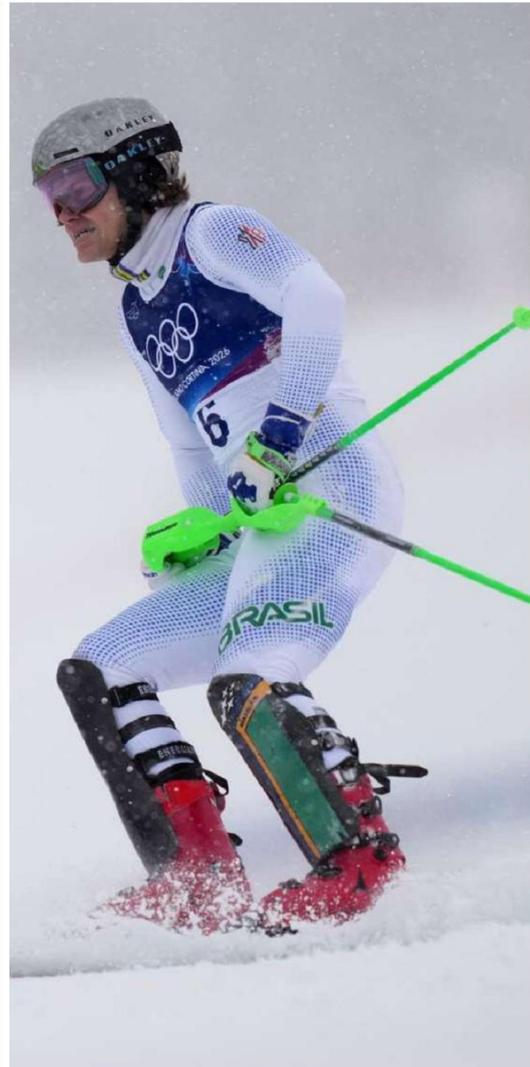
The physics of skiing is as elegant as it is unforgiving. At its core, skiing is an exercise in edge control and weight distribution. When you initiate a turn, you roll your skis onto their edges – the metal strips along the base – carving a groove, your footing into the snow. The ski, when tipped on edge, follows a natural arc determined by its side cut, the subtle hourglass shape built into every modern ski.

The critical concept is the outside ski. In any turn, the ski on the outside of the arc bears 70-80% of your weight. Turning left, your right ski does the work. The only way you can achieve the weight on the downhill ski is by leaning downhill. The steep drop makes you instinctively lean uphill, but that puts weight on the uphill ski, causing you to freeze and fall. Loading the outside ski creates the pressure that bends it into its curve, that digs the edge into the snow, that gives you grip on a surface that otherwise offers almost none.

Skiing's origins stretch back over 5,000 years. Rock carvings in Norway and ancient ski fragments across Scandinavia suggest humans were strapping boards to their feet long before anyone thought to do it for fun. The transformation from survival tool to sport began in the mid-1800s when Norway's Sondre Norheim introduced heel bindings that allowed controlled turns. Alpine skiing joined the Olympic program in 1936, and the sport exploded.

Scaling talent

On any given weekend at any ski resort, you'll witness one of sport's great democratic spectacles. Thousands of skiers of every age and ability share the same mountain. A 70-year-old in a vintage one-piece rides the same chairlift as a teenager in a hoodie. A family



Intense sport: Brazil's Lucas Pinheiro Braathen at the 2026 Winter Olympics, in Italy, on February 16. AP

pizza-plowing down a green run shares the base area with a local racing team of 10-year-olds who carve turns that would make most adults weep. The amateur talent is staggering. Kids in youth racing programs tuck into gates with a ferocity that defies their size. Teenagers launch off terrain park jumps, executing backflips and corkscrews with a casualness that belies the athleticism required. Watching a pack of tiny humans in speed suits bombing down a race course is one of winter's great joys – equal parts inspiring and terrifying for any parent watching

from behind the fence.

Scale that talent to the pinnacle and you arrive at the Winter Olympics. Olympic downhill racers exceed 130 km/hr. The margin between gold and fourth place is often a hundredth of a second.

Of gifts and grit

The 2026 Milan Cortina Games have delivered moments that embody everything skiing is. Lindsey Vonn, the 41-year-old American legend, returned despite tearing her anterior cruciate

ligament just nine days prior. Thirteen seconds into her run, she crashed violently and was airlifted off the mountain. Her message afterwards captured the essence of leaning into the abyss: no regrets, and a hope that others will find the courage to dare greatly. Her teammate Breezy Johnson then delivered a blistering run to win gold, becoming only the second American woman ever to claim the Olympic downhill title.

Today, Lucas Pinheiro Braathen – a 25-year-old born in Oslo to a Norwegian father and Brazilian mother and who switched his nationality to Brazil – won the giant slalom. It was the first Winter Olympic medal ever won by a South American country, and during Carnival season, no less. He celebrated with a samba in the snow.

No discussion of Olympic skiing is complete without Bode Miller, perhaps the most gifted Alpine skier America has ever produced. Six Olympic medals, 33 World Cup victories, and a style so aggressive that European coaches studied his impossible recoveries on endless loop. His most legendary moment came at the 2005 World Championships in Bormio, the very course where Braathen won gold this year, when Miller lost a ski 16 seconds into the downhill and continued on one ski at nearly 80 km/hr, navigating a World Cup course that most people couldn't handle on two.

Working the body

Beyond the thrill, skiing is remarkably good for you. It's a full-body workout disguised as fun. Your quads and glutes absorb constant eccentric loading through every turn, your core fires continuously to maintain balance, and the cardiovascular demand of a full day on the mountain rivals most gym sessions.

Studies have shown that regular skiing improves bone density, joint flexibility, and proprioception. At altitude, your body works harder with every breath and the combination of cold air exposure and sustained aerobic effort has been linked to improved cardiovascular health and mental resilience.

For those of us who track these things, a solid day of skiing can burn upward of 3,000 kcal. It's one of the few sports where you forget you're exercising because the mountain keeps demanding your full attention.

The economic footprint is enormous as well: a global industry valued at roughly \$20 billion a year, with more than 65 million skier visits in recent U.S. peak seasons alone.

Lean into winter

The numbers also miss the point, however.

The real value of skiing is what it does to your relationship with winter. For most people, winter is something to endure: short days, cold commutes, a low-grade melancholy that doesn't lift until March. Skiing inverts that entirely. Winter becomes something you anticipate, plan for, and countdown to.

You also meet incredible people on the mountain: in lift lines, on chairlifts with strangers who become friends for a six-minute ride through falling snow. Spirit is generous among skiers, a shared understanding that everyone chose to be there, chose discomfort over comfort, chose the abyss over the couch.

Winter is not all harshness and depression. When you lean into it – really commit, the way your instructor taught you on that first terrifying day – winter becomes perhaps the most exhilarating season of them all.

You have to look into the abyss.

Dr. Dinesh Arab is Director, Interventional and Structural Cardiology, AdventHealth Daytona Beach and Clinical Assistant Professor of Medicine, Florida State University.

The counterintuitive beauty of skiing स्कीइंग की अप्रत्याशित सुंदरता

- **Skiing's origins stretch back over 5,000 years:** rock carvings in **Norway** and ancient ski fragments across **Scandinavia** suggest humans were strapping boards to their feet long before anyone thought to do it for fun
स्कीइंग की उत्पत्ति 5,000 वर्ष से भी अधिक पुरानी है: नॉर्वे में चट्टानों की नक्काशी और स्कैंडिनेविया भर में



प्राचीन स्की के अवशेष संकेत देते हैं कि मनुष्य बहुत पहले ही अपने पैरों में पट्टियाँ बाँध रहे थे, जब किसी ने इसे मनोरंजन के लिए करने के बारे में सोचा भी नहीं था

- It's a metaphor that extends far beyond the slopes. **In medicine, business, relationships, and life, the instinct to retreat to safety is often the most dangerous thing you can do. Growth lives on the other side of discomfort.**
यह एक रूपक है जो ढलानों से बहुत आगे तक जाता है। **चिकित्सा, व्यवसाय, संबंधों और जीवन में सुरक्षा की ओर पीछे हटना अक्सर सबसे खतरनाक होता है। विकास असुविधा के दूसरी ओर होता है।**
- The **physics of skiing** is as elegant as it is unforgiving. **At its core, skiing is an exercise in edge control and weight distribution.**
स्कीइंग का भौतिक विज्ञान जितना सुंदर है उतना कठोर भी है। मूल रूप से स्कीइंग **किनारा नियंत्रण और वजन वितरण** का अभ्यास है।
- When you initiate a turn, you roll your skis onto their **edges**, carving a groove, your footing into the snow.
जब आप मोड़ शुरू करते हैं, तो स्की को उसके **किनारों** पर घुमाते हैं और बर्फ में पकड़ बनाते हैं।
- The transformation from survival tool to sport began in the **mid-1800s** when **Sondre Norheim** introduced **heel bindings** allowing controlled turns.
जीवन-रक्षक साधन से खेल बनने की प्रक्रिया **1800 के दशक के मध्य** में शुरू हुई जब **सॉन्डे नॉरहाइम** ने **हील बाइंडिंग** विकसित की।
- Alpine skiing joined the Olympic program in 1936**, and the sport expanded rapidly. **1936 में अल्पाइन स्कीइंग ओलंपिक कार्यक्रम में शामिल हुई** और यह खेल तेजी से फैल गया।
- The **2026 Milan Cortina Games** have delivered moments that embody everything skiing is. **2026 मिलान कॉर्टिना खेलों** ने ऐसे क्षण दिए जो स्कीइंग की आत्मा को दर्शाते हैं।

GS Paper 1: Society

TOPICS COVERED

19 February 2026

19F. **Woman, baby burnt alive over 'witchcraft' charge in Jharkhand**
झारखंड में 'डायन प्रथा' के आरोप में महिला और बच्चे को जिंदा जलाया गया



Woman, baby burnt alive over 'witchcraft' charge in Jharkhand

GS I: Society

Amit Bhelari

PATNA

A 32-year-old woman and her baby were allegedly set on fire by a mob at Kalaiya village in West Singhbhum district of Jharkhand late on Tuesday, after she was branded a witch, according to a complaint. The mob doused the pair with kerosene and burnt them alive, it said.

Four people have been arrested, the police said.

The village falls under the jurisdiction of Kumardungi police station. Around 9 p.m. on Tuesday, Jyoti Sinku was asleep in her home with her husband Kolhan Sinku, and their children, a two-year old son and a two-month-old baby.

In his statement to the police, Mr. Sinku, 40, said that a relative from his village came to his house and accused his wife of practising witchcraft. Another relative, who lived in the village, had died on Tuesday following a prolonged illness, and they blamed Ms. Sinku for it, according to a police official.

Mr. Sinku said about a dozen men and women were present in the courtyard of the house when he came out. He offered to calm the dispute and resolve the matter in the pan-

Blaming the death of a relative on the woman, a mob set her on fire with her two-month-old baby

chayat in the morning, but the crowd refused to listen.

Amid the commotion, the mob poured kerosene on his wife, who had their two-month-old baby in her arms, and set them on fire, according to the complaint.

Mr. Sinku suffered severe burns, but managed to escape by removing his clothes.

Probe under way

"We had got the information early in the morning today. The officer in-charge and SDPO (Sub-Divisional Police Officer) concerned had gone to the place of occurrence," Amit Renu, Superintendent of Police for West Singhbhum district, told *The Hindu*.

"Two people are reported to be dead as of now. We have arrested four people in this case and the investigation is under way. Preliminary investigation indicates and points out that it is a case of witchcraft. We are continuing the investigation and rest of the details will follow," Mr. Renu added.

आंगन में करीब एक दर्जन पुरुष और महिलाएं मौजूद थीं।

- He offered to calm the dispute and resolve the matter in the panchayat in the morning, but the crowd refused to listen. उन्होंने विवाद को शांत करने और मामले को सुबह पंचायत में सुलझाने की पेशकश की, लेकिन भीड़ ने सुनने से इनकार कर दिया।

Woman, baby burnt alive over 'witchcraft' charge in Jharkhand झारखंड में 'डायन प्रथा' के आरोप में महिला और बच्चे को जिंदा जलाया गया

- A 32-year-old woman and her baby were allegedly set on fire by a mob at Kalaiya village in West Singhbhum district of Jharkhand late on Tuesday, after she was branded a witch, according to a complaint.

शिकायत के अनुसार, 32 वर्षीय महिला और उसके शिशु को मंगलवार देर रात झारखंड के पश्चिमी सिंहभूम जिला स्थित कलैया गांव में भीड़ द्वारा कथित रूप से डायन करार देकर आग के हवाले कर दिया गया।

- The mob doused the pair with kerosene and burnt them alive, it said.

बताया गया कि भीड़ ने दोनों पर केरोसिन डालकर उन्हें जिंदा जला दिया।

- Around 9 p.m. on Tuesday, Jyoti Sinku was asleep in her home with her husband Kolhan Sinku, and their children, a two-year-old son and a two-month-old baby.

मंगलवार रात करीब 9 बजे, ज्योति सिंकू अपने घर में अपने पति कोल्हान सिंकू और बच्चों — एक दो वर्षीय बेटे और एक दो महीने के शिशु — के साथ सो रही थीं।

- In his statement to the police, Mr. Sinku, 40, said that a relative from his village came to his house and accused his wife of practising witchcraft.

पुलिस को दिए बयान में 40 वर्षीय श्री सिंकू ने कहा कि गांव का एक रिश्तेदार उनके घर आया और उनकी पत्नी पर डायन विद्या करने का आरोप लगाया।

- Another relative, who lived in the village, had died on Tuesday following a prolonged illness, and they blamed Ms. Sinku for it, according to a police official.

एक पुलिस अधिकारी के अनुसार, गांव में रहने वाले एक अन्य रिश्तेदार की लंबी बीमारी के बाद मंगलवार को मौत हो गई थी, और इसके लिए उन्होंने सुश्री सिंकू को जिम्मेदार ठहराया।

- Mr. Sinku said about a dozen men and women were present in the courtyard of the house when he came out. श्री सिंकू ने कहा कि जब वह बाहर आए तो घर के



- Amid the **commotion**, the mob poured **kerosene** on his wife, who had their **two-month-old baby** in her arms, and set them on fire, according to the complaint.
शिकायत के अनुसार, हंगामे के बीच भीड़ ने उनकी पत्नी पर **केरोसिन** डाल दिया, जिनकी गोद में उनका **दो महीने का बच्चा** था, और दोनों को आग लगा दी।
- Mr. Sinku suffered **severe burns**, but managed to escape by removing his clothes.
श्री सिंकू को **गंभीर रूप से जलने की चोटें** आईं, लेकिन वह अपने कपड़े उतारकर किसी तरह बच निकलने में सफल रहे।

GS Paper II: Polity,	
TOPICS COVERED	19 February 2026
19F.	SC panel to guide judges on sensitivity, compassion संवेदनशीलता और करुणा पर न्यायाधीशों का मार्गदर्शन करने के लिए एससी पैनल
19F.	Simultaneous polls panel mulling curbs on no-trust motion एक साथ चुनाव पैनल अविश्वास प्रस्ताव पर रोक पर विचार कर रहा
19F.	The need for diversity in the judiciary न्यायपालिका में विविधता की आवश्यकता

PATRIOTIC IAS



SC panel to guide judges on sensitivity, compassion

GS II: Polity
Krishnadas Rajagopal
NEW DELHI

Over a year after a High Court judge used explicit language to narrate a sexual assault on a minor girl in his judicial order, the Supreme Court has assigned the Director of the National Judicial Academy, Justice Aniruddha Bose (retd.), to draw guidelines to infuse the qualities of sensitivity and compassion in judges, especially in the context of vulnerable cases.

A three-judge Bench headed by Chief Justice of India Surya Kant directed Justice Bose, a former top court judge, to include legal practitioners, academics, and social workers in the expert committee.

The court said the committee report should be comprehensive and writ-



Justice Aniruddha Bose (retd.) has been assigned to draw guidelines for the panel.

ten in simple language, without any legal jargon. It said there was no point to such an exercise if the victims, whose rights the exercise seeks to protect, did not understand a word of the report. The Bench said the report should be translated into regional languages and submitted in the apex court.

The court highlighted that there were several offensive words and expressions in local dialects which are used casually in society.

'Offensive words'

However, the use of these words also constitute an offence under the penal laws. The Bench said it was time to spread awareness about how such expressions were a violation of the rights of victims of sexual assault.

"It shall be highly appreciated if the committee, as a part of its report, is able to identify and compile such words/expressions, from different languages, so that they do not go unnoticed, and the complainants/victims are empowered to give a better and fuller narrative of the trauma undergone by them,"

the judgment, authored by Chief Justice Kant, observed.

The judgment was triggered by a petition filed by an NGO 'We the Women of India', represented by senior advocate Shobha Gupta, and other members of the Supreme Court Bar, including senior advocate H.S. Phoolka about a March 17, 2025 order passed by a Single Judge Bench of the Allahabad High Court.

In a case of sexual assault under the Protection of Children from Sexual Offences (POCSO) Act, the Single Judge had concluded that the "pulling down of pyjama string" did not amount to an "attempt to rape" but only a lesser charge of assault or force on a woman with intent to

disrobe under Section 354B of the erstwhile Indian Penal Code.

Suo motu action

The Supreme Court had taken suo motu cognisance of the judgment as an example of how "judges and judicial officers have failed to imbibe compassion and empathy in the manner of handling matters involving sexual offences, especially when it comes to vulnerable and/or minor victims and witnesses".

"No judge or judgment of any court can be expected to do complete justice when it is inconsiderate towards the factual realities of a litigant and the vulnerabilities which they may be facing in approaching a court of law..." Chief Justice Kant observed in the judgment.

SC panel to guide judges on sensitivity, compassion

संवेदनशीलता और करुणा पर न्यायाधीशों का मार्गदर्शन करने के लिए एससी पैनल

- Over a year after a High Court judge used explicit language to narrate a sexual assault on a minor girl in his judicial order, the **Supreme Court** has assigned **the Director of the National Judicial Academy, Justice Aniruddha Bose (retd.)**, to draw guidelines to infuse the qualities of **sensitivity and compassion** in judges, especially in the context of **vulnerable cases**.

एक उच्च न्यायालय के न्यायाधीश द्वारा अपने न्यायिक आदेश में एक नाबालिग लड़की पर यौन हमले का वर्णन करने के लिए स्पष्ट भाषा का उपयोग किए जाने के एक वर्ष से अधिक समय बाद, **सुप्रीम कोर्ट** ने नेशनल ज्युडिशियल अकादमी के निदेशक **न्यायमूर्ति अनिरुद्ध बोस (सेवानिवृत्त)** को विशेष रूप से **संवेदनशील मामलों** के संदर्भ में न्यायाधीशों में **संवेदनशीलता** और **करुणा** के गुण समाहित करने हेतु दिशा-निर्देश तैयार करने का दायित्व सौंपा है।

- A three-judge Bench headed by **Surya Kant**, Chief Justice of India, directed Justice Bose, a former top court judge, to include **legal practitioners, academics, and social workers** in the **expert committee**.

भारत के मुख्य न्यायाधीश **सूर्यकांत** की अध्यक्षता वाली तीन-न्यायाधीशों की पीठ ने पूर्व शीर्ष अदालत के न्यायाधीश न्यायमूर्ति बोस को विशेषज्ञ समिति में **कानूनी पेशेवरों, शिक्षाविदों, और सामाजिक कार्यकर्ताओं** को शामिल करने का निर्देश दिया।

- The court said the **committee report should be comprehensive** and written in **simple language, without any legal jargon**.

अदालत ने कहा कि समिति की रिपोर्ट **समग्र** होनी चाहिए और किसी भी **कानूनी शब्दजाल** के बिना सरल **भाषा** में लिखी जानी चाहिए।

- In a case of sexual assault under the **Protection of Children from Sexual Offences (POCSO) Act**, the **Single Judge had concluded** that the **"pulling down of pyjama string"** did not amount to an **"attempt to rape"** but only a lesser charge of assault or force on a woman with intent to disrobe under **Section 354B** of the **erstwhile Indian Penal Code**.

बाल यौन शोषण से संरक्षण (पॉक्सो) अधिनियम के तहत यौन उत्पीड़न के एक मामले में, एकल न्यायाधीश ने यह निष्कर्ष निकाला था कि **"पायजामे की डोरी खींचना"** **"बलात्कार का प्रयास"** नहीं है, बल्कि पूर्व **भारतीय दंड संहिता** की **धारा 354B** के तहत किसी महिला पर निर्वस्त्र करने के इरादे से हमला या बल प्रयोग का एक हल्का आरोप है।

Suo motu action स्वप्रेरित कार्रवाई



- The **Supreme Court** had taken **suo motu cognisance** of the judgment as an example of how “**judges and judicial officers have failed to imbibe compassion and empathy** in the manner of handling matters involving sexual offences, especially when it comes to **vulnerable and/or minor victims and witnesses**”.

सुप्रीम कोर्ट ने इस निर्णय का स्वप्रेरित संज्ञान लिया था, इसे इस बात के उदाहरण के रूप में बताते हुए कि कैसे “न्यायाधीश और न्यायिक अधिकारी यौन अपराधों से जुड़े मामलों को संभालने के तरीके में करुणा और सहानुभूति आत्मसात करने में विफल रहे हैं, विशेषकर जब बात कमजोर और/या नाबालिग पीड़ितों और गवाहों की आती है।”

Simultaneous polls panel mulling curbs on no-trust motion

GS II: Polity

Sobhana K. Nair
NEW DELHI

The Joint Parliamentary Committee (JPC) examining the Bill on simultaneous elections is considering a provision that would bar the introduction of a no-confidence motion against an incumbent government if only one year of its term remains, committee chairperson and BJP MP P.P. Chaudhary said on Wednesday.

He was speaking at *The Hindu Mind*, a conversation series featuring leading newsmakers.

The Constitution (129th Amendment) Bill, 2024 to enable simultaneous elections was introduced in the Lok Sabha on December 17, 2024, and immediately referred to the committee. The panel has held 16 meetings in Delhi so far and travelled across the country.

Explaining key provisions of the Bill, Mr. Chaudhary said that if enacted before the 2029 general elections, the first sitting of the new Lok Sabha would become the “appointed date”. State Assembly terms beginning thereafter would be truncated to align with the 2034 Lok Sabha polls. This one-time synchronisation, he argued, would not violate the federal structure, contrary to the concerns raised by critics.

Mr. Chaudhary said the panel is deliberating whether to introduce a time-bar on moving a no-confidence motion. “We are actively considering introducing a provision that would bar the moving of a no-confidence motion if the incumbent government has only one year left in its term,” he said, noting that several states have similar restrictions for Panchayati Raj institutions.

However, such provisions vary widely across



P. P. Chaudhary

States. Under the Tamil Nadu Panchayats Act, 1994, for instance, a no-confidence motion cannot be moved in the last year of the term against certain panchayat office-bearers. In contrast, the Karnataka High Court ruled on February 9 that there should be no embargo on moving a no-confidence motion in the final year, emphasising the need to prevent misuse of office during the remaining tenure.

“When grassroots democracy has such a provision, why can’t we adopt it for the Lok Sabha and State Assemblies,” Mr. Chaudhary asked.

While he maintained that such a restriction is legally plausible, he acknowledged that the final decision must be a political one. “We will also consult the political parties on the issue,” he added.

Mr. Chaudhary conceded that there are infirmities in the current formulation of the Bill, and noted that addressing these gaps is precisely what the panel is attempting to do. For instance, during the deliberations so far, several members have pointed out that the Election Commission has been vested with unfettered powers under the proposed law.

The panel, he said, could consider introducing an oversight mechanism. At the same time, he said that the poll body is a constitutional body, and there is no reason to distrust its intentions or functioning.

Simultaneous polls panel mulling curbs on no-trust motion

एक साथ चुनाव पैनल अविश्वास प्रस्ताव पर रोक पर विचार कर रहा

- The **Joint Parliamentary Committee (JPC)** examining the Bill on **simultaneous elections** is considering a provision that would bar the introduction of a **no-confidence motion** against an incumbent government if only **one year** of its term remains, committee chairperson and **P.P. Chaudhary**, BJP MP, said on **Wednesday**.

संयुक्त संसदीय समिति (जेपीसी), जो एक साथ चुनाव संबंधी विधेयक की जांच कर रही है, एक ऐसे प्रावधान पर विचार कर रही है, जिसके तहत यदि मौजूदा सरकार के कार्यकाल का केवल एक वर्ष शेष हो तो उसके खिलाफ अविश्वास प्रस्ताव पेश नहीं किया जा सकेगा, यह जानकारी समिति के अध्यक्ष और भाजपा सांसद पी.पी. चौधरी ने बुधवार को दी।

- The **Constitution (129th Amendment) Bill, 2024** to enable simultaneous elections was introduced in the **Lok Sabha** on **December 17, 2024**, and immediately referred to the committee.

