

CURRENT AFFAIRS FOR UPSC

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DreamIAS

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INTERNATIONAL

UNITED NO MORE? THE PUSH FOR INDEPENDENCE FROM THE UK'

The First Ministers of Scotland, Wales, and Northern Ireland signed a joint memorandum of understanding on Monday (September 14) to signal their intent of putting their respective nations on the path to referendums towards independence from the United Kingdom. The three nations, along with England, make up the UK.

Key Takeaways:

- At a summit in the Welsh capital of Cardiff, the three leaders — Wales' Rhun ap Iorwerth, Scotland's John Swinney, and Northern Ireland's Michelle O'Neill — as well as the Republic of Ireland's leader of the opposition Mary Lou McDonald affirmed in the "Cardiff Agreement" that "the political landscape across these islands is changing".
- "For the first time ever, there are First Ministers in Scotland, in Wales and in the North of Ireland who are all committed to independence from the United Kingdom... there could be no clearer sign that Westminster's time is coming to an end," the memorandum read. "Our nations have the right to self-determination: No Westminster government has the right to block democracy or undermine the principle that our people will decide their own future."
- The Cardiff Agreement came on the back of two recent developments: UK Prime Minister Andy Burnham expressing that referendums for Scotland and Northern Ireland were not on the cards, and US President Donald Trump saying on Saturday (September 12) that he would "love" to see the reunification of Ireland.

Do You Know:

- The United Kingdom of Great Britain and Northern Ireland, commonly known as the United Kingdom (UK) or Britain, is a country in northwestern Europe, off the coast of the continental mainland. It comprises England, Scotland, Wales and Northern Ireland.
- The United Kingdom is an example of a unitary state with extensive devolution, rather than a federation constitutionally comparable to India.
- The British Isles, a group of over 6,000 islands located in northwestern Europe, comprises the two major islands of Great Britain and Ireland besides several smaller islands. Great Britain consists of three nations — England, Scotland, and Wales — whereas Ireland is made up of the Republic of Ireland and Northern Ireland.
- The name "Great Britain" assumed significance only in the 18th century, when the kingdoms of England and Scotland were united in 1707 by an Act of Union, becoming the United Kingdom of Great Britain.
- Wales, which is also located on the island of Great Britain, was conquered by the English in the late 1200s, but was legally annexed and made a part of the Kingdom of England only in 1536 through an Act of Union. Meanwhile, the island of Ireland had been under British control since the late 12th century but entered the UK as a political entity only in 1801, following a failed Irish rebellion (1798) and the Acts of Union (1800). Thereafter, the UK came to be officially known as the United Kingdom of Great Britain and Ireland.



- The name, however, lasted for over a century until 1922, when the majority of Ireland — barring six counties that make up Northern Ireland — gained independence from the British after the Anglo-Irish War (1919-21). With Northern Ireland choosing to remain part of the UK, the latter became the United Kingdom of Great Britain and Northern Ireland.
- On September 18, 2014, the Scottish independence referendum was conducted with the single-point question “Should Scotland be an independent country?”, with voters having to choose yes or no. The result: 55.3% voted No and 44.7% voted Yes, and Scotland remained with the UK.
- In 2022, the UK Supreme Court ruled that the Scottish Parliament doesn’t have the power to unilaterally call a second referendum on Scottish independence, with the subject “reserved” for the UK Parliament in Westminster, London. Although SNP’s Swinney said Monday that he wants to hold a second Scottish independence referendum by 2031, the 2022 ruling could pose a major obstacle since major British parliamentary parties such as Labour, Conservatives, and Liberal Democrats remain opposed to it.

U.S. GIVES UN ONE MORE YEAR TO END SUPPORT FOR SOMALIA PEACEKEEPERS

The United States (U.S.) has agreed to give the UN another year to wind down its support for African peacekeepers in Somalia, a document showed — a move that gives some breathing space to a force that was fearing quicker cuts, but still leaves its future in peril.

Reuters reported in July that Washington — increasingly frustrated with the administration in Mogadishu — said it would block UN from supporting the African Union (AU) force which props up the government and helps it fight al Qaeda-linked militants.

Analysts have warned that any weakening of the AU peacekeepers would severely undermine the government there and could exacerbate the political turmoil in a combustible region near the Red Sea.