एक साथ चुनाव को सक्षम बनाने वाला संविधान (129वां संशोधन) विधेयक, 2024 को 17 दिसंबर 2024 को लोकसभा में पेश किया गया और तुरंत समिति को भेज दिया गया।

- Explaining key provisions of the Bill, Mr. Chaudhary said that if enacted before the **2029 general elections**, the first sitting of the new **Lok Sabha** would become the “**appointed date**”. विधेयक के प्रमुख प्रावधानों की व्याख्या करते हुए श्री चौधरी ने कहा कि यदि इसे **2029 के आम चुनाव** से पहले लागू किया जाता है, तो नई **लोकसभा** की पहली बैठक “**नियुक्त तिथि**” बन जाएगी।

- State Assembly terms beginning thereafter would be truncated** to align with the **2034 Lok Sabha polls**.

इसके बाद शुरू होने वाले राज्य विधानसभा कार्यकाल को **संक्षिप्त** किया जाएगा ताकि उन्हें **2034 लोकसभा चुनाव** के साथ समन्वित किया जा सके।

- This one-time synchronisation**, he argued, would not violate the **federal structure**, contrary to the **concerns raised by critics**.

उन्होंने तर्क दिया कि यह एकमुश्त **समन्वय** आलोचकों द्वारा जताई गई आशंकाओं के विपरीत **संघीय ढांचे** का उल्लंघन नहीं करेगा।



- “We are actively considering introducing a provision that would bar the moving of a **no-confidence motion** if the incumbent government has only **one year** left in its term,” he said, **noting that several States have similar restrictions for Panchayati Raj institutions.**
उन्होंने कहा, “हम सक्रिय रूप से ऐसे प्रावधान पर विचार कर रहे हैं जिसके तहत यदि मौजूदा सरकार के कार्यकाल का केवल **एक वर्ष** शेष हो तो **अविश्वास प्रस्ताव** लाने पर रोक हो,” और उल्लेख किया कि कई राज्यों में **पंचायती राज संस्थाओं** के लिए ऐसे ही प्रतिबंध हैं।
- However, such provisions vary widely across **States.**
हालांकि, ऐसे प्रावधान **राज्यों** में काफी भिन्न-भिन्न हैं।
- Under the **Tamil Nadu Panchayats Act, 1994**, for instance, a no-confidence motion cannot be moved in the last year of the term against certain **panchayat office-bearers.**
उदाहरण के लिए, **तमिलनाडु पंचायत अधिनियम, 1994** के तहत कुछ **पंचायत पदाधिकारियों** के खिलाफ कार्यकाल के अंतिम वर्ष में अविश्वास प्रस्ताव नहीं लाया जा सकता।
- In contrast, the **Karnataka High Court** ruled on **February 9** that there should be no embargo on moving a no-confidence motion in the **final year**, emphasising the need to prevent misuse of office during the remaining tenure.
इसके विपरीत, **9 फरवरी** को **कर्नाटक हाई कोर्ट** ने फैसला दिया कि **अंतिम वर्ष** में अविश्वास प्रस्ताव लाने पर कोई प्रतिबंध नहीं होना चाहिए, और शेष कार्यकाल में पद के दुरुपयोग को रोकने की आवश्यकता पर जोर दिया।
- For instance, during the deliberations so far, several members have pointed out that the **Election Commission has been vested with unfettered powers under the proposed law.**
उदाहरण के लिए, अब तक की चर्चाओं के दौरान कई सदस्यों ने यह इंगित किया है कि प्रस्तावित कानून के तहत **निर्वाचन आयोग को असीमित शक्तियां** दी गई हैं।

PATRIOTIC IAS



The need for diversity in the judiciary

What does the private Bill by DMK party member P. Wilson constitute? Why was the collegium system introduced? Why did the Supreme Court strike down the National Judicial Appointments Commission? How will regional benches of the Supreme Court help with respect to access?

ISS II: Polity

MCQ

EXPLAINER

Rangarajan. R

The story so far:

P. Wilson, senior advocate and Rajya Sabha MP of the Dravida Munnetra Kazhagam (DMK) party, has introduced a private member Bill to amend the Constitution in order to bring diversity in judicial appointments and set up regional benches of the Supreme Court.

What does the Constitution provide?

Article 124 of the Constitution provides that judges of the Supreme Court shall be appointed by the President after consulting the Chief Justice of India (CJI). Similarly, Article 217 provides that judges of a High Court shall be appointed by the President after consulting the CJI, the Chief Justice of the High Court and Governor of the State. Article 130 of the Constitution provides that the seat of the Supreme Court shall be in Delhi or such other place(s) as appointed by the CJI with the approval of central government.

What is the collegium system?

As per the process laid down in the Constitution, judges were appointed by the government after consultation with the judiciary till the 1980s. In the *First Judges* case (1981), the Supreme Court upheld the primacy of the executive in judicial appointments since it is accountable to the people. However, considering the need to maintain the independence of the judiciary and insulate it from political favouritism, the Supreme Court in the *Second Judges* case (1993) created the collegium system for the appointment of judges. This was reaffirmed by the Supreme Court's opinion in the *Third Judges* case (1998). The collegium consists of the CJI with four senior judges of the SC for appointments to the Supreme Court, and the CJI with two senior judges for appointment to the High Courts. The collegium initiates the



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proposal for appointment of judges to the higher judiciary and sends the recommendation to the Central government. The Centre may return a recommendation in case of any objection. However, if the collegium reiterates the recommendation, the appointment should be made.

The collegium system has ensured the independence of the judiciary from the executive, in the matter of appointments. Nevertheless, it has its own drawbacks like lack of transparency and accountability. There is also resentment on account of alleged nepotism in this process whereby kith and kin of sitting judges are favoured for appointments to higher judiciary. Parliament through the 99th constitutional amendment in 2014 had set up the National Judicial Appointments Commission (NJAC) to provide recommendations to the

executive for appointment of judges. The NJAC was to consist of the CJI, two senior judges, the Union law minister and two eminent persons. This was however struck down by the Supreme Court in 2015 as it violated the basic structure of the independence of the judiciary. Hence, the collegium process continues till date for appointments.

What is this Bill?

The collegium process lays emphasis on merit in the selection of judges. However, it does not reflect the social diversity of our country. For instance, out of the judges appointed to higher judiciary between 2018 and 2024, only around 20% belonged to the Scheduled Castes (SC), Scheduled Tribes (ST) and Other Backward Classes (OBC). The proportion of women and religious minorities is less than 15% and 5% respectively. The Bill

introduced by the private member mandates that due representation should be given to SC, ST, OBC, religious minorities and women in proportion to their population while appointing judges to the Supreme Court and High courts. It also sets a maximum timeline of 90 days for the Central government to notify the recommendations of the collegium.

Considering that the Supreme Court only sits in Delhi, access to the highest court for common citizens remains a challenge. There are also more than 90,000 cases pending in the Supreme Court as of January 2026. In order to address these issues, the Bill requires setting up of regional benches of the Supreme Court in New Delhi, Kolkata, Mumbai and Chennai. These regional benches shall exercise full jurisdiction of the Supreme Court except over cases of constitutional importance to be heard by the main Constitution bench in Delhi.

What can be the way forward?

The onus for ensuring social diversity in the appointment of judges primarily falls on the judiciary through the collegium process. The private member Bill is relevant as it would create a constitutional directive to achieve the desired objective. The long-term reform could be to revive the NJAC by broad basing its composition. It can include representatives from the legislature, bar council and academia like in South Africa and the U.K. This would make the consultation broad based and inclusive. Suitable representation for SC, ST, OBC, minorities and women should be ensured through this process.

As recommended by Parliamentary committees and Law Commission in the past, regional benches of the Supreme Court can be set up under existing provisions of the Constitution itself. The Court may even consider setting up a bench in one region initially and extend to other regions in a time bound manner.

Rangarajan R is a former IAS officer and author of Courseware on Polity Simplified. He currently trains at Officers IAS academy. Views expressed are personal.

THE GIST

Article 124 of the Constitution provides that judges of the Supreme Court shall be appointed by the President after consulting the Chief Justice of India (CJI).

Considering the need to maintain the independence of the judiciary and insulate it from political favouritism, the Supreme Court in the *Second Judges* case (1993) created the collegium system for the appointment of judges.

Out of the judges appointed to higher judiciary between 2018 and 2024, only around 20% belonged to the Scheduled Castes (SC), Scheduled Tribes (ST) and Other Backward Classes (OBC).

The need for diversity in the judiciary न्यायपालिका में विविधता की आवश्यकता

- **P. Wilson, senior advocate and Rajya Sabha MP of the Dravida Munnetra Kazhagam (DMK) party, has introduced a private member Bill to amend the Constitution in order to bring diversity in judicial appointments and set up regional benches of the Supreme Court.**

पी. विल्सन, सीनियर एडवोकेट और राज्यसभा सांसद द्रविड़ मुनेत्र कषगम (DMK) पार्टी के, ने संविधान में संशोधन के लिए प्राइवेट मेंबर बिल प्रस्तुत किया है ताकि न्यायिक नियुक्तियों में विविधता लाई जा सके और सुप्रीम कोर्ट की क्षेत्रीय पीठें स्थापित की जा सकें।

- **What does the Constitution provide?**
संविधान क्या प्रावधान करता है?
- **Article 124** of the Constitution provides that judges of the **Supreme Court** shall be appointed by the **President** after consulting the **Chief Justice of India (CJI)**.

अनुच्छेद 124 के अनुसार सुप्रीम कोर्ट के न्यायाधीशों की नियुक्ति राष्ट्रपति द्वारा भारत के मुख्य न्यायाधीश (CJI) से परामर्श के बाद की जाएगी।

- Similarly, **Article 217** provides that judges of a **High Court** shall be appointed by the **President** after consulting the **CJI, the Chief Justice of the High Court and Governor of the State**.

इसी प्रकार अनुच्छेद 217 के अनुसार हाई कोर्ट के न्यायाधीशों की नियुक्ति राष्ट्रपति द्वारा CJI, हाई कोर्ट के मुख्य न्यायाधीश और राज्यपाल से परामर्श के बाद की जाएगी।

- **Article 130** of the Constitution provides that the **seat of the Supreme Court** shall be in **Delhi** or such other place(s) as appointed by the **CJI** with the approval of **central government**.

अनुच्छेद 130 के अनुसार सुप्रीम कोर्ट का मुख्यालय दिल्ली में होगा या CJI द्वारा केंद्र सरकार की स्वीकृति से किसी अन्य स्थान पर होगा।



What is the collegium system? कॉलेजियम प्रणाली क्या है?

- As per the process laid down in the Constitution, judges were appointed by the **government** after consultation with the **judiciary** till the **1980s**.
संविधान में निर्धारित प्रक्रिया के अनुसार **1980 के दशक** तक न्यायाधीशों की नियुक्ति **सरकार** द्वारा **न्यायपालिका से परामर्श** के बाद की जाती थी।
- In the **First Judges case (1981)**, the **Supreme Court** upheld the **primacy of the executive** in judicial appointments since it is **accountable to the people**.
प्रथम न्यायाधीश मामला (1981) में **सुप्रीम कोर्ट** ने न्यायिक नियुक्तियों में **कार्यपालिका की प्रधानता** को सही ठहराया क्योंकि वह **जनता के प्रति जवाबदेह** है।
- However, considering the need to maintain the **independence of the judiciary** and insulate it from **political favouritism**, the **Supreme Court** in the **Second Judges case (1993)** created the **collegium system** for the appointment of judges.
हालाँकि **न्यायपालिका की स्वतंत्रता** बनाए रखने और इसे **राजनीतिक पक्षपात** से बचाने के लिए **सुप्रीम कोर्ट** ने **द्वितीय न्यायाधीश मामला (1993)** में न्यायाधीशों की नियुक्ति हेतु **कॉलेजियम प्रणाली** बनाई।
- This was reaffirmed by the **Supreme Court's opinion** in the **Third Judges case (1998)**.
इसे **तृतीय न्यायाधीश मामला (1998)** में **सुप्रीम कोर्ट की राय** द्वारा पुनः पुष्टि की गई।
- The **collegium consists of the CJI with four senior judges of the SC** for appointments to the **Supreme Court**, and the **CJI with two senior judges** for appointment to the **High Courts**.
कॉलेजियम में सुप्रीम कोर्ट नियुक्तियों के लिए CJI और सुप्रीम कोर्ट के चार वरिष्ठ न्यायाधीश, तथा हाई कोर्ट नियुक्तियों के लिए CJI और दो वरिष्ठ न्यायाधीश शामिल होते हैं।
- The **collegium initiates the proposal** for appointment of judges to the **higher judiciary** and sends the **recommendation to the Central government**.
कॉलेजियम उच्च न्यायपालिका में नियुक्ति का प्रस्ताव शुरू करता है और सिफारिश केंद्र सरकार को भेजता है।
- The **Centre may return a recommendation** in case of any objection. However, if the **collegium reiterates the recommendation**, the **appointment should be made**.
केंद्र किसी आपत्ति पर सिफारिश वापस भेज सकता है। परन्तु यदि कॉलेजियम सिफारिश पुनः दोहराता है, तो नियुक्ति की जानी चाहिए।
- The **collegium system has ensured the independence of the judiciary from the executive**, in the matter of appointments.
कॉलेजियम प्रणाली ने नियुक्तियों में न्यायपालिका को कार्यपालिका से स्वतंत्रता सुनिश्चित की है।
- Nevertheless, it has its own drawbacks like **lack of transparency and accountability**.
फिर भी इसके दोष हैं जैसे **पारदर्शिता और जवाबदेही की कमी।**
- There is also resentment on account of alleged **nepotism** in this process whereby **kin and kin of sitting judges are favoured** for appointments to higher judiciary.
इस प्रक्रिया में कथित **भाई-भतीजावाद** को लेकर असंतोष है, जहाँ **वर्तमान न्यायाधीशों के रिश्तेदारों को लाभ दिया जाता है।**
- Parliament through the **99th constitutional amendment in 2014** had set up the **National Judicial Appointments Commission (NJAC)** to provide **recommendations to the executive** for appointment of judges.
संसद ने **2014 के 99वें संविधान संशोधन** द्वारा **राष्ट्रीय न्यायिक नियुक्ति आयोग (NJAC)** स्थापित किया ताकि न्यायाधीश नियुक्ति हेतु **कार्यपालिका को सिफारिशें** दी जा सकें।
- The **NJAC was to consist of the CJI, two senior judges, the Union law minister and two eminent persons**.
NJAC में CJI, दो वरिष्ठ न्यायाधीश, केंद्रीय विधि मंत्री और दो प्रतिष्ठित व्यक्ति शामिल होने थे।
- This was however **struck down by the Supreme Court in 2015** as it **violated the basic structure of the independence of the judiciary**.
किन्तु इसे **2015 में सुप्रीम कोर्ट ने निरस्त कर दिया** क्योंकि यह **न्यायपालिका की स्वतंत्रता की मूल संरचना का उल्लंघन** था।
- Hence, the **collegium process continues till date for appointments**.
इस प्रकार **नियुक्तियों हेतु कॉलेजियम प्रक्रिया आज तक जारी है।**



What is this Bill? यह विधेयक क्या है?

- The **collegium process** lays emphasis on **merit** in the selection of judges. However, it does not reflect the **social diversity** of our country.
कॉलेजियम प्रक्रिया न्यायाधीशों के चयन में योग्यता पर जोर देती है, परंतु यह हमारे देश की सामाजिक विविधता को प्रतिबिंबित नहीं करती।
- For instance, out of the judges appointed to **higher judiciary between 2018 and 2024**, only around **20%** belonged to the **Scheduled Castes (SC), Scheduled Tribes (ST) and Other Backward Classes (OBC)**.
उदाहरण के लिए 2018 से 2024 के बीच उच्च न्यायपालिका में नियुक्त न्यायाधीशों में केवल लगभग 20% अनुसूचित जाति (SC), अनुसूचित जनजाति (ST) और अन्य पिछड़ा वर्ग (OBC) से थे।
- The proportion of **women and religious minorities** is less than **15%** and **5%** respectively.
महिलाओं और धार्मिक अल्पसंख्यकों का अनुपात क्रमशः 15% और 5% से कम है।
- The **Bill introduced by the private member** mandates that **due representation** should be given to **SC, ST, OBC, religious minorities and women** in proportion to their **population** while appointing judges to the **Supreme Court and High courts**.
प्राइवेट मेंबर द्वारा प्रस्तुत विधेयक यह अनिवार्य करता है कि सुप्रीम कोर्ट और हाई कोर्ट में नियुक्ति के समय SC, ST, OBC, धार्मिक अल्पसंख्यक और महिलाओं को उनकी जनसंख्या के अनुपात में उचित प्रतिनिधित्व दिया जाए।
- It also sets a **maximum timeline of 90 days** for the **Central government** to notify the **recommendations of the collegium**.
यह केंद्र सरकार के लिए कॉलेजियम की सिफारिशों को अधिसूचित करने हेतु अधिकतम 90 दिन की समयसीमा भी निर्धारित करता है।
- Considering that the **Supreme Court only sits in Delhi**, access to the **highest court** for common citizens remains a **challenge**.
चूंकि सुप्रीम कोर्ट केवल दिल्ली में बैठता है, इसलिए आम नागरिकों के लिए सर्वोच्च न्यायालय तक पहुंच एक चुनौती बनी रहती है।
- There are also more than **90,000 cases pending in the Supreme Court as of January 2026**.
जनवरी 2026 तक सुप्रीम कोर्ट में 90,000 से अधिक मामले लंबित हैं।
- In order to address these issues, the **Bill requires setting up of regional benches of the Supreme Court in New Delhi, Kolkata, Mumbai and Chennai**.
इन समस्याओं के समाधान हेतु विधेयक नई दिल्ली, कोलकाता, मुंबई और चेन्नई में सुप्रीम कोर्ट की क्षेत्रीय पीठों की स्थापना का प्रावधान करता है।
- These **regional benches shall exercise full jurisdiction of the Supreme Court except over cases of constitutional importance to be heard by the main Constitution bench in Delhi**.
ये क्षेत्रीय पीठें संवैधानिक महत्व के मामलों को छोड़कर सुप्रीम कोर्ट के पूर्ण अधिकार क्षेत्र का प्रयोग करेंगी, जबकि ऐसे मामले दिल्ली की मुख्य संविधान पीठ द्वारा सुने जाएंगे।

What can be the way forward? आगे का मार्ग क्या हो सकता है?

- The **private member Bill is relevant** as it would create a **constitutional directive** to achieve the **desired objective**.
प्राइवेट मेंबर विधेयक महत्वपूर्ण है क्योंकि यह वांछित उद्देश्य प्राप्त करने हेतु संवैधानिक निर्देश प्रदान करेगा।
- The **long-term reform** could be to **revive the NJAC by broad basing its composition**.
दीर्घकालिक सुधार के रूप में NJAC को उसके व्यापक पुनर्गठन के साथ पुनर्जीवित किया जा सकता है।
- It can include **representatives from the legislature, bar council and academia like in South Africa and the U.K**.
इसमें दक्षिण अफ्रीका और यू.के. की तरह विधायिका, बार काउंसिल और अकादमिक क्षेत्र के प्रतिनिधि शामिल किए जा सकते हैं।



- This would make the **consultation broad based and inclusive**.
इससे परामर्श प्रक्रिया व्यापक और समावेशी होगी।
- **As recommended by Parliamentary committees and Law Commission in the past, regional benches of the Supreme Court can be set up under existing provisions of the Constitution itself.**
पूर्व में संसदीय समितियों और विधि आयोग की सिफारिशों के अनुसार, संविधान के वर्तमान प्रावधानों के अंतर्गत ही सुप्रीम कोर्ट की क्षेत्रीय पीठें स्थापित की जा सकती हैं।

GS Paper II: Governance,

TOPICS COVERED

19 February 2026

19F.	DGCA proposes swift ban on disruptive passengers डीजीसीए ने अव्यवस्थित यात्रियों पर त्वरित प्रतिबंध का प्रस्ताव रखा
19F.	Centre to bring 1,954 border villages under development scheme केंद्र 1,954 सीमावर्ती गांवों को विकास योजना के तहत लाएगा

DGCA proposes swift ban on disruptive passengers

Airlines will be able to ban unruly passengers for 30 days without any referral under the proposed amendments to the Civil Aviation Requirement; regulator invites comments from stakeholders

GS II: Governance

S. Vijay Kumar
CHENNAI

Airline operators may soon be empowered to directly impose a flying ban of up to 30 days on unruly or disruptive passengers without referring the matter to the competent authority.

The Directorate General of Civil Aviation (DGCA) has proposed amendments to the Civil Aviation Requirement provisions governing the handling of unruly or disruptive passengers, emphasising that even a single disruptive passenger can jeopardise safety on board and adversely affect flight operations.

Under the proposed revision, airlines will be authorised to impose a flying ban not exceeding 30 days

Aerial decorum

Under the proposed revision, airlines would be authorised to impose a flying ban not exceeding 30 days on passengers found guilty of disruptive behaviour during a flight without prior referral to the existing independent committee mechanism

Disruptive acts include:

- Consumption of alcohol on domestic flights
- Smoking on board
- Tampering with emergency exits
- Engaging in protests or sloganeering
- Unruly conduct arising from intoxication



While airlines will inform the DGCA about any flying ban imposed and maintain a database of such passengers, the ban does not add passengers to the regulator's official No Fly List

on passengers found guilty of disruptive behaviour during a flight without prior referral to an independent committee.

The DGCA said the definition of disruptive acts included smoking on board, consumption of alcohol on domestic flights, tampering with emergency exits, unauthorised use of life-

saving equipment such as life jackets, engaging in protests or sloganeering, and unruly conduct arising from intoxication. Additionally, screaming, causing annoyance to fellow passengers, and kicking or banging seat backs or tray tables have also been categorised as disruptive behaviour. Airlines will be re-

quired to maintain a database of such passengers and inform the DGCA about any flying ban imposed. However, passengers banned under this provision would not be included in the regulator's official "No Fly List".

The aviation regulator has invited comments from stakeholders on the proposed amendments issued under Rule 133A of the Aircraft Rules, 1937.

Currently, airlines must refer cases of disruptive conduct to an independent committee. The committee is required to examine the matter and give its decision within 45 days before a flying ban can be enforced. The revision seeks to streamline the process, enabling airlines to act swiftly in the interest of passenger safety.



DGCA proposes swift ban on disruptive passengers डीजीसीए ने अव्यवस्थित यात्रियों पर त्वरित प्रतिबंध का प्रस्ताव रखा

- Airlines will be able to ban unruly passengers for **30 days** without any referral under the proposed amendments to the **Civil Aviation Requirement**; regulator invites comments from stakeholders
प्रस्तावित **सिविल एविएशन रिक्वायरमेंट** में संशोधनों के तहत एयरलाइंस **30 दिनों** के लिए अव्यवस्थित यात्रियों पर बिना किसी रेफरल के प्रतिबंध लगा सकेंगी; नियामक ने हितधारकों से टिप्पणियां आमंत्रित की हैं
- The DGCA said the definition of disruptive acts included **smoking on board, consumption of alcohol on domestic flights, tampering with emergency exits, unauthorised use of lifesaving equipment** such as **life jackets, engaging in protests or sloganeering**, and unruly conduct arising from **intoxication**.
डीजीसीए ने कहा कि बाधा उत्पन्न करने वाले कृत्यों की परिभाषा में **विमान में धूम्रपान, घरेलू उड़ानों में शराब का सेवन, आपातकालीन निकास से छेड़छाड़, जीवनरक्षक उपकरणों का अनधिकृत उपयोग** जैसे **लाइफ जैकेट, प्रदर्शन या नारेबाजी में शामिल होना**, और **नशे से उत्पन्न अव्यवस्थित आचरण** शामिल हैं।
- Additionally, **screaming, causing annoyance to fellow passengers, and kicking or banging seat backs or tray tables** have also been categorised as disruptive behaviour.
इसके अतिरिक्त, **चिल्लाना, सहयात्रियों को परेशान करना, और सीट की पीठ या ट्रे टेबल को लात मारना या पीटना** भी बाधा उत्पन्न करने वाले व्यवहार के रूप में वर्गीकृत किए गए हैं।
- Airlines will be required to maintain a **database** of such passengers and inform the DGCA about any flying ban imposed.
एयरलाइंस को ऐसे यात्रियों का **डेटाबेस** बनाए रखना होगा और लगाए गए किसी भी उड़ान प्रतिबंध के बारे में डीजीसीए को सूचित करना होगा।
- However, passengers banned under this provision would not be included in the regulator's official **"No Fly List"**.
हालांकि, इस प्रावधान के तहत प्रतिबंधित यात्रियों को नियामक की आधिकारिक **"नो फ्लाई लिस्ट"** में शामिल नहीं किया जाएगा।
- The aviation regulator has invited **comments from stakeholders** on the proposed amendments issued under **Rule 133A of the Aircraft Rules, 1937**.
नागर विमानन नियामक ने **एयरक्राफ्ट रूल्स, 1937** के **नियम 133A** के तहत जारी प्रस्तावित संशोधनों पर **हितधारकों से टिप्पणियां आमंत्रित** की हैं।
- Currently, airlines must refer cases of disruptive conduct to an **independent committee**.
वर्तमान में, एयरलाइंस को बाधा उत्पन्न करने वाले आचरण के मामलों को **स्वतंत्र समिति** को भेजना होता है।

Centre to bring 1,954 border villages under development scheme

GS II: Governance

Vijaita Singh
NEW DELHI

The second phase of the Vibrant Village Programme (VVP) will cover 1,954 strategic villages along the land borders with Pakistan, Nepal, Bangladesh, Bhutan, and Myanmar in 15 States and two Union Territories, according to the Ministry of Home Affairs (MHA).

The VVP was launched in 2023, originally to assist development in villages along the China border. The VVP-II was cleared by the Union Cabinet in April 2025.

On February 20, Home Minister Amit Shah is likely to launch the VVP-II programme at Nathanpur vil-

lage in Assam's Cachar district along the Bangladesh border.

Ensuring livelihood

The Ministry said the main objective of the VVP-II is to meet the developmental needs and well-being of the border population, as well as promote diverse livelihood opportunities to ensure economic and cultural assimilation with the nation.

"In these villages, opportunities for professional growth, social cohesion and national integration would be enhanced to ensure that border regions are not left behind in the country's development journey," the MHA said.

Centre to bring 1,954 border villages under development scheme केंद्र 1,954 सीमावर्ती गांवों को विकास योजना के तहत लाएगा

- The second phase of the **Vibrant Village Programme (VVP)** will cover **1,954 strategic villages** along the land borders with **Pakistan, Nepal, Bangladesh, Bhutan, and Myanmar** in **15 States and two Union Territories**, according to the **Ministry of Home Affairs (MHA)**.

वाइब्रेंट विलेज प्रोग्राम (वीवीपी) का दूसरा चरण **1,954 रणनीतिक गांवों** को शामिल करेगा, जो **पाकिस्तान, नेपाल, बांग्लादेश, भूटान, और म्यांमार** के साथ लगी भूमि सीमाओं पर **15 राज्यों और दो केंद्र शासित प्रदेशों** में स्थित हैं, यह जानकारी **गृह मंत्रालय (एमएचए)** ने दी।

- The **VVP** was launched in **2023**, originally to assist development in villages along the **China border**.



वीवीपी की शुरुआत 2023 में की गई थी, जिसका मूल उद्देश्य चीन सीमा से सटे गांवों के विकास में सहायता करना था।

- The Ministry said the main objective of the VVP-II is to meet the **developmental needs and well-being** of the border population, as well as promote **diverse livelihood opportunities** to ensure **economic and cultural assimilation** with the nation.
मंत्रालय ने कहा कि वीवीपी-II का मुख्य उद्देश्य सीमावर्ती आबादी की **विकासात्मक आवश्यकताओं** और **कल्याण** को पूरा करना है, साथ ही **आर्थिक और सांस्कृतिक एकीकरण** सुनिश्चित करने के लिए **विविध आजीविका अवसरों** को बढ़ावा देना है।

GS Paper II: International Relations

TOPICS COVERED

19 February 2026

19F.	Are Indian firms intent on moving to Venezuelan oil? क्या भारतीय कंपनियाँ वेनेजुएला के तेल की ओर बढ़ने के इच्छुक हैं?
19F.	In Munich, Rubio lays bare plan for a new world म्यूनिख में रुबियो ने नई दुनिया की योजना को उजागर किया
19F.	U.S. reveals details of 'Chinese nuclear test'; Kremlin disagrees अमेरिका ने 'चीनी परमाणु परीक्षण' का विवरण उजागर किया; क्रेमलिन ने असहमति जताई
19F.	How Latin America is responding to U.S. embargo-triggered oil crisis in Cuba अमेरिकी प्रतिबंध-प्रेरित क्यूबा के तेल संकट पर लैटिन अमेरिका की प्रतिक्रिया

Are Indian firms intent on moving to Venezuelan oil?

What are the drawbacks of Venezuelan crude? Has India been importing from the South American nation?

EDITORIAL
Saptaparno Ghosh

The story so far:

Indian refiners have not been particularly enthused with the prospect of Venezuelan oil flowing into the global market following the U.S. capture of Venezuelan President Nicholas Maduro. Whilst announcing the trade agreement with India, U.S. President Donald Trump unilaterally mentioned that New Delhi had agreed to buy more crude from the U.S., potentially Venezuelan oil. However, the joint statement makes no such mention.

What are the concerns?

S. Bharathan, Director for Refiners at Hindustan Petroleum said that Venezuelan crude other than being bottom-heavy, also has high viscosity and a high acid number. Sanjay Khanna, Chairman and Managing Director of Bharat Petroleum too had indicated that

Venezuelan crude contains high metal and nitrogen content. He further stated that the crude would have to be co-blended with other lighter crude to the extent of 10-15% and then processed. For perspective, higher viscosity indicates a potential resistance to flow while a higher acid number indicates a higher chemical mix existing naturally in the oil.

Why is it a concern for any refinery?

Amit Priyadarshan, Chief Executive Officer of Caliche, explained that pipes, bends, pressure vessels, outlets, inlets, valves and chokes in a refinery are designed based on a certain viscosity of crude oil. "Beyond which, it leads to complication in the process," he stated, adding specifically with respect to viscosity, "In the flow [of crude oil in pipes and systems of a refinery], pressure gets built up." Further, enumerating about the acidic number, Mr. Priyadarshan explained that a higher acidic number

would result in corroding. Anandh Mathew, the Group COO at Caliche, also pointed to refineries using catalysts and/or chemicals to process crude into final products as petrol and diesel among others. "Refineries procure these based on the type of crude it can process but if there is a different type of crude, it is not like you can buy it from the market, the catalysts are used in thousands of tonnes each day," he stated. According to Mr. Mathews, while recalibrating refineries may not be a particularly uphill task in terms of cost, it cannot be done overnight and the lack of additional storage capacity could be a constraint. Bloomberg reported that Reliance, India's refining giant, "has taken one Very Large Crude Carrier with a cargo of around 2 million barrels". Reliance's Jamnagar can handle heavy and extra-heavy crude.

What next?

India's Foreign Ministry has maintained

that New Delhi "remains open to exploring the commercial merits of any crude supply option, including from Venezuela". Speaking to the press on February 5, Randhir Jaiswal, official spokesperson at the ministry also pointed to Indian public sector entities of the oil and gas sector having established relationships with the Venezuelan state-owned PDVSA. "We were importing energy or crude oil from Venezuela till 2019-20 and thereafter we had to stop. Again, we started buying oil from Venezuela in 2023-24 which were halted because of re-imposition of sanctions," he observed. For context, the South American nation's share in India's crude oil basket hovered between 10-13% until President Trump imposed sanctions during his first term at the Oval Office. Later, after New Delhi recommenced purchases, Venezuelan crude constitutes about 1-2% of India's overall basket.

A potential determinant for higher Venezuelan uptake also entails political uncertainty. Mr. Trump's actions have been condemned at the United Nations Security Council. India's Foreign Ministry has maintained that New Delhi "remains open to exploring the commercial merits of any crude supply option, including from Venezuela".

THE GIST

S. Bharathan, Director for Refiners at Hindustan Petroleum had mentioned that Venezuelan crude other than being bottom-heavy, also has high viscosity and a high acid number.

A potential determinant for higher Venezuelan uptake entails political uncertainty. Mr. Trump's actions have been condemned at the United Nations Security Council.

India's Foreign Ministry has maintained that New Delhi "remains open to exploring the commercial merits of any crude supply option, including from Venezuela".

Are Indian firms intent on moving to Venezuelan oil?

क्या भारतीय कंपनियाँ वेनेजुएला के तेल की ओर बढ़ने के इच्छुक हैं?

- S. Bharathan, Director for Refiners at Hindustan Petroleum said that **Venezuelan crude other than being bottom-heavy, also has high viscosity and a high acid number.**
हिंदुस्तान पेट्रोलियम के रिफाइनर निदेशक एस. भरतन ने कहा कि वेनेजुएला का कच्चा तेल भारी होने के साथ-साथ उच्च श्यानता और उच्च अम्ल संख्या वाला है।
- Sanjay Khanna, Chairman and Managing Director of Bharat Petroleum too had indicated that **Venezuelan crude contains high metal and nitrogen content.**



भारत पेट्रोलियम के अध्यक्ष एवं प्रबंध निदेशक संजय खन्ना ने भी बताया कि वेनेजुएला के कच्चे तेल में धातु और नाइट्रोजन की मात्रा अधिक होती है।

- He further stated that the crude would have to be **co-blended with other lighter crude to the extent of 10-15% and then processed.**
उन्होंने आगे कहा कि इस तेल को 10-15% हल्के कच्चे तेल के साथ मिलाकर ही प्रसंस्कृत करना होगा।
- For perspective, **higher viscosity indicates a potential resistance to flow** while a **higher acid number indicates a higher chemical mix existing naturally in the oil.**
स्पष्टता के लिए अधिक श्यानता प्रवाह में अधिक प्रतिरोध दर्शाती है जबकि उच्च अम्ल संख्या तेल में अधिक रासायनिक मिश्रण की उपस्थिति दर्शाती है।

Why is it a concern for any refinery?

यह किसी भी रिफाइनरी के लिए चिंता का विषय क्यों है?

- **Amit Priyadarshan**, Chief Executive Officer of **Caliche**, explained that **pipes, bends, pressure vessels, outlets, inlets, valves and chokes in a refinery are designed based on a certain viscosity of crude oil.**
कैलीचे के मुख्य कार्यकारी अधिकारी अमित प्रियदर्शन ने बताया कि रिफाइनरी में पाइप, मोड़, प्रेशर वेसल, आउटलेट, इनलेट, वाल्व और चोक्स कच्चे तेल की एक निश्चित श्यानता के आधार पर डिजाइन किए जाते हैं।
- Further, enumerating about the **acidic number**, he explained that **a higher acidic number would result in corroding.**
उन्होंने अम्ल संख्या के बारे में बताया कि अधिक अम्ल संख्या से क्षरण होता है।
- **Bloomberg** reported that **Reliance has taken one Very Large Crude Carrier with around 2 million barrels**, and **Jamnagar can handle heavy and extra-heavy crude.**
ब्लूमबर्ग के अनुसार रिलायंस ने लगभग 2 मिलियन बैरल वाले एक वेरी लार्ज कूड कैरियर लिया है, और जामनगर भारी तथा अति-भारी कच्चे तेल को संभाल सकता है।
- The **South American nation's share in India's crude basket hovered between 10-13% earlier, but later fell to about 1-2%.**
इस दक्षिण अमेरिकी देश की भारत के कच्चे तेल में हिस्सेदारी पहले 10-13% थी, जो बाद में घटकर लगभग 1-2% रह गई।
- An **SBI Research note** stated **India's fuel import bill could fall by \$3 billion** if Venezuelan crude is used, subject to **\$10-12 per barrel discount.**
एसबीआई रिसर्च नोट के अनुसार यदि वेनेजुएला का तेल उपयोग किया जाए तो भारत का ईंधन आयात बिल 3 अरब डॉलर तक घट सकता है, बशर्ते प्रति बैरल 10-12 डॉलर की छूट मिले।

U.S. reveals details of 'Chinese nuclear test'; Kremlin disagrees

GS II: IR

Reuters
WASHINGTON

A senior U.S. official on Tuesday revealed what he said were new details of an underground nuclear test blast that China allegedly conducted in June 2020.

Assistant Secretary of State Christopher Yeaw told an event at the Hudson Institute think tank in Washington that a remote seismic station in Kazakhstan measured an "explosion" of magnitude 2.75 located 720 km away at the

China says the allegation is an attempt 'to fabricate excuses for resuming' U.S. nuclear testing

Lop Nor test grounds in western China on June 22, 2020.

"It is ... what you would expect with a nuclear explosive test," said Mr. Yeaw, a former intelligence analyst and defence official who holds a doctorate in nuclear engineering.

The **Comprehensive Test Ban Treaty Organization** said that there was insufficient data to confirm Mr. Yeaw's allegation.

A spokesperson for the Chinese embassy in Washington said the allegation about China conducting a nuclear test was "entirely unfounded" and an attempt "to fabricate excuses for resuming" U.S. nuclear testing.

Meanwhile, the Kremlin said that neither China nor Russia have carried out secret nuclear tests.



U.S. reveals details of 'Chinese nuclear test'; Kremlin disagrees अमेरिका ने 'चीनी परमाणु परीक्षण' का विवरण उजागर किया; क्रेमलिन ने असहमति जताई

- A senior **U.S. official** on Tuesday revealed what he said were new details of an **underground nuclear test blast** that **China** allegedly conducted in **June 2020**.
मंगलवार को एक वरिष्ठ अमेरिकी अधिकारी ने उन नए विवरणों का खुलासा किया, जिनके बारे में उनका कहना है कि चीन ने जून 2020 में एक भूमिगत परमाणु परीक्षण विस्फोट किया था।
- Assistant Secretary of State Christopher Yeaw** told an event at the **Hudson Institute** think tank in **Washington** that a remote **seismic station** in **Kazakhstan** measured an **"explosion"** of magnitude **2.75** located **720 km** away at the **Lop Nor test grounds** in **western China** on **June 22, 2020**.
सहायक विदेश सचिव क्रिस्टोफर यीव ने वाशिंगटन स्थित हडसन इंस्टीट्यूट थिंक टैंक में एक कार्यक्रम में कहा कि कज़ाख़स्तान में एक दूरस्थ सीस्मिक स्टेशन ने 22 जून 2020 को पश्चिमी चीन के लोप नोर परीक्षण स्थल पर 720 किमी दूर 2.75 तीव्रता का एक "विस्फोट" दर्ज किया।
- "It is ... what you would expect with a **nuclear explosive test**," said Mr. Yeaw, a former **intelligence analyst** and **defence official** who holds a **doctorate in nuclear engineering**.
"यह वही है ... जिसकी आप एक परमाणु विस्फोटक परीक्षण से अपेक्षा करेंगे," श्री यीव ने कहा, जो एक पूर्व खुफिया विश्लेषक और रक्षा अधिकारी हैं तथा परमाणु इंजीनियरिंग में डॉक्टरेट रखते हैं।
- The **Comprehensive Test Ban Treaty Organization** said that there was **insufficient data** to confirm Mr. Yeaw's allegation.
समग्र परमाणु परीक्षण प्रतिबंध संधि संगठन ने कहा कि श्री यीव के आरोप की पुष्टि के लिए पर्याप्त डेटा नहीं है।
- A spokesperson for the **Chinese embassy in Washington** said the allegation about **China conducting a nuclear test** was **"entirely unfounded"** and an attempt **"to fabricate excuses for resuming" U.S. nuclear testing**.
वाशिंगटन में चीनी दूतावास के एक प्रवक्ता ने कहा कि चीन द्वारा परमाणु परीक्षण किए जाने का आरोप "पूरी तरह निराधार" है और यह अमेरिकी परमाणु परीक्षण को फिर से शुरू करने के लिए "बहाने गढ़ने" का प्रयास है।
- Meanwhile, the **Kremlin** said that neither **China** nor **Russia** have carried out **secret nuclear tests**.
इस बीच, क्रेमलिन ने कहा कि न तो चीन और न ही रूस ने कोई गुप्त परमाणु परीक्षण किया है।

How Latin America is responding to U.S. embargo-triggered oil crisis in Cuba

Agence France Presse
HAVANA

The U.S. oil embargo on Cuba has drawn varied responses across Latin America, ranging from offers of aid and political support to silence about Havana's economic crisis.

The Caribbean island, under communist rule for more than six decades, has been grappling with a severe fuel shortage for years.

But the crisis deepened last month when U.S. President Donald Trump cut off critical supplies of Venezuelan oil to Cuba after he ousted leader Nicolas Maduro and threatened tariffs on any country that sells hydrocarbons to Havana.

Here is a look at how go-

vernments in the region have responded to Cuba's plight.

Offering aid
Mexico, a long-standing ally of Cuba, has hit pause on oil shipments but is still leading the way in providing material support.

Two Mexican navy ships arrived in Havana on Thursday with 814 tonnes of food supplies. More than 1,500 tonnes of other humanitarian aid are expected to be delivered to the island, according to President Claudia Sheinbaum.

Sheinbaum's leftist government sent oil to Cuba until early January. Some of that crude oil was part of a "humanitarian aid"

scheme, the President said, adding that she halted those shipments but expressed her disagreement with Washington's threat of tariffs.

"We will continue sending humanitarian aid, food and some other items requested by the Cuban government," Ms. Sheinbaum said on Tuesday.

Her administration also opened a collection centre in Mexico City last week for aid for Cuba.

In Chile, the leftist President Gabriel Boric, who leaves office next month, announced a contribution of \$1 million to Cuba — an initiative criticised by the president-elect, the far-right politician Jose Antonio Kast, who was en-



Shipments to island: A Mexican Navy ship arrives at Havana Bay with humanitarian aid on February 12. AFP

dorsed by Mr. Trump and has been a critic of Mr. Maduro.

Political support

In Brazil, the government of leftist leader Luiz Inacio Lula da Silva, another im-

portant ally of Havana, criticised the U.S. pressure on Cuba but has not announced any aid.

In 2025, Lula defended the Mais Medicos (More Doctors) programme, which has brought Cuban

healthcare professionals to Brazil through an agreement with the Pan American Health Organization.

The deployment of medical brigades abroad is Cuba's main source of foreign currency, generating \$7 billion in 2025, according to official figures.

In Venezuela, the interim government of Delcy Rodriguez has criticised Trump's pressure and reiterated Caracas's "solidarity" with the island.

Her government retains some 13,000 Cuban healthcare professionals in the country.

Venezuela and Cuba have been strong allies since the presidency of the late Hugo Chavez (1999-2013) — a relationship sus-

tained by his successor Mr. Maduro until his January 3 capture by U.S. special forces. Until then, Venezuela, which has the world's largest oil reserves, was Cuba's main supplier.

Nicaragua, Cuba's only partner in Central America, has not announced any aid shipments but it has rejected the U.S. sanctions.

No help

However, the leftist government has ended a visa waiver for Cubans in place since 2021. That waiver made it easy for islanders to leave Cuba, which in turn eased some pressure on the government, including after anti-government protests in July of that year when thousands departed.

The leftist governments of Colombia and Uruguay have not announced any aid, although Uruguay has said it is studying the situation.

El Salvador, governed by right-wing Nayib Bukele, Washington's closest ally in Central America, has shown no signs of support for Havana. Neither have Panama and Costa Rica, also led by right-wing governments.

Under pressure from Mr. Trump, Guatemala has just ended a 27-year agreement under which thousands of Cuban doctors worked in the country. The 412 Cuban healthcare professionals currently there will leave in the coming months.

How Latin America is responding to U.S. embargo-triggered oil crisis in Cuba अमेरिकी प्रतिबंध-प्रेरित क्यूबा के तेल संकट पर लैटिन अमेरिका की प्रतिक्रिया

- The **U.S. oil embargo** on **Cuba** has drawn varied responses across **Latin America**, ranging from offers of aid and political support to silence about **Havana's** economic crisis.



अमेरिकी तेल प्रतिबंध के कारण क्यूबा में पैदा हुए संकट पर लैटिन अमेरिका में अलग-अलग प्रतिक्रियाएँ देखने को मिली हैं, जिनमें सहायता और राजनीतिक समर्थन की पेशकश से लेकर हवाना के आर्थिक संकट पर चुप्पी तक शामिल है।

- The Caribbean island, under communist rule for more than six decades, has been grappling with a severe **fuel shortage** for years.
छह दशकों से अधिक समय से साम्यवादी शासन के अधीन यह कैरेबियाई द्वीप वर्षों से गंभीर **ईंधन संकट** से जूझ रहा है।
- But the crisis deepened last month when **U.S. President Donald Trump** cut off critical supplies of **Venezuelan oil** to Cuba after he ousted leader **Nicolas Maduro** and threatened tariffs on any country that sells hydrocarbons to Havana.
लेकिन पिछले महीने संकट तब और गहरा गया जब **अमेरिकी राष्ट्रपति डोनाल्ड ट्रंप** ने **venezuelan तेल** की अहम आपूर्ति क्यूबा को रोक दी, जब उन्होंने नेता **निकोलस माद्रुरो** को हटाया और हवाना को हाइड्रोकार्बन बेचने वाले किसी भी देश पर शुल्क लगाने की धमकी दी।
- Here is a look at how governments in the region have responded to Cuba's plight.
यहाँ बताया गया है कि क्षेत्र की सरकारों ने क्यूबा की दुर्दशा पर कैसे प्रतिक्रिया दी है।

Offering aid सहायता की पेशकश

- **Mexico**, a long-standing ally of Cuba, has hit pause on oil shipments but is still leading the way in providing material support.
क्यूबा का लंबे समय से सहयोगी **मेक्सिको** तेल आपूर्ति पर रोक लगा चुका है, लेकिन भौतिक सहायता देने में अब भी अग्रणी है।
- Two Mexican navy ships arrived in Havana on Thursday with **814 tonnes** of food supplies.
दो मेक्सिकन नौसेना जहाज़ गुरुवार को **814 टन** खाद्य सामग्री के साथ हवाना पहुँचे।
- More than **1,500 tonnes** of other humanitarian aid are expected to be delivered to the island, according to President **Claudia Sheinbaum**.
राष्ट्रपति **क्लाउडिया शाइनबाम** के अनुसार, **1,500 टन** से अधिक अन्य मानवीय सहायता द्वीप पर पहुँचने की उम्मीद है।
- Sheinbaum's leftist government sent oil to Cuba until early January.
शाइनबाम की वामपंथी सरकार ने जनवरी की शुरुआत तक क्यूबा को तेल भेजा।
- Some of that crude oil was part of a "**humanitarian aid**" scheme, the President said, adding that she halted those shipments but expressed her disagreement with Washington's threat of tariffs.
राष्ट्रपति ने कहा कि उस कच्चे तेल का कुछ हिस्सा "**मानवीय सहायता**" योजना का हिस्सा था, उन्होंने यह भी जोड़ा कि उन्होंने उन आपूर्तियों को रोक दिया लेकिन वाशिंगटन की शुल्क धमकियों से असहमति जताई।
- "We will continue sending humanitarian aid, food and some other items requested by the Cuban government," Ms. Sheinbaum said on Tuesday.
"हम मानवीय सहायता, भोजन और क्यूबाई सरकार द्वारा माँगी गई कुछ अन्य वस्तुएँ भेजते रहेंगे," सुश्री शाइनबाम ने मंगलवार को कहा।
- Her administration also opened a collection centre in **Mexico City** last week for aid for Cuba.
उनके प्रशासन ने पिछले सप्ताह **मेक्सिको सिटी** में क्यूबा के लिए सहायता एकत्र करने का केंद्र भी खोला।
- In **Chile**, the leftist President **Gabriel Boric**, who leaves office next month, announced a contribution of **\$1 million** to Cuba — an initiative criticised by the president-elect, the far-right politician **Jose Antonio Kast**, who was endorsed by Mr. Trump and has been a critic of Mr. Maduro.
चिली में, अगले महीने पद छोड़ने वाले वामपंथी राष्ट्रपति **गेब्रियल बोरिक** ने क्यूबा को **10 लाख डॉलर** देने की घोषणा की — इस पहल की आलोचना राष्ट्रपति-निर्वाचित, धुर दक्षिणपंथी नेता **जोसे एंतोनियो कास्ट** ने की, जिन्हें श्री ट्रंप का समर्थन प्राप्त था और जो श्री माद्रुरो के आलोचक रहे हैं।

Political support राजनीतिक समर्थन

- In **Brazil**, the government of leftist leader **Luiz Inacio Lula da Silva**, another important ally of Havana, criticised the U.S. pressure on Cuba but has not announced any aid.



ब्राज़ील में, वामपंथी नेता **लुइज़ इनासियो लूला दा सिल्वा** की सरकार, जो हवाना की एक और अहम सहयोगी है, ने क्यूबा पर अमेरिकी दबाव की आलोचना की लेकिन किसी सहायता की घोषणा नहीं की।

- In **2025**, Lula defended the **Mais Medicos (More Doctors)** programme, which has brought Cuban healthcare professionals to Brazil through an agreement with the **Pan American Health Organization**.