The peacekeepers, known as the AU Support and Stabilisation Mission in Somalia, rely heavily on UN support for essential logistics such as food, water, fuel, medical services and transportation of troops.

The U.S. had told the AU in July it would use its clout to prevent the UN supporting the peacekeepers from the start of next year.

In another diplomatic note seen by Reuters and shared with embassies last week, Washington said “the United States is willing to support a 12-month drawdown followed immediately by liquidation” of the UN Support Office in Somalia (UNSOS).

Without that 12-month window, the funding could have stopped by December, when the mandate of that UN office expires.

A spokesperson for the U.S. State Department told Reuters that Washington would no longer fund or support the UN office in Somalia, whose total budget is around \$500 million.

The move will buy Somalia and its partners some more time to find other backers, but does not lift the threat over the peacekeeping force’s future.



WHY WAS EX-KOSOVO PRESIDENT CONVICTED BY THE HAGUE?

The story so far:

Hashim Thaci, the former President of Kosovo, has been sentenced to 25 years in prison after being found guilty of war crimes by a special European Union-backed court at The Hague. The trial found him guilty of war crimes including murder, arbitrary detention, illegal arrests, torture, etc during the Kosovo war in the late 1990s as a senior commandant of the Kosovo Liberation Army (KLA). Three other former KLA commanders were also sentenced for several different charges.

What happened?

Thaci was a former commandant of the KLA, a militant ethnic Albanian force, formed in the early 1990s, which strove for the independence of Kosovo, composed primarily of ethnic Albanians, from Yugoslavia and Serbia.

Kosovo was once part of the erstwhile Republic of Yugoslavia. After the Second World War, the Kingdom of Yugoslavia was reconstituted as the Socialist Federal Republic of Yugoslavia under the leadership of Josip Broz Tito. While Tito was able to unify the multiple republics, including Croatia, Montenegro, Serbia, Slovenia, Bosnia and Herzegovina, and Macedonia, and the autonomous provinces of Kosovo and Vojvodina, under a centralised government, the system came under pressure after his death. Multiple factors, including divisions between the republics, rising nationalist movements, economic pressures, and the disintegration of the Soviet Union, contributed to Yugoslavia's eventual dissolution in 2003.

One of the primary nationalist trends that spearheaded Yugoslavian dissolution was the Serbian nationalist movement led by Slobodan Milošević in the late 1980s. Riding on Serbian nationalist tendencies, Milošević pushed through policies that stripped other republics and provinces, such as Kosovo, of their autonomy. He also brought in policies that were discriminatory in nature against Albanians.

The KLA was formed in this atmosphere to fight for the independence of ethnic Albanians in Kosovo, then a province within Serbia. The KLA led an insurgency against the Yugoslav state, attacking Serbian government buildings and police stations. This eventually led to an all-out war in 1998-1999, with the Serbian-controlled federal republic brutally cracking down on the KLA. The war led to the displacement of thousands of people and the death of nearly 13,000 people, mostly ethnic Albanians. The war finally ended with the intervention of NATO (the North Atlantic Treaty Organization), which carried out air raids and bombardments against Serbian targets, which forced the federal republic to end hostilities and move out of Kosovo. NATO subsequently deployed peacekeeping forces to the region.

Milošević eventually stood trial for his crimes against humanity, genocide, and war crimes committed during the Yugoslav Wars of the 1990s, in The Hague in 2002. However, he died in prison before a judgment was reached.

In 2008, Kosovo declared independence from Serbia and was recognised by the U.S. and several other European nations. However, Serbia does not recognise Kosovo as an independent nation and still considers it a part of itself even though it has no administrative control over it. It is still not a member state of the UN. India also does not recognise Kosovo as an independent nation.



What was the trial for?

The trial was heard by the European Union-backed Kosovo Specialist Chambers, a special tribunal court constituted in The Hague in 2016, to hear the crimes committed by the KLA during the period of insurgency and subsequent war of the 1990s. The need for such a tribunal arose after Swiss politician Dick Marty authored a Council of Europe report, known as the Marty report, in 2010, which alleged that the KLA placed many Serbians in secret detention centres where they were subjected to inhuman and degrading treatment, before ultimately “disappearing”. Of particular note was the allegation that the KLA had harvested the organs of such prisoners to sell them in the international market.