2025 में, लूला ने **Mais Medicos (More Doctors)** कार्यक्रम का बचाव किया, जिसके तहत **पैन अमेरिकन हेल्थ ऑर्गनाइजेशन** के साथ समझौते के माध्यम से क्यूबाई स्वास्थ्यकर्मी ब्राज़ील आए।

- The deployment of medical brigades abroad is Cuba's main source of foreign currency, generating **\$7 billion in 2025**, according to official figures.
आधिकारिक आँकड़ों के अनुसार, विदेशों में चिकित्सा ब्रिगेड की तैनाती क्यूबा की विदेशी मुद्रा का मुख्य स्रोत है, जिससे **2025 में 7 अरब डॉलर** प्राप्त हुए।
- In **Venezuela**, the interim government of **Delcy Rodriguez** has criticised Trump's pressure and reiterated Caracas's "**solidarity**" with the island.
वेनेजुएला में, **डेलसी रोड्रिगेज़** की अंतरिम सरकार ने ट्रंप के दबाव की आलोचना की और द्वीप के साथ कराकस की "**एकजुटता**" दोहराई।
- Her government retains some **13,000 Cuban healthcare professionals** in the country.
उनकी सरकार देश में लगभग **13,000 क्यूबाई स्वास्थ्य पेशेवरों** को बनाए हुए है।
- Venezuela and Cuba have been strong allies since the presidency of the late **Hugo Chavez (1999-2013)** — a relationship sustained by his successor Mr. Maduro until his **January 3 capture** by U.S. special forces.
वेनेजुएला और क्यूबा दिवंगत **ह्यूगो चावेज़ (1999-2013)** के राष्ट्रपति काल से मजबूत सहयोगी रहे हैं — यह संबंध उनके उत्तराधिकारी श्री मादुरो द्वारा **3 जनवरी को अमेरिकी विशेष बलों द्वारा गिरफ्तारी** तक बना रहा।
- Until then, Venezuela, which has the **world's largest oil reserves**, was Cuba's main supplier.
तब तक, **दुनिया के सबसे बड़े तेल भंडार** वाला वेनेजुएला क्यूबा का मुख्य आपूर्तिकर्ता था।
- **Nicaragua**, Cuba's only partner in Central America, has not announced any aid shipments but it has rejected the U.S. sanctions.
निकारागुआ, जो मध्य अमेरिका में क्यूबा का एकमात्र साझेदार है, ने किसी सहायता की घोषणा नहीं की लेकिन अमेरिकी प्रतिबंधों को खारिज किया।

No help कोई सहायता नहीं

- However, the leftist government has ended a **visa waiver** for Cubans in place since **2021**.
हालाँकि, वामपंथी सरकार ने **2021** से लागू क्यूबाई नागरिकों के लिए **वीज़ा छूट** समाप्त कर दी है।
- That waiver made it easy for islanders to leave Cuba, which in turn eased some pressure on the government, including after **anti-government protests in July** of that year when thousands departed.
उस छूट ने द्वीपवासियों के लिए क्यूबा छोड़ना आसान बना दिया था, जिससे सरकार पर कुछ दबाव कम हुआ, जिसमें उसी वर्ष **जुलाई में हुए सरकार-विरोधी प्रदर्शनों** के बाद हजारों लोगों का पलायन शामिल है।
- The leftist governments of **Colombia** and **Uruguay** have not announced any aid, although Uruguay has said it is studying the situation.
कोलंबिया और **उरुग्वे** की वामपंथी सरकारों ने किसी सहायता की घोषणा नहीं की है, हालाँकि उरुग्वे ने कहा है कि वह स्थिति का अध्ययन कर रहा है।
- **El Salvador**, governed by right-wing **Nayib Bukele**, Washington's closest ally in Central America, has shown no signs of support for Havana.
मध्य अमेरिका में वाशिंगटन के सबसे करीबी सहयोगी **एल साल्वाडोर**, जहाँ दक्षिणपंथी **नायिब बुकेले** की सरकार है, ने हवाना के लिए किसी समर्थन के संकेत नहीं दिए हैं।
- Neither have **Panama** and **Costa Rica**, also led by right-wing governments.
इसी तरह, **पनामा** और **कोस्टा रिका**, जहाँ भी दक्षिणपंथी सरकारें हैं, ने भी समर्थन नहीं दिखाया है।
- Under pressure from Mr. Trump, **Guatemala** has just ended a **27-year agreement** under which thousands of Cuban doctors worked in the country.
श्री ट्रंप के दबाव में, **ग्वाटेमाला** ने अभी-अभी **27 साल पुराना समझौता** समाप्त किया है, जिसके तहत हजारों क्यूबाई डॉक्टर देश में काम करते थे।



- The **412 Cuban healthcare professionals** currently there will leave in the coming months. वर्तमान में वहाँ मौजूद **412 क्यूबाई स्वास्थ्य पेशेवर** आने वाले महीनों में देश छोड़ देंगे।

GS Paper III: Economy,

TOPICS COVERED

19 February 2026

19F.	Nvidia, OpenAI announce partnerships with Indian firms, academic institutes एनविडिया, ओपनएआई ने भारतीय कंपनियों और शैक्षणिक संस्थानों के साथ साझेदारी की घोषणा की
19F.	New rootstocks promise better apple yields for Kashmir farms कश्मीर के खेतों के लिए नई रूटस्टॉक्स बेहतर सेब उत्पादन का वादा करती हैं
19F.	Kashmir revival कश्मीर पुनरुत्थान
19F.	Google plans India, U.S. direct subsea cable link गूगल भारत, अमेरिका के बीच सीधा सबसी केबल लिंक बनाने की योजना

Nvidia, OpenAI announce partnerships with Indian firms, academic institutes

GS III: Economy
The Hindu Bureau
NEW DELHI

U.S. tech giants Nvidia and OpenAI on Wednesday announced partnerships with Indian industry and academia at the ongoing AI Impact Summit. The former will work with three firms - Yotta (which runs data centres), L&T, and E2E Networks. The latter has signed on with multiple universities with a view to "strengthening AI use among students".

"India's AI cloud infrastructure will host workloads as well as manufacture intelligence for model training, fine-tuning and high-scale inference," Nvidia, which makes the graphics processing units that run AI models, said in a statement. "Capacity within these data centers will be reserved for model builders, startups, researchers and enterprises to build, fine-tune and deploy AI in India." The firm will provide Indian partners with access to Nemotron and NeMo, the former being a family of open source LLMs and the latter a software suite for managing AI agents.

Ties in skilling
OpenAI, the maker of ChatGPT, has partnered with multiple higher education institutes, namely IIT-Delhi, IIM-Ahmedabad, AIIMS, New Delhi, Manipal Academy of Higher Education, University of Petroleum and Energy Studies, and Pearl Academy. "By embedding AI tools, training, and research into the core infrastructure of schools and universities, they can equip students

Technical tie-up

Chip maker Nvidia will work with three firms while OpenAI has signed on with multiple universities.

OpenAI seeks to 'equip students with the skills needed to thrive in a world with AI'

PARTNERS ■ IIT-Delhi ■ IIM-Ahmedabad ■ AIIMS New Delhi ■ Manipal Academy of Higher Education ■ Pearl Academy ■ University of Petroleum and Energy Studies

Nvidia to provide firms access to Nemotron, a family of open source LLMs and NeMo, a software suite for managing AI agents

PARTNERS ■ Yotta ■ L&T ■ E2E Networks

India's Sarvam AI brings out two large language models

Aroon Deep
NEW DELHI

A few months after the Centre announced that India would create its own large language model, the Bengaluru-based Sarvam AI unveiled two language models at the AI Impact Summit on Wednesday. The launch of a 35-billion parameter model and a 105-billion parameter model is being seen as a milestone for AI development in India.

with the skills needed to thrive in a world with AI," OpenAI India's head of education Raghav Gupta said.

"To expand AI capabilities beyond campuses and into the broader skilling ecosystem, OpenAI is also collaborating with leading ed-tech platforms including PhysicsWallah, up-Grad, and HCL GUVI," the firm said, adding that one lakh students and staff will benefit from the deal.

"These platforms will

The models will be open source, said Pratyush Kumar, co-founder of Sarvam, adding that they had beaten comparable models from around the world at industry benchmarks. These are yet to be made available for the public. A message on the Sarvam website says that a chat feature will be available "soon".

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Nvidia, OpenAI announce partnerships with Indian firms, academic institutes

एनविडिया, ओपनएआई ने भारतीय कंपनियों और शैक्षणिक संस्थानों के साथ साझेदारी की घोषणा की

U.S. tech giants Nvidia and OpenAI on Wednesday announced partnerships with Indian industry and academia at the ongoing AI Impact Summit.

अमेरिकी तकनीकी दिग्गज एनविडिया और ओपनएआई ने बुधवार को चल रहे एआई इम्पैक्ट समिट में भारतीय उद्योग और शिक्षा जगत के साथ साझेदारियों की घोषणा की।

The former will work with three firms – Yotta (which runs data centres), L&T, and E2E Networks. पहली कंपनी तीन फर्मों – योत्ता (जो डेटा सेंटर संचालित करती है), एल एंड टी, और ई2ई नेटवर्क्स – के साथ काम करेगी।

The latter has signed on with multiple universities with a view to "strengthening AI use among students". दूसरी कंपनी ने "छात्रों के बीच एआई के उपयोग को मजबूत करने" के उद्देश्य से कई विश्वविद्यालयों के साथ समझौता किया है।

"India's AI cloud infrastructure will host workloads as well as manufacture intelligence for model training, fine-tuning and high-scale inference," Nvidia, which makes the graphics processing units that run AI models, said in a statement.

"भारत का एआई क्लाउड इंफ्रास्ट्रक्चर वर्कलोड को होस्ट करेगा और साथ ही मॉडल प्रशिक्षण, फाइन-ट्यूनिंग और बड़े पैमाने पर इनफेरेंस के लिए इंटेलिजेंस का निर्माण करेगा," एआई मॉडल चलाने वाले ग्राफिक्स प्रोसेसिंग यूनिट्स बनाने वाली कंपनी एनविडिया ने एक बयान में कहा।



- “**Capacity within these data centers** will be reserved for model builders, startups, researchers and enterprises to build, fine-tune and deploy AI in India.”
“**इन डेटा केंद्रों की क्षमता** मॉडल बिल्डर्स, स्टार्टअप्स, शोधकर्ताओं और उद्यमों के लिए आरक्षित होगी ताकि वे भारत में एआई का निर्माण, फाइन-ट्यून और तैनाती कर सकें।”
- The firm will provide Indian partners with access to **Nemotron** and **NeMo**, the former being a family of **open source LLMs** and the latter a **software suite** for managing AI agents.
कंपनी भारतीय भागीदारों को **नेमोट्रॉन** और **नीमो** तक पहुंच प्रदान करेगी, जिसमें पहला **ओपन सोर्स एलएलएम** का एक समूह है और दूसरा एआई एजेंटों के प्रबंधन के लिए एक **सॉफ्टवेयर सूट** है।

Ties in skilling स्किलिंग में साझेदारी

- **OpenAI**, the maker of **ChatGPT**, has partnered with multiple higher education institutes, namely **IIT-Delhi, IIM-Ahmedabad, AIIMS, New Delhi, Manipal Academy of Higher Education, University of Petroleum and Energy Studies, and Pearl Academy**.
चैटजीपीटी बनाने वाली कंपनी **ओपनएआई** ने कई उच्च शिक्षा संस्थानों के साथ साझेदारी की है, जिनमें **आईआईटी-दिल्ली, आईआईएम-अहमदाबाद, एम्स, नई दिल्ली, मणिपाल एकेडमी ऑफ हायर एजुकेशन, यूनिवर्सिटी ऑफ पेट्रोलियम एंड एनर्जी स्टडीज, और पर्ल अकादमी** शामिल हैं।
- “By embedding **AI tools, training, and research** into the core infrastructure of schools and universities, they can equip students with the skills needed to thrive in a world with AI,” **OpenAI India’s head of education Raghav Gupta** said.
“स्कूलों और विश्वविद्यालयों की मुख्य संरचना में **एआई टूल्स, प्रशिक्षण, और अनुसंधान** को शामिल करके, वे छात्रों को एआई की दुनिया में आगे बढ़ने के लिए आवश्यक कौशल से लैस कर सकते हैं,” **ओपनएआई इंडिया के शिक्षा प्रमुख राघव गुप्ता** ने कहा।
- “To expand **AI capabilities** beyond campuses and into the broader **skilling ecosystem**, OpenAI is also collaborating with leading **ed-tech platforms** including **PhysicsWallah, upGrad, and HCL GUVI**,” the firm said, adding that **one lakh students and staff** will benefit from the deal.
कंपनी ने कहा, “कैम्पस से बाहर और व्यापक **स्किलिंग इकोसिस्टम** में **एआई क्षमताओं** का विस्तार करने के लिए, ओपनएआई अग्रणी **एड-टेक प्लेटफॉर्म** जैसे **फिजिक्सवाला, अपग्रेड, और एचसीएल गुवी** के साथ भी सहयोग कर रही है,” और जोड़ा कि इस समझौते से **एक लाख छात्र और कर्मचारी** लाभान्वित होंगे।
- “These platforms will launch **structured courses** focused on **AI fundamentals** and practical **ChatGPT use cases**, targeting students and early-career professionals seeking **industry-ready skills**.
“ये प्लेटफॉर्म **संरचित पाठ्यक्रम** शुरू करेंगे जो **एआई की बुनियादी अवधारणाओं** और व्यावहारिक **चैटजीपीटी उपयोग मामलों** पर केंद्रित होंगे, और **उद्योग-तैयार कौशल** चाहने वाले छात्रों और शुरुआती करियर पेशेवरों को लक्षित करेंगे।
- This complementary pathway ensures that **AI fluency** is not confined to select institutions but scaled across **India’s rapidly growing learner base**,” the company further said
कंपनी ने आगे कहा कि यह पूरक मार्ग सुनिश्चित करता है कि **एआई दक्षता** केवल चुनिंदा संस्थानों तक सीमित न रहे बल्कि **भारत के तेजी से बढ़ते शिक्षार्थी आधार** में व्यापक रूप से फैले



New rootstocks promise better apple yields for Kashmir farms

Apple is a major fruit crop in Kashmir with a production of 11 lakh tonnes, providing livelihoods to around 27 lakh people; however, despite having one of the largest areas under apple cultivation in India, productivity in the valley remains far below that of developed apple-growing regions

IAS in Economy
Hirra Azmat
SRINAGAR

Kashmir grows apples across a wide range of altitudes, each shaping how the crop flowers, sets fruit, and yields. Yet, even with one of the largest apple-growing areas in the country, productivity in the valley remains modest. As traditional orchards face rising costs, delayed returns, and increasing climate stress, researchers and growers are turning to new rootstock technologies and high-density systems to make apple cultivation more efficient and resilient.

Apple is a major fruit crop in Kashmir cultivated on 1.08 lakh ha with a production of 11 lakh tonnes, providing livelihoods to around 27 lakh people. The performance of apples is determined by the valley's diverse altitudes. They range from 1,500 m to more than 2,600 m above sea level, creating distinct microclimates. The trees need a certain amount of winter cold (chilling hours), they are sensitive to frost, and need enough warmth in summer (heat accumulation). So, the altitude influences how much cold or heat the trees get, which directly affects how well apples grow, flower, and produce fruit.

High-density orchards

However, despite having one of the largest areas under apple cultivation in India, productivity in the Kashmir Valley remains far below that of developed apple-growing regions.

"One major reason is that for decades, orchards have been dominated by seedling-based trees that are tall, vigorous, low-density, and extremely slow to bear fruit. These trees take 6-8 years to produce a commercial crop and yield just 10-12 tonnes per hectare, making them unviable for small landholdings," Dr. Wasim Hassan Raja says.

Dr. Raja is a scientist at Fruit science division, ICAR-Central Institute for Temperate Horticulture (CIHT), Srinagar, who has developed two novel technologies for apple rootstock multiplication and feathering, both now licensed to 25 nursery growers and adopted by over 100 orchardists across India.

He adds that the modern rootstock techniques on the other hand offer a solution. Rootstock refers to the roots and lower stem of a specially selected apple plant onto which the desired variety is grafted. It forms the entire root system and the lower trunk of the tree, essentially acting as its foundation.

"This foundation determines the tree's mature size (dwarf, semi-dwarf, or standard), how early it begins to bear fruit, and its resistance to pests and diseases such as root rot, collar rot, and Woolly aphid," he says.

High-density orchards are based on clonal rootstocks. Clonal rootstocks are rootstocks that are propagated from cuttings or layering so that every plant is identical.

"Dwarf clonal rootstocks like M9, MM106, and MM111 can raise productivity to 40 tonnes per hectare and yield marketable fruit within 2-4 years. Studies show that M-9 based systems provide significantly higher gross margins due to early production, better fruit colour, and uniformity, Dr. Raja points out.

"They reduce tree size, increase precocity (how quickly it starts to bear fruit), improve uniformity, and enhance yield efficiency."

Traditional trees require heavy pruning, ladders, and labour, which are now increasingly expensive.

"Dense canopies make uniform spraying of pesticides and fungicides difficult, worsening pest and disease pressure. For small-scale farmers, wide spacing is not feasible due to land limitations, and low-density systems use land inefficiently. These challenges have pushed Kashmir into a global trend: a shift from seedling to clonal rootstocks," per Dr. Raja.

"As winter is getting warm and snowfall is decreasing, the region may struggle to accumulate the required chill hours, which could affect apple production. The dwarf clonal rootstocks further help trees cope with erratic rainfall, heat stress, and soil-borne diseases, while enabling better canopy management and efficient irrigation. Systematic studies on altitude-specific rootstock performance are still lacking, but urgently needed as climate zones shift across the valley."

Although clonal rootstocks were introduced in the valley in 1989-90, the modern high-density orchards still remain



Falling yield: An apple grower at an orchard at Ratnipora in Pulwama district. BIRAN NISSAR

limited. "The biggest barrier remains the availability of quality clonal rootstocks and the high capital cost of setting up trellised orchards," Javed Iqbal Mir, Principal Scientist at Fruit science division, ICAR-CIHT says. "Trellised orchards are fruit orchards where trees are trained to grow along a supporting structure, usually wires, posts, or frames, similar to how grapes are grown on trellises. It supports high-density apple orchards as it makes pruning, spraying, and harvesting easier, etc."

He points out government schemes under the Mission for Integrated Development of Horticulture and the Holistic Agriculture Development Program have been instrumental in supporting farmers through subsidies, improving access to high-quality rootstocks and varieties, strengthening nursery infrastructure, and promoting high-density plantation systems. "These initiatives have significantly boosted orchard productivity, enhanced farmer income, and improved the overall competitiveness of the apple industry in Kashmir," Dr. Mir says.

According to official figures, around 836 ha have been brought under the High-Density Plantation scheme in Jammu & Kashmir.

The high-density orchards further demand high precision. Farmers need training in pruning, canopy management, fertigation, leader training, pest surveillance, and shoot positioning. "Productivity declines sharply if these systems are mismanaged," Dr. Mir says.

ICAR-CIHT has also been conducting regular training programmes, field demos, and exposure visits. "Besides, the institute is now working on developing indigenous rootstocks suited to Himalayan climate change, tolerant to drought, root rot, and extreme



Clonal rootstocks, SPECIAL ARRANGEMENT

Clonal rootstocks are propagated from cuttings or layering so that every plant is identical. Although they were introduced in the Kashmir valley in 1989-90, the modern high-density orchards still remain limited

temperature fluctuations. Some of these are already in advanced stages of evaluation and may be released within a few years. "These rootstocks will help expand apple cultivation into marginal areas - Karewas, rocky slopes, and replant sites - and ensure long-term sustainability," Dr. Raja notes.

Adopting a new system

For Tantray Manzoor, a farmer from Panchoora Marhama in Anantnag district, the shift to high-density systems is driven by both economic need and changing agro-climatic conditions. After two decades in conventional apple farming on his 1.52 ha of land, he recently converted 0.2 ha of his orchard to high-density planting, introducing 700 dwarf apple trees on M9 rootstock.

Mr. Manzoor adds the rootstock technology has transformed apple cultivation by controlling excessive tree height and reducing unproductive woody growth typical of conventional orchards.

"Its precocious nature has changed the grower's experience entirely, bringing down the waiting period for first fruits from nearly 10 years to just the second year. Yields have improved drastically as well. Conventional orchards produce about 1 tonne per kanal (1 kanal is 0.05 ha) while high-density orchards can yield up to 4 tonnes per kanal at maturity. Fruit quality has also improved significantly in

terms of better colour, crunch, firmness, and freshness because the shallow-rooted M9 system absorbs and mobilises nutrients much more efficiently."

He explains the economic value of Gala apple variety in the Indian market is another major motivation. "Gala apples often lose quality on conventional trees because thinning is labour-intensive - something that dwarf trees on M9 greatly simplify. "Rootstocks like M7, MM106 or MM111 are preferred by growers who want to avoid the higher initial investment required for M9, which needs staking and trellising. However, these non-staking rootstocks do not match M9 in terms of early fruiting or growth control," Mr. Manzoor says.

According to Mr. Manzoor, the initial investment of around 1.75 rupees lakh per kanal seemed heavy for him, but it eventually stabilised and became a reliable source of income. "Although departmental and private-sector programmes like availability of planting material and support services was initially limited, the government has supported farmers through subsidies, flagship programmes, and easier bank financing," he says.

With the result, his income from high-density orchards has increased substantially. "By the third year, a single M9 tree can produce around 2.5 boxes of high-quality apples, translating to roughly 1.5 lakh rupees profit per kanal, excluding expenses. Gala apples generally fetch 15-20 rupees per piece, about 500-1,000 rupees per box, and up to 1,500 rupees per box when quality is exceptional," he says.

Further, rootstocks like M9 also show good adaptability to weather and climatic variations. "However, high-density orchards require smarter management, including trickle irrigation, branch bending, careful fertiliser use, limited fertigation, professional pruning, and training trees to international standards such as the modified central leader system. They demand more expertise and higher initial investment, but the long-term returns are far greater," he points out.

Like-wise, another farmer, Zaffar Mehdi Dar, has been engaged in apple farming for five years. His orchard in Wabab Pora, Budgam district spans about 0.2 ha and has around 350 apple trees in a semi-high-density system established on M106 rootstock. "I shifted from traditional spacing to semi-high-density planting because it offers faster canopy development, earlier fruiting, and better overall productivity," he says.

(Hirra Azmat is a Kashmiri-based journalist who writes on science, health, and environment. azmathirra@gmail.com)

New rootstocks promise better apple yields for Kashmir farms

कश्मीर के खेतों के लिए नई रूटस्टॉक्स बेहतर सेब उत्पादन का वादा करती हैं

• Apple is a major fruit crop in Kashmir with a production of 11 lakh tonnes, providing livelihoods to around 27 lakh people; however, despite having one of the largest areas under apple cultivation in India, productivity in the valley remains far below that of developed apple-growing regions

सेब कश्मीर में एक प्रमुख फल फसल है जिसका उत्पादन 11 लाख टन है, जो लगभग 27 लाख लोगों को आजीविका प्रदान करता है; हालांकि, भारत में सेब की खेती के तहत सबसे बड़े क्षेत्रों में से एक होने के बावजूद, घाटी में उत्पादकता विकसित सेब उगाने वाले क्षेत्रों की तुलना में काफी कम बनी हुई है

• Kashmir grows apples across a wide range of altitudes, each shaping how the crop flowers, sets fruit, and yields.

कश्मीर विभिन्न ऊँचाइयों पर सेब उगाता है, जहाँ प्रत्येक ऊँचाई फसल के फूलने, फल बनने और उत्पादन को प्रभावित करती है।

• As traditional orchards face rising costs, delayed returns, and increasing climate stress, researchers and growers are turning to new rootstock technologies and high-density systems to make apple cultivation more efficient and resilient.

जब पारंपरिक बागानों को बढ़ती लागत, विलंबित लाभ और बढ़ते जलवायु दबाव का सामना करना पड़ रहा है, तब शोधकर्ता और किसान सेब की खेती को अधिक कुशल और लचीला बनाने के लिए नई मूलवृत्त तकनीक और उच्च घनत्व प्रणाली की ओर बढ़ रहे हैं।

• They range from 1,500 m to more than 2,600 m above sea level, creating distinct microclimates.

ये ऊँचाइयाँ 1,500 मीटर से 2,600 मीटर से अधिक समुद्र तल तक होती हैं, जिससे अलग-अलग सूक्ष्म जलवायु बनती हैं।

- The trees need a certain amount of winter cold (chilling hours), they are sensitive to frost, and need enough warmth in summer (heat accumulation).



पेड़ों को सर्दियों में एक निश्चित मात्रा में ठंड अवधि, वे पाले के प्रति संवेदनशील होते हैं और गर्मियों में पर्याप्त ऊष्मा संचय की आवश्यकता होती है।

- So, the altitude influences how much cold or heat the trees get, which directly affects how well apples grow, flower, and produce fruit.

इसलिए, ऊँचाई यह निर्धारित करती है कि पेड़ों को कितनी ठंड या गर्मी मिलेगी, जो सीधे सेब की वृद्धि, फूलने और फल उत्पादन को प्रभावित करती है।

High-density orchards

उच्च घनत्व बागान

- One major reason is that for decades, orchards have been dominated by seedling-based trees that are tall, vigorous, low-density, and extremely slow to bear fruit. These trees take 6–8 years to produce a commercial crop and yield just 10–12 tonnes per hectare, making them unviable for small landholdings, Dr. Wasim Hassan Raja says.
डॉ. वसीम हसन राजा के अनुसार, एक प्रमुख कारण यह है कि दशकों से बागानों में बीज से उगे पेड़ों का प्रभुत्व रहा है, जो लंबे, शक्तिशाली, कम घनत्व वाले और बहुत देर से फल देने वाले होते हैं। ये पेड़ 6–8 वर्ष में व्यावसायिक फसल देते हैं और केवल 10–12 टन प्रति हेक्टेयर उत्पादन देते हैं, जिससे वे छोटे खेतों के लिए अनुपयुक्त हो जाते हैं।
- Dr. Raja is a scientist at Fruit science division, ICAR-Central Institute of Temperate Horticulture (CITH), Srinagar, who has developed two novel technologies for apple rootstock multiplication and feathering, both now licensed to 25 nursery growers and adopted by over 100 orchardists across India.
डॉ. राजा समशीतोष्ण बागवानी के केंद्रीय संस्थान, श्रीनगर के फल विज्ञान विभाग में वैज्ञानिक हैं, जिन्होंने सेब के मूलवृंत गुणन और शाखा विकास के लिए दो नई तकनीकें विकसित की हैं, जिन्हें अब 25 नर्सरी उत्पादकों को लाइसेंस दिया गया है और भारत में 100 से अधिक बागवानों ने अपनाया है।
- He adds that the modern rootstock techniques offer a solution. Rootstock refers to the roots and lower stem of a specially selected apple plant onto which the desired variety is grafted. It forms the entire root system and lower trunk, essentially acting as its foundation.
वे बताते हैं कि आधुनिक मूलवृंत तकनीकें समाधान प्रदान करती हैं। मूलवृंत एक विशेष रूप से चयनित सेब पौधे की जड़ों और निचले तने को कहते हैं, जिस पर वांछित किस्म को जोड़ा जाता है। यह पूरे जड़ तंत्र और निचले तने का निर्माण करता है और मूल रूप से इसकी नींव का कार्य करता है।
- This foundation determines the tree's mature size (dwarf, semi-dwarf, or standard), how early it begins to bear fruit, and its resistance to pests and diseases such as root rot, collar rot, and Woolly aphid.
यह नींव पेड़ के परिपक्व आकार, फल देने की शुरुआत के समय और कीट एवं रोग प्रतिरोध जैसे जड़ सड़न, तना सड़न और ऊनी माहू के प्रति प्रतिरोध को निर्धारित करती है।
- High-density orchards are based on clonal rootstocks. Clonal rootstocks are rootstocks that are propagated from cuttings or layering so that every plant is identical.
उच्च घनत्व बागान क्लोनल मूलवृंत पर आधारित होते हैं। क्लोनल मूलवृंत वे होते हैं जिन्हें कलम या परत विधि से बढ़ाया जाता है ताकि हर पौधा समान हो।
- Dwarf clonal rootstocks like M-9, MM-106, and MM-111 can raise productivity to 40 tonnes per hectare and yield marketable fruit within 2–4 years. Studies show that M-9 based systems provide significantly higher gross margins due to early production, better fruit colour, and uniformity, Dr. Raja points out.
डॉ. राजा के अनुसार, एम-9, एमएम-106 और एमएम-111 जैसे बौने क्लोनल मूलवृंत उत्पादकता को 40 टन प्रति हेक्टेयर तक बढ़ा सकते हैं और 2–4 वर्षों में बाजार योग्य फल दे सकते हैं। अध्ययन बताते हैं कि एम-9 आधारित प्रणाली अधिक सकल लाभ प्रदान करती है क्योंकि इसमें शीघ्र उत्पादन, बेहतर रंग और समानता होती है।
- They reduce tree size, increase precocity (how quickly it starts to bear fruit), improve uniformity, and enhance yield efficiency.
वे पेड़ का आकार कम करते हैं, शीघ्र फलन बढ़ाते हैं, समानता सुधारते हैं और उत्पादन दक्षता बढ़ाते हैं।
- Traditional trees require heavy pruning, ladders, and labour, which are now increasingly expensive.



पारंपरिक पेड़ों को अधिक छंटाई, सीढ़ियाँ और श्रम की आवश्यकता होती है, जो अब लगातार महंगे होते जा रहे हैं।

- **Dense canopies make uniform spraying of pesticides and fungicides difficult, worsening pest and disease pressure.**
घने वृक्ष-छत्र के कारण कीटनाशक और फफूंदनाशक का समान छिड़काव कठिन हो जाता है, जिससे कीट और रोग का दबाव बढ़ता है।
- **For small-scale farmers, wide spacing is not feasible due to land limitations, and low-density systems use land inefficiently.**
छोटे किसानों के लिए अधिक दूरी पर रोपण भूमि की कमी के कारण संभव नहीं है और कम घनत्व प्रणाली भूमि का अक्षम उपयोग करती है।
- **These challenges have pushed Kashmir into a global trend: a shift from seedling to clonal rootstocks, per Dr. Raja.**
डॉ. राजा के अनुसार, इन चुनौतियों ने कश्मीर को वैश्विक प्रवृत्ति की ओर धकेला है: बीज आधारित से क्लोनल मूलवृंत की ओर बदलाव।
- **As winter is getting warm and snowfall is decreasing, the region may struggle to accumulate the required chill hours, which could affect apple production.**
जैसे-जैसे सर्दियाँ गर्म हो रही हैं और हिमपात घट रहा है, क्षेत्र को आवश्यक ठंड अवधि जमा करने में कठिनाई हो सकती है, जिससे सेब उत्पादन प्रभावित हो सकता है।
- **The dwarf clonal rootstocks further help trees cope with erratic rainfall, heat stress, and soil-borne diseases, while enabling better canopy management and efficient irrigation.**
बौने क्लोनल मूलवृंत पेड़ों को अनियमित वर्षा, ताप तनाव और मृदा जनित रोगों से निपटने में मदद करते हैं, साथ ही बेहतर छत्र प्रबंधन और कुशल सिंचाई को संभव बनाते हैं।
- **Systematic studies on altitude-specific rootstock performance are still lacking, but urgently needed as climate zones shift across the valley.**
ऊँचाई विशेष मूलवृंत प्रदर्शन पर व्यवस्थित अध्ययन अभी भी कम हैं, लेकिन घाटी में जलवायु क्षेत्रों के बदलाव के कारण उनकी तत्काल आवश्यकता है।
- **Although clonal rootstocks were introduced in the valley in 1989-90, the modern high-density orchards still remain limited.**
हालाँकि घाटी में क्लोनल मूलवृंत 1989-90 में लाए गए थे, फिर भी आधुनिक उच्च घनत्व बागान सीमित हैं।
- **The biggest barrier remains the availability of quality clonal rootstocks and the high capital cost of setting up trellised orchards, Javed Iqbal Mir, Principal Scientist at Fruit science division, ICAR-CITH says.**
फल विज्ञान विभाग, समशीतोष्ण बागवानी केंद्रीय संस्थान के प्रधान वैज्ञानिक जावेद इकबाल मीर के अनुसार, सबसे बड़ी बाधा उच्च गुणवत्ता वाले क्लोनल मूलवृंत की उपलब्धता और ट्रेलिस बागान स्थापित करने की उच्च पूंजी लागत है।
- **Trellised orchards are fruit orchards where trees are trained to grow along a supporting structure, usually wires, posts, or frames, similar to how grapes are grown on trellises.**
ट्रेलिस बागान वे फल बागान होते हैं जहाँ पेड़ों को सहायक संरचना जैसे तार, खंभे या फ्रेम के साथ बढ़ने के लिए प्रशिक्षित किया जाता है, जैसे अंगूर ट्रेलिस पर उगाए जाते हैं।
- **It supports high-density apple orchards as it makes pruning, spraying, and harvesting easier.**
यह उच्च घनत्व सेब बागानों को समर्थन देता है क्योंकि इससे छंटाई, छिड़काव और कटाई आसान हो जाती है।
- **He points out government schemes under the Mission for Integrated Development of Horticulture and the Holistic Agriculture Development Program have been instrumental in supporting farmers through subsidies, improving access to high-quality rootstocks and varieties, strengthening nursery infrastructure, and promoting high-density plantation systems.**
उन्होंने बताया कि एकीकृत बागवानी विकास मिशन और समग्र कृषि विकास कार्यक्रम के तहत सरकारी योजनाएँ सब्सिडी के माध्यम से किसानों का समर्थन, उच्च गुणवत्ता वाले मूलवृंत और किस्मों तक पहुँच, नर्सरी ढाँचे को मजबूत करना और उच्च घनत्व रोपण प्रणाली को बढ़ावा देने में महत्वपूर्ण रही हैं।
- **These initiatives have significantly boosted orchard productivity, enhanced farmer income, and improved the overall competitiveness of the apple industry in Kashmir, Dr. Mir says.**



डॉ. मीर के अनुसार, इन पहलों ने बागान उत्पादकता में उल्लेखनीय वृद्धि, किसानों की आय में सुधार और कश्मीर के सेब उद्योग की समग्र प्रतिस्पर्धात्मकता को बेहतर बनाया है।

- **The high-density orchards further demand high precision. Farmers need training in pruning, canopy management, fertigation, leader training, pest surveillance, and shoot positioning.**

उच्च घनत्व बागानों में उच्च सटीकता की आवश्यकता होती है। किसानों को छंटाई, छत्र प्रबंधन, उर्वरक-सिंचाई, अग्र शाखा प्रशिक्षण, कीट निगरानी और शाखा स्थिति निर्धारण में प्रशिक्षण की आवश्यकता होती है।

- **Yields have improved drastically as well. Conventional orchards produce about 1 tonne per kanal (1 kanal is 0.05 ha) while high-density orchards can yield up to 4 tonnes per kanal at maturity.**

उत्पादन में भी तेजी से वृद्धि हुई है। पारंपरिक बागान लगभग 1 टन प्रति कनाल उत्पादन देते हैं, जबकि उच्च घनत्व बागान परिपक्वता पर 4 टन प्रति कनाल तक उत्पादन दे सकते हैं।

- **Fruit quality has also improved significantly in terms of better colour, crunch, firmness, and freshness because the shallow-rooted M9 system absorbs and mobilises nutrients much more efficiently.**

फल की गुणवत्ता में भी बेहतर रंग, कुरकुरापन, दृढ़ता और ताजगी के रूप में सुधार हुआ है क्योंकि उथली जड़ वाला एम9 तंत्र पोषक तत्वों को अधिक कुशलता से अवशोषित और संचालित करता है।

GS III: Economy

Kashmir revival

Tourism that benefits locals can help counter the terrorist ecosystem

The April 2025 Pahalgam attack forced India to confront the fact that tourism recovers only when visitors can predict what will happen to them and local communities see credible benefits from keeping the sites open. Following the attack, the local administration closed 48 government-approved tourist sites, later reopening them in phases, including 14 on February 16. Tourists have rated the Kashmir Valley as relatively safe overall while still differentiating types of risk, which means that tourism policy in the region needs to focus on what visitors can be certain about and whether the state has a fixed and lucid rationale for closing or reopening sites. In the Union Budget 2026-27 announcement, Finance Minister Nirmala Sitharaman described a two-pronged plan to enhance tourism: institutional capacity building and developing trails and heritage sites. She also singled out the development of ecologically sustainable mountain trails in Jammu and Kashmir, which is good because formal trails admit better management, including ticketing, permits, deployment of rangers, and medical facilities, and reduce fragility by diversifying the 'Kashmir experience'. Kashmir could also do with a third prong: it is a biodiverse region that has become heavily militarised and shared environmental governance can help build trust.

The central government should consider paid civic roles rather than relying only on volunteer awareness campaigns, using protocols that forest protection committees already implement around protected areas. These can include trail maintenance, waste management, guiding, fire watch, and (wildlife) conflict mitigation. An influx of tourists can jolt the local economy to provide more and better services, so that over time, more families are incentivised to speak out against terrorism that suppresses tourism. Functional sites also need clear rules, reliable permits, fast help during emergencies, working roads, clean public spaces, and good communication, and the lower disruption is the state's incentive to solve these problems. Tourism can also help reduce fear and isolation by bringing people from across India into local contact and fostering business ties. Tourism and allied services can give young people a real path into the economy by skilling or reskilling them. The people of the region deserve more civilian ownership of social stability and more negotiating power, especially one that outstrips their cause for resentment.

- He explains the economic value of **Gala apple variety** in the Indian market is another major motivation.

वे बताते हैं कि भारतीय बाजार में गाला सेब किस्म का आर्थिक मूल्य भी एक प्रमुख प्रेरणा है।

- **Gala apples often lose quality on conventional trees because thinning is labour-intensive — something that dwarf trees on M9 greatly simplify.**

गाला सेब पारंपरिक पेड़ों पर अक्सर गुणवत्ता खो देते हैं क्योंकि थिनिंग श्रमसाध्य होती है, जिसे एम9 पर बौने पेड़ काफी सरल बना देते हैं।

- **Rootstocks like M7, MM106 or MM111 are preferred by growers who want to avoid the higher initial investment required for M9, which needs staking and trellising.**

एम7, एमएम106 या एमएम111 जैसे मूलवृंत उन उत्पादकों द्वारा पसंद किए जाते हैं जो एम9 के लिए आवश्यक अधिक प्रारंभिक निवेश से बचना चाहते हैं, क्योंकि इसमें सहारा और ट्रेलिस संरचना की आवश्यकता होती है।

- **However, these non-staking rootstocks do not match M9 in terms of early fruiting or growth control, Mr. Manzoor says.**

हालाँकि मंजूर के अनुसार, ये बिना सहारे वाले मूलवृंत प्रारंभिक फलन या वृद्धि नियंत्रण में एम9 के बराबर नहीं हैं।

Kashmir revival कश्मीर पुनरुत्थान

- In the **Union Budget 2026-27**, Finance Minister **Nirmala Sitharaman** described a **two-pronged plan: institutional capacity building** and **developing trails and heritage sites.**

केंद्रीय बजट 2026-27 में वित्त मंत्री निर्मला सीतारमण ने दो-आयामी योजना बताई: संस्थागत क्षमता निर्माण और ट्रेल्स व विरासत स्थलों का विकास।



- She highlighted **ecologically sustainable mountain trails in Jammu and Kashmir**, because **formal trails** allow better management including **ticketing, permits, rangers, medical facilities**, and reduce fragility by diversifying the **Kashmir experience**.
उन्होंने जम्मू और कश्मीर में पर्यावरणीय रूप से सतत पर्वतीय ट्रेल्स पर जोर दिया, क्योंकि औपचारिक ट्रेल्स बेहतर प्रबंधन जैसे टिकटिंग, परमिट, रेंजर, चिकित्सा सुविधाएँ संभव बनाते हैं और कश्मीर अनुभव को विविध बनाते हैं।
- Kashmir also needs a **third prong: it is a biodiverse region, heavily militarised, and shared environmental governance can help build trust**.
कश्मीर को तीसरे आयाम की भी आवश्यकता है: यह जैव विविधता युक्त क्षेत्र है, अत्यधिक सैन्यीकृत, और साझा पर्यावरणीय शासन विश्वास निर्माण में मदद कर सकता है।

Google plans India, U.S. direct subsea cable link

GS III: Economy

Aroon Deep
NEW DELHI

Google will work on an undersea cable project directly linking the U.S. and India, CEO Sundar Pichai told the media on the sidelines of the AI Impact Summit. This would be the second planned subsea cable system that would in and of itself link the U.S. and India, after Facebook and WhatsApp parent Meta's Project Waterworth.

So far, subsea cable systems, carrying vast majority of Internet traffic between continents, do not have a direct Indo-U.S. link, relying instead on relay points like Singapore.

It also announced "Google DeepMind partnership to boost AI-powered science and education in India and expanded workforce development efforts," earmarking \$30 million "Google.org AI [grant] for Government Innovation Impact Challenge to support AI-powered government-to-citizen solutions." Also, 1.1 crore Atal Tinkering Labs' students would have access to chatbot assistants.

Google plans India, U.S. direct subsea cable link गूगल भारत, अमेरिका के बीच सीधा सबसी केबल लिंक बनाने की योजना

• Google will work on an **undersea cable project** directly linking the **U.S. and India**, CEO **Sundar Pichai** told the media on the sidelines of the **AI Impact Summit**.

गूगल सीधे अमेरिका और भारत को जोड़ने वाली एक अंडरसी केबल परियोजना पर काम करेगा, यह जानकारी सीईओ सुंदर पिचाई ने एआई इम्पैक्ट समिट के इतर मीडिया को दी।

• This would be the **second planned subsea cable system** that would in and of itself link the **U.S. and India**, after **Meta's Project Waterworth**.

यह दूसरी प्रस्तावित सबसी केबल प्रणाली होगी जो अपने आप में अमेरिका और भारत को जोड़ेगी, इससे पहले मेटा की प्रोजेक्ट वॉटरवर्थ योजना आई थी।

• So far, **subsea cable systems**, carrying vast majority of **Internet traffic** between continents, do not have a direct **Indo-U.S. link**, relying instead on relay points like **Singapore**.

अब तक, महाद्वीपों के बीच अधिकांश इंटरनेट ट्रैफिक ले जाने वाली सबसी केबल प्रणालियों में कोई सीधा भारत-अमेरिका लिंक नहीं है, बल्कि वे सिंगापुर जैसे रिले पॉइंट्स पर निर्भर हैं।

• It also announced "**Google DeepMind partnership to boost AI-powered science and education in India** and expanded **workforce development efforts**," earmarking **\$30 million "Google.org AI grant for Government Innovation Impact Challenge** to support **AI-powered government-to-citizen solutions**."

इसने "गूगल डीपमाइंड साझेदारी" की भी घोषणा की, जिससे भारत में एआई-संचालित विज्ञान और शिक्षा को बढ़ावा मिलेगा और कार्यबल विकास प्रयासों का विस्तार होगा, साथ ही \$30 मिलियन का "Google.org AI अनुदान गवर्नमेंट इनोवेशन इम्पैक्ट चैलेंज के लिए" निर्धारित किया गया, ताकि एआई-संचालित सरकार-से-नागरिक समाधान समर्थित हो सकें।

• Also, **1.1 crore Atal Tinkering Labs' students** would have access to **chatbot assistants**.

साथ ही, 1.1 करोड़ अटल टिकरिंग लैब्स के छात्रों को चैटबॉट असिस्टेंट्स तक पहुंच मिलेगी।

GS Paper III: S&T,

TOPICS COVERED

19 February 2026

19F. Screenwriter Salim Khan's condition stable: doctor
पटकथा लेखक सलीम खान की हालत स्थिर: डॉक्टर

19F. India's moment to restoring balance to copyright



	कॉपीराइट में संतुलन बहाल करने का भारत का क्षण
19F.	AI for people, applying technology for social good लोगों के लिए एआई, सामाजिक भलाई के लिए प्रौद्योगिकी का उपयोग
19F.	Military AI and urgency of guardrails सैन्य एआई और सुरक्षा मानकों की तात्कालिकता
19F.	A 'Third Way' for AI governance एआई शासन के लिए एक 'तीसरा मार्ग'
19F.	At the last frontier of thought: will AI kill creativity? विचार की अंतिम सीमा पर: क्या एआई रचनात्मकता को समाप्त कर देगा?
19F.	New tech and AI set to take athlete data business to next level नई तकनीक और एआई एथलीट डेटा कारोबार को अगले स्तर पर ले जाने के लिए तैयार

GS III: S&T

Screenwriter Salim Khan's condition stable: doctor

Veteran film producer and screenwriter Salim Khan has been put on ventilator support as a "safeguard and for stability", pulmonologist Jalil Parkar said on Wednesday, a day after Mr. Khan was admitted to Mumbai's Lilavati Hospital with brain haemorrhage. The team of doctors who performed the **DSA (digital subtraction angiography) procedure** on Mr. Khan confirmed that his condition was stable and that he was under observation. "There was a minor **haemorrhage**, which was tackled and required no surgery," Mr. Parkar said, adding that when he was brought to the hospital, he had **high blood pressure** and was put on a ventilator so that his condition would not worsen.

- soft tissues.
- It is widely used in **diagnosis and treatment of vascular diseases**, especially in the brain, heart, and peripheral arteries.
- The technique combines **X-ray imaging, contrast dye, and digital computer processing**.

Screenwriter Salim Khan's condition stable: doctor

पटकथा लेखक सलीम खान की हालत स्थिर: डॉक्टर

The team of doctors who performed the **DSA (digital subtraction angiography) procedure** on Mr. Khan confirmed that his **condition was stable** and that he was under **observation**.

श्री खान पर **डीएसए (डिजिटल सबट्रैक्शन एंजियोग्राफी)** प्रक्रिया करने वाले डॉक्टरों की टीम ने पुष्टि की कि उनकी **हालत स्थिर** है और उन्हें **निगरानी** में रखा गया है।

Digital Subtraction Angiography (DSA)

Digital Subtraction Angiography is an advanced **medical imaging technique** used to visualize blood vessels clearly by removing background structures such as bones and



Insights and an exploration of Artificial Intelligence across five Editorial and Opinion page articles

India's moment to restoring balance to copyright

GS III: S&T

MOB

The India-AI Impact Summit 2026 is on in New Delhi and I am reminded of a story. A former colleague, Nirmita, who is visually impaired, once found herself in an absurd legal position. She could not legally purchase a book from the United States in a disability-friendly format called DAISY (Digital Accessible Information System), even though I, as a sighted reader, was able to purchase any print or e-books I wished. This was because of the vagaries of copyright law.

To address this issue, our non-governmental organisation, together with international coalitions of disability rights organisations, engaged in years of advocacy at the international level. These efforts ultimately led to the creation of the Marrakesh Treaty, which enables the cross-border exchange of accessible-format books as well as national exceptions for visually impaired persons to use technology to convert books into accessible formats when publishers do not make them available. The copyright industry – from book publishers to the movie industry – strongly opposed the treaty, which sought to establish a 'right to read' for visually impaired persons as any exception to copyright law was viewed as fundamentally unacceptable, even if it was at the expense of denying access to the visually impaired.

It is now copyright maximalism

The struggle of visually impaired persons against overly rigid copyright laws highlights a fundamental problem: copyright has expanded far beyond its original purpose, and copyright maximalism now actively obstructs the creation of and access to knowledge. This debate has taken on a renewed vigour thanks to Artificial Intelligence (AI) models, many of which turn out to be useful only when they have large quantities of training data (which, for language models, inevitably means copyrighted works). But before looking at AI, copyright needs to be understood in a historical perspective.

We have had art for far longer than we have had copyright. The Statute of Anne, widely seen as the first copyright law, was passed in Britain in 1710, after the era of Shakespeare and Milton. The British brought copyright law to India in 1847. The current Copyright Act is from 1957. In 1710, the law granted authors a limited monopoly of 14 years, with the possibility of one renewal. The monopoly right would only vest if it was specifically registered and multiple copies of the book deposited for distribution among libraries and universities.

Under the current law, the monopoly right goes well beyond the act of publishing, vests automatically the moment 'a work' is created, and lasts for the author's entire lifetime plus 70



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years posthumously. So, the thousands of random Instagram posts and notebook doodles that you have made are all protected under copyright law for centuries. While the public domain was once the default, now a nearly-perpetual copyright monopoly is the default, regardless of the commercial potential of the work or ambitions of the creator. This fundamental change in the nature of the law has deleterious consequences.