The report, in effect, coloured the larger imagination of the KLA and the Kosovo independence movement. The narrative changed from the KLA being seen as a champion of self-determination to an inhumane militia which had committed human rights abuses against Serbian nationals.

At least 15 people have been charged by the Chambers, with Thaci being the most senior figure. Charges were brought against him in 2020, when he was President of Kosovo, following which he had to resign and stand trial as an ordinary citizen. The central question before the court was to understand the extent of the commandants’ control over the KLA and whether the crimes amounted to a pattern of abuse. Finally, presiding judge Charles Smith stated that Thaci had “actively participated in and encouraged crimes,” adding that “the scale and nature of the crimes committed were very serious”. However, the judge insisted that the trial was “not about the legitimacy of the Kosovo Liberation Army” or its ultimate goal of securing independence for Kosovo.

What has been the reaction?

The verdict is a significant fall for Thaci, who was once regarded by Western powers as central to Kosovo’s post-war future. In Kosovo, where Thaci is still seen as a revolutionary figure, the verdict was met with outrage and tears. Kosovo’s Prime Minister Albin Kurti said the verdict was “a travesty of justice”. People who had poured into the streets of Pristina, the capital of Kosovo, to hear the verdict were shocked and shouted slogans in support of the KLA and Thaci.

However, the Serbian side has welcomed the judgement. Serbia’s Deputy Prime Minister Ivica Dacic called the verdicts a “warning” to Pristina “that a fake state cannot be built on mass graves of murdered Serbs”. Thaci and the three other commandants have the right to appeal the decision.

BANQUE MISR SANCTIONS: US WIDENS ECONOMIC WAR WITH IRAN

On August 28, the Secretary of the United States Department of Treasury, Scott Bessent, expanded the scope of “Operation Economic Outcast” by issuing an order that identified the United Arab Emirates (UAE) branches of Banque Misr — Egypt’s second-largest state-owned financial institution — as a financial institution operating outside the US of “primary money laundering concern”. The Treasury found that the bank’s UAE operations were processing transactions for accounts linked to Iran’s shadow-banking networks.

Key Takeaways:

- The US Treasury’s Financial Crimes Enforcement Network (FinCEN) proposed invoking Special Measure Five under Section 311, which bars US financial institutions from opening or maintaining correspondent banking accounts for, or on behalf of, Banque Misr UAE.



- The FinCEN described the bank as a key point of access to US dollar correspondent banking services for the Iranian regime and alleged that certain customers included front companies associated with Iran's Ministry of Defense and the Islamic Revolutionary Guard Corps (IRGC).
- The proposal applies only to Banque Misr UAE, which includes five branches in Abu Dhabi, Dubai, Sharjah, and Ras Al Khaimah. Banque Misr's operations in Egypt and other countries are outside its scope.

Do You Know:

- As the ongoing war against Iran seems far from any negotiated end, the US would like to choke all the possible financial sources for its adversary. Over the last few months, Iran appears to have seized every single opportunity to secure its finances, while its economy is getting worse by the day. Deprived of hard-currency inflows, the Iranian rial faces rapid devaluation, exacerbating hyperinflation and squeezing domestic consumer purchasing power toward a subsistence economy.
- The move leaves Iran with not many choices. Currently, Tehran is testing its endurance against an escalating fiscal insolvency and a severe domestic economic strain. The US hopes that the fresh sanctions would push Iran further into crisis and force it to capitulate on its regional proxy activities and nuclear efforts to prevent complete systemic isolation.

FOR THE FIRST TIME SINCE WORLD WAR II, AfD SUCCESS ISN'T JUST A GERMANY STORY

The thumping victory of the Alternative für Deutschland (AfD, Alternative for Germany) in Saxony-Anhalt, with 43.8 per cent of the vote, against 17.2 per cent for the second-placed centre-right Christian Democratic Union, has sent shockwaves well beyond the small eastern state. It is still unclear whether the AfD, whose Saxony-Anhalt branch has been officially classified as "confirmed right-wing extremist" by German intelligence, will be able to form a government. But the result is the strongest-ever performance in a state election by a party shunned by mainstream parties under Germany's "firewall" strategy. The AfD has managed to move towards the political mainstream.