Findings from a study

As part of a research project by LIRNEasia, a Sri Lankan think tank, we studied the data governance regimes of seven countries in South and Southeast Asia. With respect to copyright, we found that in four out of seven, the law made web search engines and AI training illegal. Web search engines need to copy as much of the Web as they can (a process called 'crawling'), effectively creating a mirror copy of all that is reachable on the web through links, but permissionless copying is prohibited by copyright law. Except in the Philippines and Sri Lanka (which have a flexible 'fair use' exception) and India (which, in 2012, introduced a specific exception for 'the transient or incidental storage' for 'providing electronic links, access or integration'), no other country in our study provided an exception, meaning AI training is effectively illegal in most countries we surveyed.

This does not make sense. Web search engines and AI models do not view copyrighted materials as scribbles or poems or art the way humans do; for programs, it is merely 'data' for statistical purposes. Recognising this, many jurisdictions such as the European Union, Japan and Singapore have adopted 'text and data mining' exceptions in their copyright regimes, while others such as Hong Kong and South Korea are in the process of doing so. Japan's law allows for an exemption for "Exploitations not for enjoying the ideas or emotions expressed in a work" (i.e., use by machines), and permits "using the work in data analysis". This is sensible: copyright was never meant to cover mechanistic uses.

By not allowing for a broad text and data-mining exception, India has created a pall of legal uncertainty over the collection of the training data for many forms of AI. And by not having a flexible, general and open-ended exception (as countries such as Singapore and the United States do), India ensures that copyright law will always hamper technological developments.

There are separate concerns around the outputs of generative AI substituting creative labour. But copyright is meant to be about

encouraging creativity, not about protecting jobs. Further, copyright law has never prohibited learning from examples and imitating – every artist studies predecessors, and every writer reads widely. Technology has always displaced jobs – we have far fewer rickshaw pullers, telegraphists, *pankhaawallahs*, stenographers, lift operators, bank tellers, typesetters, darkroom technicians and draughtsmen – yet, it has created new jobs as well. The advent of photography reduced the demand for portraitists, but enabled new forms of creativity and access to knowledge. We do not know what the impact of generative AI will be: we might, in the future, need greater government grants for arts and culture, or to strengthen the cooperative movement, potentially funded by taxes from large AI companies. But these ought not be dealt with in copyright law.

Creativity, access should be promoted

What copyright law should protect, however, are contributions to the commons. Open-licensed AI models and datasets exemplify this – developers and researchers absorbing massive computational costs to create what enables others to be creative. These models add to the common heritage of mankind rather than subtracting from it. Copyright law should encourage such contributions, not hinder them with the same restrictions designed to prevent commercial exploitation.

Governments are also uniquely positioned to curate high-quality locally-relevant datasets for public benefit; they should establish safe harbour provisions that protect such datasets from copyright claims, at least when used for training open-source models.

We have seen copyright law repeatedly being weaponised to block beneficial technologies under the guise of protecting creators. The Authors Guild in the U.S. used copyright to block Amazon Kindle's "Read Aloud" function, despite it being assistive technology that enabled visually impaired persons to listen to books they had legally purchased. Current copyright law blocks technologies that could democratise access to knowledge, unleash creativity, and drive innovation – the very things that copyright was meant to foster. India's hosting of the AI Summit is the moment to act: it must lead efforts for all nations to adopt flexible exceptions that serve creators and the public, rather than the copyright industry. We need to bring copyright law into the 21st century by returning to its roots.

This article is based on research funded by LIRNEasia, based on a grant from IDRC, a Canadian taxpayer-funded research donor. The views expressed are personal



Rigid copyright laws are undermining access, creativity and technological progress

India's moment to restoring balance to copyright

कॉपीराइट में संतुलन बहाल करने का भारत का क्षण

- The India-AI Impact Summit 2026 is on in New Delhi and I am reminded of a story. A former colleague, Nirmita, who is visually impaired, once found herself in an absurd legal position. She could not legally purchase a book from the United States in a disability-friendly format called DAISY (Digital Accessible Information System), even though I, as a sighted reader, was able to purchase any print or e-books I wished. This was because of the vagaries of copyright law.

इंडिया-एआई इम्पैक्ट समिट 2026 नई दिल्ली में आयोजित है और मुझे एक कहानी याद आती है। मेरी पूर्व सहयोगी निर्मिता, जो दृष्टिबाधित हैं, एक अजीब कानूनी स्थिति में थीं। वह संयुक्त राज्य अमेरिका से डेजी सुलभ प्रारूप में पुस्तक कानूनी रूप से नहीं खरीद सकती थीं, जबकि एक सामान्य पाठक के रूप में मैं कोई भी प्रिंट या ई-पुस्तक खरीद सकता था। इसका कारण कॉपीराइट कानून की जटिलताएँ थीं।

- To address this issue, our non-governmental organisation, together with international coalitions of disability rights organisations, engaged in years of advocacy at the international level. These efforts ultimately led to the creation of the Marrakesh Treaty, which enables the cross-border exchange of accessible-format books as well as national exceptions for visually impaired persons to use technology to convert books into accessible



formats when publishers do not make them available. The **copyright industry** — from book publishers to the movie industry — strongly opposed the treaty, which sought to establish a **'right to read'** for visually impaired persons.

इस समस्या के समाधान हेतु हमारे गैर सरकारी संगठन ने अंतरराष्ट्रीय विकलांग अधिकार संगठनों के साथ मिलकर वर्षों तक अंतरराष्ट्रीय स्तर पर प्रयास किए। इन प्रयासों से अंततः मराकेश संधि बनी, जो सीमा पार सुलभ प्रारूप पुस्तकों के आदान प्रदान और दृष्टिबाधित व्यक्तियों के लिए राष्ट्रीय अपवाद प्रदान करती है ताकि वे तकनीक के माध्यम से पुस्तकों को सुलभ प्रारूप में बदल सकें। कॉपीराइट उद्योग ने इस संधि का कड़ा विरोध किया, जबकि इसका उद्देश्य दृष्टिबाधित व्यक्तियों के लिए पढ़ने का अधिकार स्थापित करना था।

- We have had **art** for far longer than **copyright**. The **Statute of Anne (1710)**, considered the first copyright law, was passed in **Britain** after the era of **Shakespeare and Milton**. The **British** introduced copyright law in **India in 1847**. The current **Copyright Act (1957)** governs today.

कला का अस्तित्व कॉपीराइट से कहीं पहले से है। स्टैच्यूट ऑफ ऐन 1710 पहला कॉपीराइट कानून माना जाता है, जो ब्रिटेन में शेक्सपियर और मिल्टन के बाद पारित हुआ। ब्रिटिश शासन ने 1847 में भारत में कॉपीराइट कानून लागू किया। वर्तमान में कॉपीराइट अधिनियम 1957 लागू है।

- Under the current law, **copyright monopoly vests automatically at creation**, extends to the author's **lifetime plus 70 years**, and covers even **Instagram posts and notebook doodles**. वर्तमान कानून के तहत कॉपीराइट एकाधिकार रचना के साथ स्वतः लागू हो जाता है, लेखक के जीवनकाल के साथ 70 वर्ष तक चलता है, और सोशल मीडिया पोस्ट व नोटबुक चित्र तक को कवर करता है।
- **Web search engines** need to copy as much of the Web as they can, a process called **'crawling'**, creating a **mirror copy of the web**, but **permissionless copying** is prohibited by copyright law.

वेब सर्च इंजन वेब को अधिकतम कॉपी करते हैं, जिसे क्रॉलिंग कहा जाता है, जिससे वेब की प्रतिलिपि बनती है, परंतु बिना अनुमति कॉपी करना कॉपीराइट कानून द्वारा निषिद्ध है।

- Except in the **Philippines and Sri Lanka with fair use exception**, and **India (2012 exception for transient or incidental storage)**, no other country provided an exception, making **AI training illegal in most countries surveyed**.

फिलीपींस और श्रीलंका में फेयर यूज अपवाद तथा भारत (2012 अस्थायी या आकस्मिक भंडारण अपवाद) को छोड़कर किसी अन्य देश में अपवाद नहीं था, जिससे अधिकांश देशों में कृत्रिम बुद्धिमत्ता प्रशिक्षण अवैध हो जाता है।

- This does not make sense because **AI models and search engines treat copyrighted material as data for statistical purposes**, not as human creative expression. यह तर्कसंगत नहीं है क्योंकि कृत्रिम बुद्धिमत्ता मॉडल और सर्च इंजन कॉपीराइट सामग्री को सांख्यिकीय डेटा के रूप में देखते हैं, न कि मानवीय रचनात्मक अभिव्यक्ति के रूप में।
- By not allowing a **broad text and data mining exception**, **India has created legal uncertainty over AI training data collection**.

व्यापक टेक्स्ट और डेटा माइनिंग अपवाद न होने से भारत में कृत्रिम बुद्धिमत्ता प्रशिक्षण डेटा संग्रह पर कानूनी अनिश्चितता उत्पन्न हुई है।

- Without a **flexible and open-ended exception**, as in **Singapore and United States**, copyright law will continue to **hamper technological development**. लचीले और खुले अपवाद के बिना, जैसा सिंगापुर और अमेरिका में है, कॉपीराइट कानून तकनीकी विकास में बाधा बना रहेगा।

- There are concerns about **generative AI replacing creative labour**, but **copyright is meant to encourage creativity, not protect jobs**.

जनरेटिव कृत्रिम बुद्धिमत्ता द्वारा रचनात्मक श्रम प्रतिस्थापन की चिंता है, पर कॉपीराइट का उद्देश्य रचनात्मकता को बढ़ावा देना है, न कि नौकरियों की रक्षा करना।

- Copyright law has never prohibited **learning from examples and imitation**, as every **artist studies predecessors** and every **writer reads widely**.

कॉपीराइट कानून ने कभी उदाहरणों से सीखने और अनुकरण को नहीं रोका, क्योंकि हर कलाकार पूर्वजों का अध्ययन करता है और हर लेखक व्यापक पढ़ाई करता है।

- **Technology has displaced jobs** such as **rickshaw pullers, telegraphists, stenographers, bank tellers, typesetters**, but has also **created new jobs**.

प्रौद्योगिकी ने रिक्शा चालक, टेलीग्राफ ऑपरेटर, स्टेनोग्राफर, बैंक टेलर, टाइपसेटर जैसी नौकरियाँ समाप्त कीं, पर नई नौकरियाँ भी पैदा कीं।



- **Governments can curate high-quality locally relevant datasets for public benefit and should establish safe harbour provisions protecting such datasets from copyright claims, especially when used for training open-source models.**

सरकारें उच्च गुणवत्ता वाले स्थानीय डेटासेट को सार्वजनिक हित के लिए विकसित कर सकती हैं और ऐसे डेटासेट को कॉपीराइट दावों से सुरक्षा देने हेतु सुरक्षित आश्रय प्रावधान स्थापित करने चाहिए, विशेषकर जब उनका उपयोग ओपन सोर्स मॉडल प्रशिक्षण में हो।

- **Copyright law has often been weaponised to block beneficial technologies under the pretext of protecting creators. The Authors Guild (U.S.) used copyright to block Amazon Kindle 'Read Aloud', even though it was assistive technology for visually impaired persons.**

कॉपीराइट कानून का उपयोग कई बार रचनाकारों की सुरक्षा के नाम पर लाभकारी तकनीकों को रोकने के लिए किया गया है। ऑथर्स गिल्ड अमेरिका ने कॉपीराइट का उपयोग अमेज़न किंडल रीड अलाउड सुविधा को रोकने के लिए किया, जबकि यह दृष्टिबाधित व्यक्तियों के लिए सहायक तकनीक थी।

AI for people, applying technology for social good

GS III: S&T

MOB

Artificial intelligence (AI) is rapidly transforming our lives, including how we work. The question is not whether AI will change jobs – it already does – but whether this transformation will be shaped in ways that advance social justice, decent work and shared prosperity. As India hosts the AI Impact Summit in New Delhi – the first of its kind in the Global South, coinciding with the World Day of Social Justice observed on February 20 – we take the opportunity to call for a human-centred AI that serves people and drives inclusive social development.

By its scale and impact, India's AI journey stands at a critical moment, offering a compelling laboratory for what lies ahead. The country now has the world's largest share of monthly active users of the ChatGPT mobile application and one of the largest user bases for advanced AI platforms. By 2030, AI could generate more than three million new technology jobs in India while reshaping over 10 million existing ones. India illustrates both the scale of transformation and the promise of responsible AI deployment for social justice, job creation, economic inclusion and growth.

Divided discourse

Globally, debates on AI are increasingly polarised. Some narratives emphasise the potential for surging productivity growth, while others focus on job losses, rising inequality and governance gaps. Yet, both perspectives overlook a fundamental truth: technology alone does not determine outcomes, human beings do. This is why the way AI is governed – through inclusive institutions, social dialogue and democratic participation – matters as much as the technology itself.

When deployed inclusively and responsibly, AI can help reduce inequalities, expand access to training, employment and social protection, and improve workplace safety and conditions – benefiting workers and enterprises alike. To support this agenda, the International Labour Organization (ILO) is working together with India and other partners of the Global Coalition for Social Justice, which includes a global network of AI observatories to strengthen evidence and



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support decision-making. Evidence from the ILO – the leading normative agency on labour standards – suggests that AI will profoundly reshape the world of work, not by replacing jobs wholesale, but by transforming roles in ways that can enhance productivity, drive innovation and improve organisational performance. Around one in four workers globally is employed in occupations with some level of exposure to generative AI, yet more roles are likely to be transformed rather than replaced. To maximise these opportunities, effective policy and governance frameworks are essential, along with meaningful worker participation and strong social dialogue to ensure that innovation promotes equitable and inclusive outcomes across the world of work.

Tech for good, AI impact

There are compelling examples of how technologies, including AI, can strengthen social justice and decent work. For instance, India's e-Shram platform, which enables over 315 million informal workers to register for social protection schemes. With the ILO's technical collaboration on the inclusion of major central and states schemes, India has increased its social protection coverage from 19% in 2015 to 64.3% in 2025. Building on this success, major investments, such as Microsoft's \$17.5 billion commitment to AI diffusion, are supporting the integration of AI into e-Shram and the National Career Service portal. This approach has the potential to benefit India's informal workers by improving access to jobs, skills development and social protection.

Aligned with the vision of leveraging AI for inclusive and human-centred development, the Government of India has been proactive in preparing the country for the future of work by advancing transformative technologies through initiatives such as the AI Mission, National Quantum Mission, Anusandhan National Research Fund and the Research, Development and Innovation Fund.

Recognising that technological progress must translate into inclusive growth and quality

employment, the Union Budget 2026-27 has announced the formation of a High-Powered 'Education to Employment and Enterprise' Standing Committee to assess the impact of emerging technologies, including AI, on employment and skill requirements. It will also recommend targeted measures to embed AI education, from the school-level onwards, and enable AI-driven matching of workers with jobs and training opportunities. Through these forward-looking measures, India is positioning itself not only to harness AI for social good domestically but also to serve as a model for the Global South in building an inclusive, future-ready digital economy.

AI access remains unequal

AI exposure around the world is, however, uneven with persistent gaps in access to technology and skills across regions and within countries, genders, age groups and social categories. In low-income countries, only about 11.5% of employment is exposed to generative AI, compared with roughly one-third in high-income economies. These differences reflect variations in economic structures and underscore

the need for tailored policy approaches rather than one-size-fits-all solutions. Targeted public investment in skills development, digital infrastructure and social protection, alongside international collaboration and solidarity, are essential to ensure that AI fosters greater inclusion and expands opportunity across all countries.

The convergence of the AI Impact Summit and the World Day of Social Justice is a reminder that technology should primarily serve workers and societies. AI is moving faster than our institutions, but it does not absolve us from our collective responsibility. The task ahead is to align technological ambition with social purpose so that innovation strengthens trust, inclusion and dignity at work. Through such an approach, AI will not only reaffirm why work matters but also its intrinsic value as a source of dignity and social cohesion, and its fundamental role in building peaceful and socially just societies.



Artificial intelligence must help advance social justice, inclusive work, and equitable growth

AI for people, applying technology for social good

लोगों के लिए एआई, सामाजिक भलाई के लिए प्रौद्योगिकी का उपयोग

- **Artificial intelligence (AI) is rapidly transforming how we work and live, and the question is whether this transformation advances social justice, decent work and shared prosperity.**

कृत्रिम बुद्धिमत्ता तेजी से काम और जीवन के तरीके को बदल रही है, और प्रश्न यह है कि क्या यह परिवर्तन सामाजिक न्याय, सम्मानजनक कार्य और साझा समृद्धि को आगे बढ़ाएगा।



- As India hosts the **AI Impact Summit in New Delhi**, the first in the **Global South**, coinciding with the **World Day of Social Justice (February 20)**, there is a call for **human-centred AI** driving **inclusive social development**.
जब भारत नई दिल्ली में एआई इम्पैक्ट समिट की मेजबानी कर रहा है, जो ग्लोबल साउथ का पहला है और विश्व सामाजिक न्याय दिवस 20 फरवरी के साथ हो रहा है, तब मानव केन्द्रित एआई और समावेशी सामाजिक विकास की आवश्यकता पर जोर है।
- India's **AI journey stands at a critical moment**, with the **largest share of ChatGPT mobile users** and one of the **largest advanced AI user bases globally**.
भारत की एआई यात्रा एक महत्वपूर्ण मोड़ पर है, जहाँ चैटजीपीटी मोबाइल उपयोगकर्ताओं का सबसे बड़ा हिस्सा और उन्नत एआई का सबसे बड़ा उपयोगकर्ता आधार है।
- By **2030**, AI could generate **more than 3 million new technology jobs** while reshaping **over 10 million existing jobs** in India.
2030 तक एआई भारत में 30 लाख से अधिक नई तकनीकी नौकरियाँ उत्पन्न कर सकता है और 1 करोड़ से अधिक मौजूदा नौकरियों को बदल सकता है।
- India reflects both the **scale of transformation** and the promise of **responsible AI deployment** for **social justice, job creation, economic inclusion and growth**.
भारत परिवर्तन के पैमाने और जिम्मेदार एआई उपयोग के वादे को दर्शाता है जो सामाजिक न्याय, रोजगार सृजन, आर्थिक समावेशन और विकास को बढ़ावा देता है।

Divided discourse विभाजित विमर्श

- Globally, **debates on AI are polarised**, with some focusing on **productivity gains** and others on **job losses, inequality and governance gaps**.
वैश्विक स्तर पर एआई पर बहस ध्रुवीकृत है, जहाँ कुछ उत्पादकता वृद्धि पर और अन्य नौकरी हानि, असमानता और शासन अंतर पर ध्यान देते हैं।
- Both perspectives ignore that **technology alone does not determine outcomes**, but **human governance and institutions do**.
दोनों दृष्टिकोण इस तथ्य को नजरअंदाज करते हैं कि केवल तकनीक परिणाम तय नहीं करती, बल्कि मानव शासन और संस्थाएँ करती हैं।
- Therefore, **AI governance through inclusive institutions, social dialogue and democratic participation** is as important as technology itself.
इसलिए समावेशी संस्थाओं, सामाजिक संवाद और लोकतांत्रिक भागीदारी के माध्यम से एआई शासन तकनीक जितना ही महत्वपूर्ण है।
- When deployed responsibly, AI can **reduce inequalities, expand access to training, employment and social protection**, and improve **workplace safety and conditions**.
जिम्मेदारी से उपयोग होने पर एआई असमानता कम, प्रशिक्षण, रोजगार और सामाजिक सुरक्षा तक पहुँच बढ़ा, और कार्यस्थल सुरक्षा व स्थितियाँ सुधार सकता है।
- To support this, **the International Labour Organization (ILO) works with India and Global Coalition for Social Justice**, including a **network of AI observatories** for evidence-based decisions.
इस उद्देश्य हेतु अंतरराष्ट्रीय श्रम संगठन भारत और वैश्विक सामाजिक न्याय गठबंधन के साथ मिलकर एआई प्रेक्षण नेटवर्क के माध्यम से प्रमाण आधारित निर्णय को मजबूत कर रहा है।
- Evidence from **ILO** shows AI will **reshape the world of work**, not by replacing jobs entirely but by **transforming roles**, enhancing **productivity, innovation and organisational performance**.
अंतरराष्ट्रीय श्रम संगठन के प्रमाण दिखाते हैं कि एआई कार्य की दुनिया को बदलेगा, नौकरियाँ पूरी तरह समाप्त नहीं करेगा बल्कि भूमिकाओं को परिवर्तित कर उत्पादकता, नवाचार और संगठनात्मक प्रदर्शन बढ़ाएगा।
- Around **one in four workers globally** are in jobs exposed to **generative AI**, but most roles will be **transformed rather than replaced**.
विश्व स्तर पर लगभग चार में एक कर्मचारी ऐसे कार्यों में है जो जनरेटिव एआई से प्रभावित हैं, पर अधिकांश भूमिकाएँ परिवर्तित होंगी, समाप्त नहीं।
- To maximise benefits, **effective policy and governance frameworks, worker participation and strong social dialogue** are essential for **equitable and inclusive outcomes**.



लाभ अधिकतम करने हेतु प्रभावी नीतियाँ और शासन ढाँचा, कर्मचारी भागीदारी और मजबूत सामाजिक संवाद आवश्यक हैं ताकि न्यायसंगत और समावेशी परिणाम सुनिश्चित हों।

Tech for good, AI impact सामाजिक हित हेतु तकनीक, एआई प्रभाव

- There are compelling examples of how **technologies including AI** can strengthen **social justice and decent work**. For instance, India's **e-Shram platform** enables over **315 million informal workers** to register for **social protection schemes**.
ऐसे कई उदाहरण हैं जहाँ तकनीक और कृत्रिम बुद्धिमत्ता ने सामाजिक न्याय और सम्मानजनक कार्य को मजबूत किया है। उदाहरण के लिए भारत का ई-श्रम पोर्टल 31.5 करोड़ असंगठित श्रमिकों को सामाजिक सुरक्षा योजनाओं में पंजीकरण की सुविधा देता है।
- With **ILO technical collaboration**, India increased **social protection coverage** from **19% in 2015 to 64.3% in 2025**.
अंतरराष्ट्रीय श्रम संगठन के तकनीकी सहयोग से भारत ने सामाजिक सुरक्षा कवरेज को 2015 में 19 प्रतिशत से बढ़ाकर 2025 में 64.3 प्रतिशत कर दिया।
- Building on this, **Microsoft's \$17.5 billion investment in AI diffusion** supports integrating **AI into e-Shram and National Career Service portal**, improving **jobs, skills and social protection access**.
इसी आधार पर माइक्रोसॉफ्ट का 17.5 अरब डॉलर निवेश ई-श्रम और राष्ट्रीय करियर सेवा पोर्टल में एआई एकीकरण को समर्थन देता है, जिससे रोजगार, कौशल और सामाजिक सुरक्षा तक पहुँच बेहतर होती है।
- Aligned with **inclusive and human-centred AI vision**, the Government of India advances transformative technologies through **AI Mission, National Quantum Mission, Anusandhan National Research Fund and Research, Development and Innovation Fund**.
समावेशी और मानव केन्द्रित एआई दृष्टि के अनुरूप भारत सरकार एआई मिशन, राष्ट्रीय क्वॉन्टम मिशन, अनुसंधान राष्ट्रीय अनुसंधान कोष और अनुसंधान विकास एवं नवाचार कोष के माध्यम से उन्नत तकनीकों को बढ़ावा दे रही है।
- Recognising the need for **inclusive growth and quality employment**, the **Union Budget 2026-27** announced a **High-Powered Education to Employment and Enterprise Standing Committee** to assess **AI impact on jobs and skills**.
समावेशी विकास और गुणवत्तापूर्ण रोजगार को ध्यान में रखते हुए केंद्रीय बजट 2026-27 ने शिक्षा से रोजगार एवं उद्यम स्थायी समिति की घोषणा की जो एआई के रोजगार और कौशल पर प्रभाव का आकलन करेगी।
- The committee will promote **AI education from school level** and enable **AI-driven job and training matching**.
समिति स्कूल स्तर से एआई शिक्षा को बढ़ावा देगी और एआई आधारित रोजगार व प्रशिक्षण मिलान को सक्षम बनाएगी।
- Through these measures, India aims to **harness AI for social good** and become a **model for Global South** in building an **inclusive digital economy**.
इन उपायों के माध्यम से भारत सामाजिक हित हेतु एआई उपयोग और समावेशी डिजिटल अर्थव्यवस्था के निर्माण में ग्लोबल साउथ के लिए मॉडल बनने का प्रयास कर रहा है।

AI access remains unequal एआई तक पहुँच असमान बनी हुई है

- Globally, **AI exposure is uneven** with gaps across **regions, genders, age groups and social categories**.
वैश्विक स्तर पर एआई का प्रभाव असमान है और क्षेत्र, लिंग, आयु समूह तथा सामाजिक वर्ग में अंतर मौजूद है।
- In **low-income countries**, only **11.5% jobs** are exposed to **generative AI**, compared to **about one-third in high-income economies**.
निम्न आय देशों में केवल 11.5 प्रतिशत नौकरियाँ जनरेटिव एआई से प्रभावित हैं, जबकि उच्च आय देशों में यह लगभग एक तिहाई है।
- These differences reflect **economic structure variations** and require **tailored policy approaches**, not **one-size-fits-all solutions**.