It is tempting to reduce the AfD's victory to region-specific factors: A relatively poor and ageing electorate in former East Germany; a territory that has, over the years, become its stronghold. But the party that wants to institute separate classes for children of refugees and seeks better ties with Russia is also leading in national opinion polls and is ahead of the Social Democratic Party in Mecklenburg-Western Pomerania, where state elections are due on September 20. The AfD has capitalised on a sense of voter grievance, making immigration and economic uncertainty its principal planks. Immigration has been the defining political issue since the European refugee crisis of 2015, but it has acquired greater force amid weak growth, high energy costs and anxieties about jobs that have undermined the confidence that once sustained the political centre. The export-heavy industrial model that contributed to German prosperity for decades has also come under severe strain due to the rise of China. The AfD has brought these disparate frustrations together and convinced voters of the inability of the established parties to address them. The firewall strategy has, in turn, helped it to portray itself as the only authentic opposition to a political system whose principal point of unity appears to be stopping the AfD.

Across Europe, the far right — the National Rally in France, Giorgia Meloni's Brothers of Italy — continues to rise as immigration becomes a litmus test, alongside concerns over the economy.



Failures on both fronts have created fertile ground for the far right. To halt its march, mainstream parties need to repair their credibility deficit and reclaim the power to set the agenda.

RUSSIA BEGINS THREE DAYS OF VOTING IN FIRST WARTIME PARLIAMENTARY POLL

Russians on Friday began three days of voting in the country's first wartime parliamentary election, which features virtually no opposition and is all but certain to secure the Kremlin's political dominance.

Authorities spread the election over the weekend, ending on Sunday, in a bid to boost turnout among the 111 million eligible voters, and they even allowed electronic balloting.

The Kremlin wants the parliamentary election — the first since the start of the full-scale invasion of Ukraine in 2022 — to underline public support for the war and give a veneer of legitimacy to its action. It has sought to avoid any political risks by stamping out even the slightest sign of dissent.

"Your choice and resolve will once again demonstrate that millions of people stand behind our fighters, that we are a united people, bound by shared values, historical memory, and love for the Motherland," President Vladimir Putin told the nation before the vote.

Russian state news agencies reported that Mr. Putin voted online on Friday and released a video of him in front of a computer screen. The main Kremlin party, United Russia, is all but assured to retain its overwhelming control of the lower house, the State Duma. Several smaller parties of the "systemic opposition" that vote in sync with the government on all key issues also are expected to retain their presence.

Voters cast two separate ballots, filling half of the Duma's 450 seats by selecting political parties listed on the ballot. The rest are contested in single-seat constituencies, with voters choosing individual candidates.

The liberal Yabloko party, the only registered political entity that dared to criticise the war, was removed from the ballot last month by Russia's Supreme Court, and only has a few dozen candidates in the single-constituency races. Additionally, some anti-war politicians have been imprisoned or forced to flee abroad ahead of the campaign.



NATIONAL

BUILDING CONSENSUS

The 18th BRICS Summit pushed for changes in traditional power equations

Reaffirming the importance of reformed multilateralism in a world riven with unilateral actions by superpowers emerged as a binding theme of the 18th BRICS Summit and the New Delhi Declaration. The Summit's success could be measured by three main parameters — the participation of members at the highest levels, the importance given to intra-BRICS trade cooperation mechanisms and the consensus achieved by Indian negotiators in forging a joint statement in a time of war. The government should be commended for ensuring that Iran and the UAE, two rivals in the West Asian conflict, used the occasion for their highest-level bilateral meeting since the war began. The New Delhi Declaration, which was issued despite scepticism about all the differences within the grouping, presented the BRICS as a formidable front in its 20th year. Among the BRICS members, the position of Saudi Arabia, which has yet to formally join the group, remains ambiguous, as Foreign Minister Faisal bin Farhan Al Saud arrived after the main session where the joint statement was adopted on Saturday. For the other members, however, the consensus was clear on issues of global importance. The declaration made a call for the reform of the Security Council and support for a greater role for Brazil and India while recommending new initiatives for global governance. It condemned western sanctions and tariffs and resolved to improve intra-BRICS trade and transact more in local currencies. It also condemned unilateral wars, without criticising any member. While the statement omitted references to the U.S.-Israel attacks on Iran, the assassination of Iran's Supreme Leader Ali Khamenei, and of Iran's retaliatory attacks on its neighbours, especially the UAE, it is understood that this was due to a last-moment compromise effected between the two countries so as to forge the agreed text. It also took an exceptionally strong position on Israel's actions in Palestine and Lebanon.