ये अंतर आर्थिक संरचना भिन्नता को दर्शाते हैं और विशिष्ट नीतिगत दृष्टिकोण की आवश्यकता बताते हैं, न कि समान समाधान की।

- **Public investment in skills, digital infrastructure and social protection**, along with **international cooperation**, is essential for **inclusive AI growth**.
कौशल, डिजिटल अवसंरचना और सामाजिक सुरक्षा में सार्वजनिक निवेश तथा अंतरराष्ट्रीय सहयोग समावेशी एआई विकास के लिए आवश्यक हैं।
- The convergence of the **AI Impact Summit** and **World Day of Social Justice** reminds that **technology must serve workers and society**.
एआई इम्पैक्ट समिट और विश्व सामाजिक न्याय दिवस का संगम याद दिलाता है कि तकनीक को श्रमिकों और समाज की सेवा करनी चाहिए।
- AI is advancing faster than institutions, but society must align **technological ambition with social purpose** to strengthen **trust, inclusion and dignity at work**.
एआई संस्थाओं से तेज़ी से आगे बढ़ रहा है, पर समाज को तकनीकी महत्वाकांक्षा को सामाजिक उद्देश्य से जोड़कर विश्वास, समावेशन और कार्य गरिमा को मजबूत करना होगा।
- Such an approach will reaffirm **the value of work**, strengthen **social cohesion**, and support building **peaceful and socially just societies**.
ऐसा दृष्टिकोण कार्य के महत्व को पुनः स्थापित करेगा, सामाजिक एकता को मजबूत करेगा और शांतिपूर्ण तथा सामाजिक न्यायपूर्ण समाज के निर्माण में सहायता करेगा।

PATRIOTIC IAS



Military AI and urgency of guardrails

GS III: S&T

Just days before the India AI Impact Summit, India abstained from signing a pledge to govern the deployment of artificial intelligence (AI) in warfare at the third global summit on Responsible Artificial Intelligence in the Military Domain (REAIM). The governance of military AI often falls outside many conversations on AI regulation, but given its national security implications, it must become a higher priority.

About a third of the participating countries signed the 'Pathways to Action' declaration. The United States, India, and China were among those that did not. The previous summit saw 60 countries sign a document outlining a blueprint for action. This year, that number decreased considerably, with only 35 of 85 countries signing the declaration. The drop indicates some of the challenges in governing military AI that affect states' commitments. These challenges need to be considered as India navigates how to govern military AI without curbing its own technological development.

Strategic reluctance

The challenges are multifold. The first issue with governing military AI is the nature of the technology itself. AI is a dual-use technology – it has both civilian and military applications that are being developed in parallel. This makes it hard to verify compliance with any military AI-related constraints, since it can be hard to discern the end to which R&D is directed. Typically, in the context of arms control, technologies seen as 'game-changing' and offering widespread benefits have been harder to restrict. As its use cases expand, AI is increasingly gaining this reputation, with applications ranging from logistics and management to direct combat functions. The perceived military advantage discourages regulation. Furthermore, states that have already invested heavily in AI can utilise civilian-sector R&D for military purposes, making them reluctant to commit to measures that could curb their growth.

AI is already used for a range of benign purposes across the



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India should utilise the opportunity to push for a non-binding framework rooted in its principles of accountability and aligned with its interests

military, such as maintenance, data analysis, and streamlining logistics. However, the elephant in the room is the more complex question of what to do about lethal autonomous weapons systems (LAWS), one of the most controversial use cases of AI. The UN Convention on Certain Conventional Weapons' (CCW) Group of Governmental Experts convened twice last year, but failed to reach any conclusions or issue concrete recommendations. This stems from challenges with AI itself, which are further magnified in the higher-stakes case of LAWS, as well as from independent conundrums that arise.

Definitional deadlock

There is no international consensus on the definition of LAWS. Countries with limited AI investments and less pressing strategic concerns are keen to have a legally binding instrument in place.

On the other hand, those focused on AI or those with strategic concerns have maintained ambiguous positions, such as India, or have opposed binding frameworks, such as Israel. Technologically advanced states also tend to push for definitions with a higher 'threshold' as to what constitutes LAWS to maximise their freedom of action, while states that lack that capacity push for more restrictive definitions.

While there may be a widespread sense that LAWS need some form of regulatory framework, the finer details have become mired in definitional conundrums, hindering any agreement. The absence of a specific definition makes it difficult to establish binding terms, as ideas about what constitutes autonomy vary.

India's calculated stance

India's position on military AI is complex and reflects both its economic focus on AI R&D and security compulsions. While it continues to align with broader ideas such as the need for 'responsible' use, it has not signed either the 2024 Blueprint for Action in Korea or the 'Pathways to Action' declaration.

India has also maintained that a legally binding instrument on LAWS would be "premature". Given the security concerns in its immediate neighbourhood, these decisions can be seen as a means to avoid curbing its own development.

The assertion that a binding instrument is premature makes sense, given the limited publicly known use of military AI. Moral arguments that call for a ban are unlikely to succeed, considering the lack of strong norms against military AI.

However, concerns about accountability and widespread discomfort with the idea of technology being responsible for the loss of human lives make it ripe for a non-binding mechanism to be established. While it is not easy to reach such an agreement, the following provisions could help ensure transparency and the safe deployment of military AI.

First, AI-augmented autonomous decision-making should not be used alongside any country's nuclear forces. Second, given the complexities of verifying compliance, there should be voluntary confidence-building mechanisms in place that allow states to share data on their development of military AI. Finally, given the lack of a clear definition, an accepted risk hierarchy of military AI use cases should be created. This could serve as a starting point for states to develop their own military AI frameworks.

The way forward

Arguably, India should utilise the opportunity to push for a non-binding framework rooted in its principles of accountability and aligned with its interests. Once norms are established and more cases of military AI deployment in combat have occurred, a legally binding framework could follow. Given the pace at which AI development is advancing and the capital behind it, even looser, non-binding frameworks are the need of the hour. The use of AI in the military is inevitable; the focus should be on ensuring that the right guardrails are put in place.



Military AI and urgency of guardrails
सैन्य एआई और सुरक्षा मानकों की तात्कालिकता

Military AI governance and India's position
सैन्य एआई शासन और भारत की स्थिति



- Just days before the **India AI Impact Summit**, India **abstained** from signing a pledge to govern the deployment of **artificial intelligence (AI) in warfare** at the **third global summit on Responsible Artificial Intelligence in the Military Domain (REAIM)**.
इंडिया एआई इम्पैक्ट समिट से कुछ दिन पहले भारत ने युद्ध में कृत्रिम बुद्धिमत्ता के उपयोग को नियंत्रित करने संबंधी प्रतिज्ञा पर हस्ताक्षर नहीं किए, जो सैन्य क्षेत्र में जिम्मेदार कृत्रिम बुद्धिमत्ता शिखर सम्मेलन में हुई।
- The governance of **military AI** often falls outside many conversations on **AI regulation**, but given its **national security implications**, it must become a **higher priority**.
सैन्य एआई का शासन अक्सर एआई विनियमन की चर्चाओं से बाहर रहता है, परंतु इसके राष्ट्रीय सुरक्षा प्रभाव के कारण इसे उच्च प्राथमिकता मिलनी चाहिए।
- About a **third of the participating countries** signed the '**Pathways to Action**' declaration. The **United States, India, and China** were among those that did not.
लगभग एक तिहाई भाग लेने वाले देशों ने पाथवे टू एक्शन घोषणा पर हस्ताक्षर किए। अमेरिका, भारत और चीन उनमें शामिल थे जिन्होंने हस्ताक्षर नहीं किए।
- The previous summit saw **60 countries** sign a document outlining a **blueprint for action**. This year, that number decreased considerably, with only **35 of 85 countries** signing the declaration.
पिछले शिखर सम्मेलन में 60 देशों ने कार्य रूपरेखा दस्तावेज पर हस्ताक्षर किए। इस वर्ष यह संख्या काफी कम होकर केवल 85 में से 35 देशों तक रह गई।
- The drop indicates some of the **challenges in governing military AI** that affect **states' commitments**.
यह गिरावट सैन्य एआई शासन की चुनौतियों को दर्शाती है जो राज्यों की प्रतिबद्धताओं को प्रभावित करती हैं।
- These challenges need to be considered as India navigates how to **govern military AI without curbing its technological development**.
इन चुनौतियों पर विचार आवश्यक है ताकि भारत तकनीकी विकास को सीमित किए बिना सैन्य एआई शासन कर सके।

Strategic reluctance रणनीतिक हिचकिचाहट

- The challenges are **multifold**. The first issue with governing **military AI** is the **nature of the technology itself**.
चुनौतियाँ बहुआयामी हैं। सैन्य एआई शासन की पहली समस्या तकनीक की प्रकृति है।
- AI is a **dual-use technology** — it has both **civilian and military applications** that are being developed in **parallel**.
एआई एक दोहरे उपयोग वाली तकनीक है — इसके नागरिक और सैन्य उपयोग समानांतर विकसित हो रहे हैं।
- This makes it hard to **verify compliance** with any **military AI-related constraints**, since it can be difficult to discern the end to which **research and development** is directed.
इससे अनुपालन सत्यापन कठिन हो जाता है क्योंकि यह समझना मुश्किल होता है कि अनुसंधान और विकास किस उद्देश्य के लिए है।
- Typically, in the context of **arms control**, technologies seen as **game-changing** and offering **widespread benefits** have been harder to restrict.
आमतौर पर हथियार नियंत्रण के संदर्भ में महत्वपूर्ण और व्यापक लाभ वाली तकनीकों को सीमित करना कठिन रहा है।
- As its use cases expand, **AI** is increasingly gaining this reputation, with applications ranging from **logistics and management** to **direct combat functions**.
जैसे-जैसे इसके उपयोग बढ़ रहे हैं, एआई को लॉजिस्टिक्स और प्रबंधन से लेकर प्रत्यक्ष युद्ध कार्यों तक लागू किया जा रहा है।
- The **perceived military advantage** discourages regulation.
सैन्य लाभ की धारणा विनियमन को हतोत्साहित करती है।
- Furthermore, states that have already invested heavily in **AI** can utilise **civilian-sector research and development** for military purposes, making them reluctant to commit to measures that could curb their growth.



इसके अलावा जिन देशों ने **एआई में भारी निवेश** किया है, वे **नागरिक क्षेत्र के अनुसंधान** का सैन्य उपयोग कर सकते हैं और ऐसे उपायों से हिचकिचाते हैं जो उनके विकास को सीमित करें।

- AI is already used for a range of **benign purposes** across the military, such as **maintenance, data analysis and streamlining logistics**.
एआई का उपयोग पहले से **रखरखाव, डेटा विश्लेषण और लॉजिस्टिक्स सुधार** जैसे कार्यों में हो रहा है।
- However, the **elephant in the room** is the question of **lethal autonomous weapons systems (LAWS)**, one of the most controversial AI use cases.
हालांकि मुख्य मुद्दा **घातक स्वायत्त हथियार प्रणालियाँ** हैं, जो एआई के सबसे विवादास्पद उपयोगों में से एक हैं।
- The **UN Convention on Certain Conventional Weapons Group of Governmental Experts** convened twice last year but **failed to reach conclusions or recommendations**.
संयुक्त राष्ट्र पारंपरिक हथियार सम्मेलन विशेषज्ञ समूह ने पिछले वर्ष दो बैठकें कीं, पर **कोई निष्कर्ष या सिफारिश नहीं** दे सका।
- This stems from **challenges inherent in AI** and the higher-stakes complexity of **LAWS**, as well as **independent strategic conundrums**.
यह **एआई की अंतर्निहित चुनौतियों** और **घातक स्वायत्त हथियारों की जटिलता** तथा **स्वतंत्र रणनीतिक दुविधाओं** के कारण है।

Definitional deadlock परिभाषात्मक गतिरोध

- There is no **international consensus** on the definition of **LAWS**. Countries with **limited AI investments** and fewer **strategic concerns** prefer a **legally binding instrument**.
एलएडब्ल्यूएस की परिभाषा पर कोई **अंतरराष्ट्रीय सहमति नहीं** है। जिन देशों का **एआई निवेश सीमित** है और **रणनीतिक चिंताएँ कम** हैं, वे **कानूनी रूप से बाध्यकारी ढाँचा** चाहते हैं।
- On the other hand, states focused on **AI development** or with **strategic concerns** maintain **ambiguous positions**, such as **India**, or oppose binding frameworks, such as **Israel**.
दूसरी ओर **एआई विकास पर केंद्रित** या **रणनीतिक चिंताओं** वाले देश **अस्पष्ट रुख** रखते हैं, जैसे **भारत**, या **बाध्यकारी ढाँचे** का विरोध करते हैं, जैसे **इज़राइल**।
- **Technologically advanced states** push for definitions with a higher **'threshold'** for what constitutes **LAWS**, while states lacking such capacity prefer **more restrictive definitions**.
तकनीकी रूप से उन्नत देश एलएडब्ल्यूएस की परिभाषा के लिए उच्च **सीमा** चाहते हैं, जबकि क्षमता की कमी वाले देश **अधिक प्रतिबंधात्मक परिभाषाएँ** चाहते हैं।
- There is broad agreement that **LAWS need regulation**, but the **finer details** are stuck in **definitional conundrums**, preventing consensus.
व्यापक सहमति है कि **एलएडब्ल्यूएस के लिए विनियमन** आवश्यक है, परंतु **सूक्ष्म विवरण परिभाषात्मक दुविधाओं** में उलझे हैं, जिससे सहमति नहीं बन पा रही।
- The absence of a **clear definition** makes it difficult to establish **binding terms**, since views on **autonomy** differ.
स्पष्ट परिभाषा के अभाव में **बाध्यकारी नियम** बनाना कठिन है क्योंकि **स्वायत्तता** पर मतभेद हैं।

India's calculated stance भारत का संतुलित रुख

- India's position on **military AI** reflects both its **economic focus on AI R&D** and **security concerns**.
सैन्य एआई पर भारत का रुख उसके **एआई अनुसंधान आर्थिक फोकस** और **सुरक्षा चिंताओं** को दर्शाता है।
- India aligns with ideas such as **responsible use**, but has not signed the **2024 Blueprint for Action** or the **Pathways to Action declaration**.
भारत **जिम्मेदार उपयोग** के सिद्धांत से सहमत है, पर उसने **2024 ब्लूप्रिंट फॉर एक्शन** और **पाथवे टू एक्शन घोषणा** पर हस्ताक्षर नहीं किए।
- India has stated that a **legally binding instrument on LAWS** would be **premature**.
भारत ने कहा है कि **एलएडब्ल्यूएस पर कानूनी बाध्यकारी ढाँचा** अभी **समयपूर्व** होगा।



- Given **regional security concerns**, this stance helps avoid **restricting India's technological development**.
क्षेत्रीय सुरक्षा चिंताओं के कारण यह रुख भारत के तकनीकी विकास को सीमित होने से बचाता है।
- The claim that a binding instrument is **premature** is reasonable given the **limited publicly known use of military AI**.
समयपूर्व का दावा उचित है क्योंकि सैन्य एआई का सार्वजनिक उपयोग सीमित है।
- Moral arguments for banning military AI** are unlikely to succeed due to the absence of **strong global norms**.
सैन्य एआई प्रतिबंध के नैतिक तर्क सफल होने की संभावना कम है क्योंकि मजबूत वैश्विक मानदंडों का अभाव है।
- However, concerns about **accountability** and discomfort with **technology causing loss of human lives** make it suitable for a **non-binding mechanism**.
हालाँकि जवाबदेही और तकनीक द्वारा मानव जीवन की हानि को लेकर चिंता इसे गैर बाध्यकारी व्यवस्था के लिए उपयुक्त बनाती है।
- While difficult, the following **provisions** could ensure **transparency** and **safe deployment of military AI**.
यद्यपि कठिन है, निम्न प्रावधान पारदर्शिता और सैन्य एआई के सुरक्षित उपयोग को सुनिश्चित कर सकते हैं।
- First, **AI-augmented autonomous decision-making** should not be used with **nuclear forces**.
पहला, एआई आधारित स्वायत्त निर्णय प्रणाली का उपयोग परमाणु बलों के साथ नहीं होना चाहिए।
- Second, due to difficulty in **verifying compliance**, **voluntary confidence-building mechanisms** should allow **data sharing on military AI development**.
दूसरा, अनुपालन सत्यापन कठिन होने के कारण स्वैच्छिक विश्वास निर्माण उपाय होने चाहिए जो सैन्य एआई विकास पर डेटा साझा करने की अनुमति दें।
- Finally, due to lack of a **clear definition**, a **risk hierarchy of military AI use cases** should be created as a basis for **national military AI frameworks**.
अंततः स्पष्ट परिभाषा के अभाव में सैन्य एआई उपयोग के जोखिम क्रम का निर्माण होना चाहिए, जो राष्ट्रीय सैन्य एआई ढाँचे का आधार बन सके।

The way forward आगे का मार्ग

- India should utilise this opportunity to push for a **non-binding framework** based on **accountability** and aligned with its **strategic interests**.
भारत को इस अवसर का उपयोग गैर बाध्यकारी ढाँचा आगे बढ़ाने के लिए करना चाहिए जो जवाबदेही और रणनीतिक हितों पर आधारित हो।
- Once **norms are established** and more **military AI combat use cases** emerge, a **legally binding framework** could follow.
जब मानदंड स्थापित हो जाएँ और सैन्य एआई के अधिक उपयोग सामने आएँ, तब कानूनी बाध्यकारी ढाँचा संभव हो सकता है।
- Given the **rapid pace of AI development** and growing **investment**, even **loose non-binding frameworks** are urgently needed.
एआई विकास की तीव्र गति और बढ़ते निवेश को देखते हुए लचीले गैर बाध्यकारी ढाँचे की आवश्यकता है।
- The use of **AI in the military is inevitable**, and focus must be on establishing proper **guardrails**.
सैन्य क्षेत्र में एआई का उपयोग अनिवार्य है, इसलिए ध्यान उचित सुरक्षा सीमाएँ स्थापित करने पर होना चाहिए।



A 'Third Way' for AI governance

GS III: S&T

With the AI Impact Summit underway, world leaders and technology experts are gathering in Delhi to discuss innovation and governance directions for artificial intelligence (AI). This is happening at a moment of profound contradiction – and frankly, confusion – about what is the “right” way to govern AI that encourages strategic creation while acknowledging both the known and unknown risks it poses.

As the host of the Summit, India has uniquely positioned itself as offering a “Third Way” for AI governance, one that recognises opportunities for countries to enter AI markets while acknowledging that existing governance strategies do not transfer neatly to the global majority. Case in point: the EU’s compliance-heavy regime, the U.S.’s hands-off approach, and China’s centralised state model were each designed for different economic contexts and policy traditions. India needs something different.

In November 2025, the Indian government released its AI governance guidelines. As Amlan Mohanty, one of the framework’s architects, reflected in a recent *Technawtopia* essay, the guidelines represent a distinctive approach: not merely a regulatory framework, but a governance framework encompassing adoption, diffusion, diplomacy, and capacity-building. It prioritises scaling AI for inclusive development – in healthcare, agriculture, education, and public administration – while working through existing legal structures. It is designed to be agile and forward-looking, translating high-level principles into practical guidelines while allowing room for evolution as the technology matures.

This approach is already taking shape. On February 10, the government announced amendments to the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, which make it mandatory for intermediary tools and platforms to label AI-generated information and impose a three-hour takedown window for harmful content. This is the first instance of a government mandating AI-generation disclosure. But implementation and enforcement at scale, against tech behemoths and in a way that respects human rights and democratic norms, will be tough without international coordination.

For the Global South, this matters enormously. The concentration of AI



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investment creates an uneven landscape for AI diffusion and governance. Dependence on external or proprietary AI systems brings forth existing and new contextually-rooted risks.

India’s approach – emphasising strategic autonomy, public-private partnerships, and governance tailored to the local context – offers an alternative path. It recognises the need for research infrastructure across middle powers, including but not limited to shared safety evaluation frameworks, collaborative research networks, and mechanisms to pool expertise on risks that no single country can assess alone. Given its size, scale, and leading role in AI infrastructure, India is uniquely positioned to convene this coordination.

Critical gap

Yet governance coordination means little if the framework itself has gaps. A governance approach that accelerates AI adoption while providing no protection for workers being displaced is not a balanced model for others to follow.

Without a shared understanding of the minimum measures to mandate transparency and accountability from AI developers, protect whistleblowers and vulnerable populations from adverse harms, and encourage public awareness and agency, even well-meaning coordination is likely to fall flat. In short, what is required is a corresponding framework for the people on whom that innovation depends.

The AI Impact Summit represents a genuine opportunity to shape what inclusive AI governance coordination could look like: robust public-private partnerships across the technology stack that distribute gains more equitably, and positioning India as a hub for agile collective governance among middle powers. For nations seeking development pathways compatible with their strategic interests and institutional capacities, India’s model holds real appeal.

The next 12 months will determine whether India’s model can successfully integrate innovation, security, and human welfare or whether the gaps create the very instability that governance is meant to prevent. The choices India makes now will determine whether the “Third Way” becomes a model worth following.