India's fourth BRICS chairship has given ballast to its reputation as a Global South balancer with easy access to both sides of a divided world, while delivering bilateral benefits. Prime Minister Narendra Modi's close attention to Iran's President Masoud Pezeshkian would have gone some way in assuaging hurt feelings, when New Delhi appeared to be tilting towards the U.S. and Israel in the war. Mr. Modi's meeting with Chinese President Xi Jinping also afforded the two countries a chance to reaffirm their political will to normalise ties. And his meeting with important leaders from the ASEAN grouping and African nations paid much-needed attention to India's ties with them. This BRICS Summit will be remembered for a moment of solidarity among countries that have many differences but are together in desiring a shift in traditional power equations to one more driven by their emerging economies.

DIGNITARIES SAVOUR INDIAN DELICACIES AT BRICS DINNER

'Paneer lababdar', 'gucchi marmik', 'millet pulao', and 'shahtoot phirni' for desserts were among the Indian delicacies served to the leaders and delegates of the BRICS Summit at a gala dinner hosted by Prime Minister Narendra Modi at the Bharat Mandapam on Saturday.

India is hosting the BRICS Summit at the sprawling venue in central Delhi on September 12-13. The first day saw the presence of Chinese President Xi Jinping, Russian President Vladimir Putin and several other heads of state.



The menu included 'khandvi mille' and 'khumb galouti' as starters, people familiar with the matter said. 'Khandvi mille' is a feuille steamed gram-flour roll, tempered with mustard, coconut and curry leaves. It is served with kesar mango, micro-greens and yoghurt dressing. 'Khumb galouti' is tender pan-grilled mushroom kebabs with mint pearls, served on a bed of sheermal bread, they said.

The main course offered 'paneer lababdar' — cottage cheese cubes simmered in a gravy of shallots and tomato; 'gucchi marmik' — Himalayan morel mushrooms and tender asparagus, simmered with saffron, raisins, and mamra almonds; and 'carrot bean poriyal' — carrots and green beans toasted in South Indian spices in virgin coconut oil and finished with grated coconut.

STATE CONSENT NOT TAKEN, PUT HC CHIEF JUSTICE APPOINTMENT ON HOLD: PUNJAB GOVT

Saying that the Centre appointed Justice Ashwani Kumar Mishra as the Chief Justice of the Punjab and Haryana High Court without awaiting the state government's views as required under the Memorandum of Procedure (MoP) for appointment of High Court Judges, the Punjab Cabinet on Sunday passed a resolution demanding that his "appointment and administration of oath... be put on hold".

Key Takeaways:

- The resolution was passed at an emergency meeting chaired by Chief Minister Bhagwant Singh Mann, a day after the Centre notified the appointment. The state government said the appointment was "yet another instance" of the Centre "bypassing Punjab's constitutional rights and established procedure".
- "This appointment has been made without obtaining the consent of the state government, thereby bypassing all Constitutional norms and set procedures," it said in a statement. "The Cabinet resolved that the appointment and administration of oath should be put on hold until Punjab's views are obtained and duly considered," it said.
- Justice Mishra, whose parent court is the Allahabad High Court, is expected to be sworn in on Monday.
- He later wrote to President Droupadi Murmu, Prime Minister Narendra Modi and Punjab Governor Gulab Chand Kataria, enclosing a copy of the resolution adopted by the Cabinet.
- The Punjab Cabinet said the appointment reflected a pattern of the Centre's "infringement of Punjab's constitutional rights".
- As Acting CJ, a bench led by Justice Mishra had in August directed the Punjab government to clear pending instalments of dearness allowance and dearness relief owed to its employees and pensioners, observing that the state continued to spend on advertisements and other discretionary items even as it cited financial constraints to withhold the dues.
- Meanwhile, the Punjab and Haryana High Court Bar Association has opposed the state government's stand. It said the move risked being seen as Executive overreach into a matter governed by the constitutional process for judicial appointments, cautioning that any impression of political pressure on the judiciary could erode public confidence in the justice system.