For nations seeking development pathways compatible with their strategic interests and institutional capacities, India’s model holds real appeal

A 'Third Way' for AI governance
एआई शासन के लिए एक 'तीसरा मार्ग'



AI governance and India's Third Way

एआई शासन और भारत का तृतीय मार्ग

- With the **AI Impact Summit** underway, **world leaders and technology experts** are gathering in **Delhi** to discuss **innovation and governance directions for artificial intelligence (AI)**.
एआई इम्पैक्ट समिट के दौरान विश्व नेता और तकनीकी विशेषज्ञ दिल्ली में कृत्रिम बुद्धिमत्ता नवाचार और शासन दिशा पर चर्चा कर रहे हैं।
- This is happening amid **contradiction and confusion** about the **right way to govern AI**, balancing **strategic innovation with known and unknown risks**.
यह विरोधाभास और भ्रम के बीच हो रहा है कि एआई शासन का सही तरीका क्या हो, जिसमें रणनीतिक नवाचार और ज्ञात-अज्ञात जोखिमों का संतुलन हो।
- As the host, **India offers a "Third Way" for AI governance**, recognising **market opportunities** while acknowledging that existing governance models do not suit the **global majority**.
मेजबान के रूप में भारत एआई शासन का तृतीय मार्ग प्रस्तुत करता है, जो बाजार अवसरों को पहचानता है और मानता है कि वर्तमान मॉडल वैश्विक बहुमत पर लागू नहीं होते।
- Examples include the **EU's compliance-heavy regime**, the **U.S. hands-off approach**, and **China's centralised state model**, each shaped by different **economic contexts and policy traditions**.
उदाहरण हैं यूरोपीय संघ का अनुपालन आधारित मॉडल, अमेरिका का हस्तक्षेप रहित दृष्टिकोण, और चीन का केंद्रीकृत राज्य मॉडल, जो अलग-अलग आर्थिक और नीतिगत संदर्भों पर आधारित हैं।
- India released its **AI governance guidelines in November 2025**, representing a **governance framework beyond regulation**, covering **adoption, diffusion, diplomacy and capacity-building**.
भारत ने नवंबर 2025 में एआई शासन दिशानिर्देश जारी किए, जो नियमन से आगे का शासन ढाँचा है और स्वीकार, प्रसार, कूटनीति और क्षमता निर्माण को शामिल करता है।
- The framework prioritises **scaling AI for inclusive development** in **healthcare, agriculture, education and public administration**, using **existing legal structures**.
यह ढाँचा स्वास्थ्य, कृषि, शिक्षा और सार्वजनिक प्रशासन में समावेशी विकास हेतु एआई विस्तार को प्राथमिकता देता है और मौजूदा कानूनी संरचनाओं के साथ काम करता है।
- It is designed to be **agile and forward-looking**, translating **high-level principles into practical guidelines** while allowing **evolution with technological maturity**.
इसे लचीला और दूरदर्शी बनाया गया है, जो उच्च सिद्धांतों को व्यावहारिक दिशानिर्देश में बदलता है और तकनीकी परिपक्वता के साथ विकास की अनुमति देता है।
- On **February 10**, amendments to the **Information Technology Intermediary Rules** mandated **labelling AI-generated content** and a **three-hour takedown window** for harmful information.
10 फरवरी को सूचना प्रौद्योगिकी मध्यस्थ नियमों में संशोधन कर एआई निर्मित सामग्री लेबलिंग और हानिकारक सामग्री हटाने के लिए **तीन घंटे की समय सीमा** अनिवार्य की गई।
- This marks the **first instance of mandatory AI-generation disclosure**, but **implementation and enforcement at scale** against **large technology companies** while protecting **human rights and democratic norms** will be challenging without **international coordination**.
यह एआई निर्माण प्रकटीकरण की पहली अनिवार्यता है, परंतु बड़ी तकनीकी कंपनियों पर व्यापक कार्यान्वयन और प्रवर्तन तथा मानवाधिकार और लोकतांत्रिक मानदंडों की रक्षा अंतरराष्ट्रीय समन्वय के बिना कठिन होगी।
- For the **Global South**, the concentration of **AI investment** creates an **uneven landscape** for **AI diffusion and governance**, increasing dependence on **external or proprietary AI systems** and creating **new context-specific risks**.
ग्लोबल साउथ के लिए एआई निवेश का केंद्रीकरण एआई प्रसार और शासन में असमानता पैदा करता है, जिससे बाहरी या स्वामित्व वाले एआई सिस्टम पर निर्भरता और नए संदर्भ आधारित जोखिम बढ़ते हैं।
- India's approach emphasises **strategic autonomy, public-private partnerships, and local-context governance**, offering an **alternative pathway**.
भारत का दृष्टिकोण रणनीतिक स्वायत्तता, सार्वजनिक निजी भागीदारी और स्थानीय संदर्भ आधारित शासन पर आधारित है, जो एक वैकल्पिक मार्ग प्रस्तुत करता है।



- It highlights the need for **research infrastructure among middle powers**, including **shared safety evaluation frameworks, collaborative research networks, and pooled expertise on shared risks**.
यह मध्यम शक्तियों के बीच अनुसंधान ढाँचे की आवश्यकता पर बल देता है, जिसमें साझा सुरक्षा मूल्यांकन ढाँचे, सहयोगी अनुसंधान नेटवर्क, और साझा जोखिम विशेषज्ञता शामिल हैं।
- Given its **scale and leadership in AI infrastructure**, India is uniquely positioned to **coordinate global collaboration**.
एआई अवसंरचना में पैमाने और नेतृत्व के कारण भारत वैश्विक समन्वय के लिए विशेष स्थिति में है।

Critical gap महत्वपूर्ण कमी

- Governance coordination is ineffective if the **framework has gaps**, especially when **AI adoption accelerates without worker protection**.
यदि ढाँचे में कमी हो तो शासन समन्वय प्रभावी नहीं होता, विशेषकर जब एआई अपनाने की गति बढ़े पर श्रमिक सुरक्षा न हो।
- Without minimum standards for **transparency and accountability, whistleblower protection, and safeguarding vulnerable populations**, governance efforts may fail.
पारदर्शिता और जवाबदेही, किसलब्लोअर सुरक्षा, तथा संवेदनशील समूहों की रक्षा के न्यूनतम मानकों के बिना शासन प्रयास विफल हो सकते हैं।
- A corresponding framework is needed for the **people dependent on innovation**, not just for technology itself.
केवल तकनीक ही नहीं बल्कि नवाचार पर निर्भर लोगों के लिए भी ढाँचा आवश्यक है।
- The **AI Impact Summit** offers an opportunity to shape **inclusive governance coordination**, through **public-private partnerships across the technology stack** and positioning India as a **hub for collective governance among middle powers**.
एआई इम्पैक्ट समिट समावेशी शासन समन्वय को आकार देने का अवसर है, जिसमें तकनीकी क्षेत्र में सार्वजनिक निजी भागीदारी और मध्यम शक्तियों के बीच सामूहिक शासन केंद्र के रूप में भारत की भूमिका शामिल है।
- For countries seeking development aligned with **strategic interests and institutional capacity**, **India's model** is appealing.
जो देश रणनीतिक हित और संस्थागत क्षमता के अनुरूप विकास चाहते हैं, उनके लिए भारत का मॉडल आकर्षक है।
- The **next 12 months** will determine whether India can balance **innovation, security and human welfare**, or whether governance gaps create **instability**.
अगले 12 महीने तय करेंगे कि भारत नवाचार, सुरक्षा और मानव कल्याण में संतुलन बना पाएगा या शासन की कमी अस्थिरता पैदा करेगी।
- India's choices will decide whether the **"Third Way"** becomes a **global model**.
भारत के निर्णय तय करेंगे कि तृतीय मार्ग एक वैश्विक मॉडल बनेगा या नहीं।



At the last frontier of thought: will AI kill creativity?

There was a time, not very long ago, when schools believed that the purpose of education was not merely to align it with narrowly defined employability outcomes, but to nurture thinking human beings. In my own schooldays, we were instructed to write an essay every third day, two uninterrupted hours of wrestling with ideas, not copying, not cramming, not downloading, but thinking on paper. Weekends were reserved for reading a novel or a play, and Mondays for speaking about it in our own words. This disciplined encounter with language and thought was the underpinning of intellectual upbringing. Today, that foundation has begun to crack.

The arrival of artificial intelligence (AI) has produced a fallacy that writing is a product rather than an existential act of human understanding and interpretive imagination. Increasingly, students, professionals, and even scholars have begun outsourcing their cognitive labour not because they lack intelligence but because the cult of speed and metric-driven performance has supplanted the pursuit of genuine thought. The digital age has indeed made access to information effortless, but access without engagement creates only the illusion of knowledge, a negligible gesture of cognition.

The writing self

It is therefore heartening to note recent developments in countries such as Denmark, where schools have begun to actively restrict the use of mobile phones, laptops, and digital devices, consciously returning education to traditional modes of learning.

Across human history, each generation has generally advanced cognitively and creatively beyond the previous one. Yet ours may be the first generation at risk of intellectual regression. Those of us educated before the digital deluge learned to wrestle with difficult questions and to research without instant answers at the touch of a button. As a research scholar, I learned to frame my own questions, search for material in physical libraries, and construct my own bibliographies rather than rely on ready-made data. I remember locating a single article in the National Library in Calcutta that led me to the critical works on Evelyn Waugh, eventually made available at New York University, material otherwise unavailable in India. This



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process, driven entirely by individual initiative, inevitably opened up unexpected and critically valuable avenues of reading, thereby cultivating curiosity, judgment, and creative thought, precisely the cognitive skills that risk being diminished when knowledge is reduced to instant retrieval rather than hard-won understanding. Unfortunately, the consequence is cognitive atrophy, and the striking paradox of AI's promise of limitless access to knowledge pitted against genuine learning, which increasingly requires deliberate withdrawal from it.

For instance, the uncritical infusion of AI into scientific research has begun to corrode the very norms that once sustained scholarly credibility. Over the last two years, the volume of papers submitted to journals has exploded, not because of the emergence of authentic intellectual breakthroughs, but because AI systems can now rapidly generate texts that mimic scientific discourse. Reviewers with domain expertise increasingly report "phantom citations" that do not exist, or are misattributed, or only loosely related to the essence of the paper. These often slip through peer review undetected. The rapid inflation of output, consequently, has overwhelmed already strained editorial systems, making rigorous review unusually difficult.

AI-generated papers, containing subtle errors or fabricated sources, enter reputable journals and are then absorbed into training data and future research, thereby swelling misinformation. Meanwhile, careful, original researchers are eclipsed by sheer volume. In scientific disciplines, the dilution of verification processes, clear lines of



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responsibility, and intellectual honesty represents not merely a serious problem in how research is done, but a profound ethical concern.

Scholarly erosion

Yet AI is not the villain. In the right hands, it can expand access to knowledge and free human beings from intellectual drudgery so that the mind may turn to a richer form of creativity.

A recent claim by an AI enthusiast suggested that the "hallucinations" of large language models (LLMs) or their tendency to invent details, prove their humanity, and that such improvisation is akin to human imagination. The sentiment is whimsical but dangerously misguided. A metaphor emerging from a human being is shaped by memory, longing, pain and curiosity, the expression indeed of a lived experience. Clearly, when an LLM fabricates details, it is not imagining; it is predicting. Reducing imagination to probability, therefore, strips humanity of its essence, rendering it mechanical. The danger is not that AI is becoming human. The danger is that our definition of humanity is shrinking to resemble the logic of AI.

The death of language, therefore, is the death of democracy. Language is, more than a vehicle of communication, the means by which individuals articulate emotion, fear, dissent, hope and conviction. To lose the capacity to inhabit one's own language is to yield to a structure of linguistic dispossession in which the capacity for free thought and expression is entirely eclipsed. It is well established that AI-driven propaganda already produces misinformation at an unprecedented scale; deepfakes manufacture heroes and villains in minutes; algorithmic precision enables political messaging to target the exact emotional and psychological susceptibilities of individuals. Consequently, very little resistance is possible from an electorate that has stopped thinking critically. They stand disarmed even before the battle commences.

Moreover, the university has become the new battleground. Across the world, the humanities are being treated as expendable, sacrificed at the altar of an ideological script that identifies progress exclusively with STEM and market efficiency. The university is being remodelled into a corporate skills factory. The vitality of language, the humanities, and democracy is inextricably linked.

As language falters, the humanities decline, and democracy suffers in a generation that no longer reads books, no longer writes essays and no longer engages in the inner argument that creates conscience and critical thinking. In such an environment, language stands stripped of its oppositional power. AI, like every technology in history, would reflect the worldview of those who design and deploy it. If steered by corporate monopolies, it will accelerate hyper-consumption; if governed by authoritarian states, it will enable behavioural control; if animated by a market that values efficiency over imagination, it will produce a civilisation that mistrusts ambiguity, slowness and inwardness. It is not AI that threatens creativity because it thinks too much; it threatens creativity because it allows us to think less.

Therefore, universities must safeguard the humanities as the bedrock of critical thought, rather than treating them as ornamental indulgences. Democratic systems, in turn, must



protect not only the freedom of speech and the intellectual labour of independent inquiry. AI can be taken as a valuable adjunct to human creativity, augmenting our capacity for insight and innovation, rather than usurping it. At its core, the creative crisis we face is not a function of technological limitations, but a reflection of a deeper deficit in intellectual courage and imaginative tenacity. We have to come to grips with the fact that it is easier to copy-paste than to confront the mute page and wrestle a fragile thought into existence.

History instructs us that the edifice of civilisation has enduringly rested upon the shoulders of those who eschewed expediency in favour of rigour. If AI is to function as a complement to humanity, it must be steered toward the cultivation of imagination and language unfettered by the spectre of mechanical domination. The apprehension of diminishing our humanity must always linger at the margins of our consciousness. For the human essence is reaffirmed, as it has always been, in the primal act of creation with a child, bent over a desk, inscribing her own thoughts, fashioning meaning out of nothing. This, I recall, was the foundational lesson imparted by my daily essay-writing classes in school, a lesson whose wisdom manifests now, in this moment of technological transition.

At the last frontier of thought: will AI kill creativity?

विचार की अंतिम सीमा पर: क्या एआई रचनात्मकता को समाप्त कर देगा?

Education, thinking and the age of AI शिक्षा, चिंतन और एआई का युग

- There was a time when schools saw the purpose of **education** not just as **employability**, but to nurture **thinking human beings**.
एक समय था जब शिक्षा का उद्देश्य केवल रोज़गार नहीं बल्कि सोचने वाले मनुष्य बनाना था।
- Students were asked to write an **essay every third day**, spending **two uninterrupted hours** thinking, not copying or cramming, but **thinking on paper**.
छात्रों को हर तीसरे दिन निबंध लिखने के लिए कहा जाता था, जिसमें दो घंटे लगातार सोचने पर ध्यान होता था, न कि नकल या रटने पर।
- Weekends were for **reading a novel or play**, and Mondays for **speaking about it in one's own words**, building **intellectual foundation**.
सप्ताहांत उपन्यास या नाटक पढ़ने के लिए और सोमवार अपने शब्दों में बोलने के लिए होते थे, जिससे बौद्धिक आधार बनता था।
- Today, this **foundation has begun to crack**.
आज यह आधार कमजोर होने लगा है।
- The rise of **artificial intelligence (AI)** has created a fallacy that **writing is a product**, rather than a **human act of understanding and imagination**.
कृत्रिम बुद्धिमत्ता के उदय ने यह भ्रम पैदा किया कि लेखन केवल उत्पाद है, न कि मानवीय समझ और कल्पना का कार्य।
- Students and professionals are **outsourcing cognitive labour** due to the **cult of speed and metric-driven performance**, replacing genuine thought.
छात्र और पेशेवर मानसिक श्रम को बाहरी स्रोतों पर निर्भर कर रहे हैं क्योंकि गति और माप आधारित प्रदर्शन ने वास्तविक चिंतन को पीछे छोड़ दिया है।
- The **digital age** has made **information access effortless**, but **access without engagement** creates only an **illusion of knowledge**.
डिजिटल युग ने सूचना तक पहुँच आसान बनाई है, पर बिना सहभागिता के पहुँच केवल ज्ञान का भ्रम पैदा करती है।



The writing self लेखन का आत्म

- It is encouraging that in countries like **Denmark**, schools are restricting **mobile phones and digital devices**, returning to **traditional learning modes**.
यह उत्साहजनक है कि **डेनमार्क** जैसे देशों में स्कूल **मोबाइल और डिजिटल उपकरणों** को सीमित कर **पारंपरिक शिक्षा पद्धति** की ओर लौट रहे हैं।
- Historically, each generation advanced **cognitively and creatively**, but the present generation risks **intellectual regression**.
इतिहास में हर पीढ़ी **बौद्धिक और रचनात्मक रूप से आगे बढ़ी**, पर वर्तमान पीढ़ी **बौद्धिक पतन** के खतरे में है।
- Earlier, learning involved **wrestling with difficult questions and research without instant answers**.
पहले शिक्षा में **कठिन प्रश्नों से जूझना और तत्काल उत्तरों के बिना शोध** शामिल था।
- Research involved **framing questions**, using **physical libraries**, and building **independent bibliographies** rather than relying on ready-made data.
शोध में **स्वयं प्रश्न बनाना, पुस्तकालयों का उपयोग, और स्वतंत्र ग्रंथ सूची तैयार करना** शामिल था।
- An example includes locating an article in the **National Library, Calcutta**, leading to further research material at **New York University**.
एक उदाहरण में **राष्ट्रीय पुस्तकालय कोलकाता** में लेख ढूँढना शामिल है, जिससे आगे **न्यूयॉर्क विश्वविद्यालय** में शोध सामग्री मिली।
- This process, driven by **individual initiative**, cultivated **curiosity, judgment and creative thought**, key **cognitive skills**.
यह प्रक्रिया **व्यक्तिगत प्रयास** से संचालित होकर **जिज्ञासा, निर्णय क्षमता और रचनात्मक सोच** विकसित करती है, जो प्रमुख **संज्ञानात्मक कौशल** हैं।
- Reducing knowledge to **instant retrieval** risks weakening these **cognitive abilities**.
ज्ञान को **तुरंत प्राप्ति** तक सीमित करना इन **संज्ञानात्मक क्षमताओं** को कमजोर कर सकता है।
- The result is **cognitive atrophy** and the paradox of **limitless access to knowledge** versus **genuine learning requiring deliberate withdrawal**.
परिणाम है **संज्ञानात्मक क्षीणता** और **असीमित ज्ञान पहुँच** तथा **वास्तविक सीख के लिए सचेत दूरी** का विरोधाभास।
- The uncritical infusion of **AI into scientific research** is corroding norms that sustained **scholarly credibility**.
वैज्ञानिक शोध में एआई का बिना आलोचनात्मक उपयोग उन मानकों को कमजोर कर रहा है जो **शैक्षणिक विश्वसनीयता** बनाए रखते थे।
- In the last **two years**, the number of **journal submissions has exploded**, not due to genuine breakthroughs but because **AI can rapidly generate scientific-like texts**.
पिछले **दो वर्षों** में **जर्नल लेखों की संख्या तेजी से बढ़ी**, वास्तविक खोजों के कारण नहीं बल्कि इसलिए कि **एआई वैज्ञानिक जैसे लेख तेजी से बना सकता है**।
- Reviewers report **phantom citations, misattributed references**, and unrelated citations slipping through **peer review**.
समीक्षक **काल्पनिक संदर्भ, गलत संदर्भ, और असंबंधित उद्धरणों** की शिकायत करते हैं जो **पीयर रिव्यू** से बच जाते हैं।
- The surge in output has **overwhelmed editorial systems**, making **rigorous review difficult**.
लेखों की अधिकता ने **संपादकीय प्रणालियों पर दबाव** डाला है जिससे **कठोर समीक्षा कठिन** हो गई है।
- **AI-generated papers with errors or fabricated sources** enter journals and then feed into **future research and training data**, spreading **misinformation**.
एआई निर्मित लेख जिनमें **त्रुटियाँ या काल्पनिक स्रोत** होते हैं, जर्नल में प्रकाशित होकर **भविष्य के शोध और प्रशिक्षण डेटा** में शामिल होकर **भ्रामक जानकारी** फैलाते हैं।
- Original researchers are **eclipsed by sheer volume**, and weakening of **verification, responsibility and intellectual honesty** raises **serious ethical concerns**.
मौलिक शोधकर्ता **अत्यधिक मात्रा के कारण पीछे रह जाते हैं**, और **सत्यापन, जिम्मेदारी और बौद्धिक ईमानदारी** की कमजोरी **गंभीर नैतिक चिंता** पैदा करती है।



Scholarly erosion

शैक्षणिक क्षरण

- AI is not the villain; used properly it can **expand knowledge access** and free humans from **intellectual drudgery** for **higher creativity**.
एआई खलनायक नहीं है; सही उपयोग से यह ज्ञान की पहुँच बढ़ा सकता है और मानसिक श्रम से मुक्ति देकर उच्च रचनात्मकता को बढ़ावा दे सकता है।
- Some argue **LLM hallucinations** show human-like imagination, but this is **misguided**.
कुछ लोग कहते हैं एलएलएम की भ्रमात्मक प्रतिक्रियाएँ मानवीय कल्पना जैसी हैं, पर यह भ्रामक है।
- Human imagination arises from **memory, pain, longing and curiosity**, whereas **LLM predictions are statistical**, not experiential.
मानवीय कल्पना स्मृति, पीड़ा, आकांक्षा और जिज्ञासा से बनती है, जबकि एलएलएम केवल सांख्यिकीय अनुमान लगाता है।
- Reducing imagination to **probability** risks shrinking **human essence** into something mechanical.
कल्पना को संभावना तक सीमित करना मानव सार को यांत्रिक बना देता है।
- The danger is not AI becoming human, but **humanity shrinking to resemble AI logic**.
खतरा यह नहीं कि एआई मानव बन रहा है, बल्कि मानवता एआई तर्क जैसी बन रही है।

Language and democracy

भाषा और लोकतंत्र

- The **death of language** is the **death of democracy**, as language enables expression of **emotion, dissent, hope and conviction**.
भाषा का पतन लोकतंत्र का पतन है क्योंकि भाषा भावना, विरोध, आशा और विश्वास व्यक्त करने का माध्यम है।
- Loss of linguistic capacity weakens **free thought and expression**.
भाषाई क्षमता का हास स्वतंत्र विचार और अभिव्यक्ति को कमजोर करता है।
- **AI-driven propaganda** spreads **misinformation at unprecedented scale**, while **deepfakes** and **algorithmic targeting** manipulate emotions and politics.
एआई आधारित प्रचार अभूतपूर्व स्तर पर भ्रामक जानकारी फैलाता है, जबकि डीपफेक और एल्गोरिदमिक लक्ष्यीकरण भावनाओं और राजनीति को प्रभावित करते हैं।
- An electorate that stops **critical thinking** becomes unable to resist manipulation.
जो मतदाता आलोचनात्मक सोच छोड़ देते हैं वे हेरफेर का विरोध नहीं कर पाते।
- **Universities and humanities**
विश्वविद्यालय और मानविकी
- Universities have become a **new battleground**, with **humanities being sidelined** in favour of **STEM and market efficiency**.
विश्वविद्यालय नया संघर्ष क्षेत्र बन गए हैं, जहाँ मानविकी को किनारे कर स्टेम और बाज़ार दक्षता को प्राथमिकता दी जा रही है।
- The university risks becoming a **corporate skills factory**, weakening **language, humanities and democracy**, which remain deeply interconnected.
विश्वविद्यालय कॉर्पोरेट कौशल कारखाना बनते जा रहे हैं, जिससे भाषा, मानविकी और लोकतंत्र कमजोर हो रहे हैं, जो परस्पर जुड़े हुए हैं।
- As **language falters**, the **humanities decline** and **democracy suffers** in a generation that no longer reads books, writes essays, or engages in **critical inner argument**.
जब भाषा कमजोर होती है, तो मानविकी घटती है और लोकतंत्र प्रभावित होता है, ऐसी पीढ़ी में जो किताबें नहीं पढ़ती, निबंध नहीं लिखती और आलोचनात्मक आंतरिक संवाद नहीं करती।
- Language then loses its **oppositional power**, weakening **critical thought and conscience**.
तब भाषा अपनी प्रतिरोध क्षमता खो देती है, जिससे आलोचनात्मक सोच और विवेक कमजोर होते हैं।
- **AI reflects the worldview** of those who design and deploy it. If driven by **corporate monopolies**, it promotes **hyper-consumption**; under **authoritarian states**, it enables **behavioural control**; under **market efficiency**, it suppresses **imagination and ambiguity**.
एआई उसी दृष्टिकोण को दर्शाता है जो उसे विकसित और संचालित करते हैं। कॉर्पोरेट एकाधिकार के तहत



यह अतिउपभोग बढ़ाता है; सत्तावादी शासन में यह व्यवहार नियंत्रण को सक्षम करता है; बाजार दक्षता के तहत यह कल्पना और अस्पष्टता को दबाता है।

- AI threatens creativity not because it **thinks too much**, but because it **allows humans to think less**.
एआई रचनात्मकता के लिए खतरा इसलिए नहीं है कि यह **बहुत सोचता है**, बल्कि इसलिए कि यह **मनुष्यों को कम सोचने देता है**।
- Universities must protect the **humanities as the foundation of critical thought**, rather than treating them as **ornamental subjects**.
विश्वविद्यालयों को **मानविकी को आलोचनात्मक सोच का आधार** मानकर संरक्षित करना चाहिए, न कि **सजावटी विषय** समझना चाहिए।
- Democratic systems must safeguard **freedom of speech** and the **intellectual labour of independent inquiry**.
लोकतांत्रिक व्यवस्थाओं को **अभिव्यक्ति की स्वतंत्रता** और **स्वतंत्र बौद्धिक शोध** की रक्षा करनी चाहिए।
- AI should function as an **adjunct to human creativity**, enhancing **insight and innovation**, not replacing them.
एआई को **मानवीय रचनात्मकता का सहयोगी** बनना चाहिए, जो **अंतर्दृष्टि और नवाचार** को बढ़ाए, न कि प्रतिस्थापित करे।
- The creative crisis is not due to **technological limits** but due to a **deficit of intellectual courage and imaginative persistence**.
रचनात्मक संकट **तकनीकी सीमाओं** से नहीं बल्कि **बौद्धिक साहस और कल्पनाशील दृढ़ता की कमी** से उत्पन्न है।
- It is easier to **copy-paste** than to struggle with a **blank page and fragile thought**.
कॉपी पेस्ट करना आसान है, पर **खाली पृष्ठ पर विचार विकसित करना** कठिन है।
- Civilisation has endured through those who chose **rigour over expediency**.
सभ्यता उन लोगों के कारण कायम रही जिन्होंने **सुविधा से अधिक कठोरता** को चुना।
- If AI is to complement humanity, it must promote **imagination and language**, not **mechanical domination**.
यदि एआई मानवता का सहयोगी बनना है, तो उसे **कल्पना और भाषा** को बढ़ावा देना होगा, न कि **यांत्रिक प्रभुत्व** को।
- Concern about **diminishing humanity** must remain present in consciousness.
मानवता के क्षरण की चिंता चेतना में बनी रहनी चाहिए।
- Human essence is reaffirmed in the **act of creation**, like a child writing her **own thoughts and meaning**.
मानव सार **सृजन के कार्य** में पुनः स्थापित होता है, जैसे एक बच्चा अपने **स्वयं के विचार और अर्थ** लिखता है।
- This lesson, learned through **daily essay writing**, holds wisdom in the present **age of technological transition**.
यह शिक्षा, जो **दैनिक निबंध लेखन** से मिली, आज के **तकनीकी परिवर्तन के युग** में भी प्रासंगिक है।



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