**Do You Know:**

- The Chief Justice of a High Court is appointed by the President of India under Article 217(1) of the Constitution of India.
- The SC Collegium had recommended the appointment of four Chief Justices of High Courts, including Justice Mishra's candidature, on August 6. On August 12, the Centre had sought the views of the Chief Ministers and Governors of the four states.
- While the MoP does not stipulate a time period, conventionally, it is learnt that the consent for appointment of a Chief Justice is dealt with immediately. For appointment of HC Judges, it takes four to six weeks for inputs from the Chief Minister. It is learnt that normally, the Secretary of the Department of Justice dials the Principal Secretary to the Chief Minister to facilitate the process. After a certain time period, the Law Ministry deems that there was no objection from the state government.
- It is learnt that the Law Ministry had received inputs from Bihar, West Bengal and Maharashtra — the three other states concerned — immediately, but the delay by the Punjab Chief Minister held up the other appointments too. The appointments were notified on September 5.
- Justice Mishra has been serving as Acting Chief Justice of the Punjab and Haryana High Court since June 1, when he took over the elevation of then Chief Justice Sheel Nagu to the Supreme Court.

CAN HUSBAND BE TRIED FOR MARITAL RAPE WHEN IT'S NOT OFFENCE, ASKS SC

Hearing petitions challenging the marital rape exemption in the country's penal law, the Supreme Court on Wednesday said that while a marriage does not result in extinction of individual autonomy, the question is whether a husband can be prosecuted for non-consensual sex without first deciding the constitutional validity of the exception.

Key Takeaways:

- The court said it will start the final hearing on the petitions after three weeks and asked the parties to submit their papers in the meanwhile.
- "Where there is a clear definition and an exception under Section 375, the issue is about the remit of that exception...One is the safety and security of married women...We fully appreciate the submission that there is no question of marriage resulting in a union of individual autonomy. Point well taken. Now see the law as it stands. It is a penal law. And therefore, rightly or wrongly, before a constitutional court renders a verdict that the exception was unreasonable or manifestly arbitrary, can we permit a prosecution on that score?," said Justice Joymalya Bagchi, who was part of a three-judge bench hearing a clutch of petitions challenging the exception.
- The bench presided by Chief Justice of India Surya Kant and also comprising Justice V Mohana said this in the context of the March 2022 ruling of Karnataka High Court that a husband, who forces non-consensual sex on his wife, can be prosecuted under the relevant penal provision.
- Justice Bagchi said, "Till we take a call on the constitutional vires of the exception, can a prosecution be permitted? We will definitely protect the victims but is it within the domain of a prosecutor to prosecute a person where there is a clear definition of an exception in S. 375 IPC (or section 63 Bhartiya Nyaya Sanhita)?" Besides the appeal challenging the Karnataka High Court



decision, the bench is also seized of an appeal challenging the 2022 split verdict delivered by the Delhi High Court in the matter, PILs against the exception and applications by some intervenors.

- The bench said it will consider whether a prosecution can be sustained if the exception survives, and also if the exception itself is constitutionally valid.

Do You Know:

- Section 375 defines rape and lists seven notions of consent which, if vitiated, would constitute the offence of rape by a man. However, the provision contains a crucial exemption: “Sexual intercourse or sexual acts by a man with his own wife, the wife not being under eighteen years of age, is not rape.”

This exemption essentially allows a marital right to a husband who can with legal sanction exercise his right to consensual or non-consensual sex with his wife.

- The marital rape immunity is known to several post-colonial common law countries. Australia (1981), Canada (1983), and South Africa (1993) have enacted laws that criminalise marital rape.

—In the United Kingdom, the House of Lords overturned the exception in 1991. In their landmark decision in the case known as *R v R*, the Lords took the view that the time had “arrived when the law should declare that a rapist remains a rapist subject to the criminal law, irrespective of his relationship with his victim”. They also said that the verdict was not creating a new offence, rather only removing a common law fiction that has its roots in ecclesiastical law.

- It was argued that the House of Lords decision amounted to a retrospective change in criminal law, which would amount to a breach of the European Convention on Human Rights. The European Court of Justice reviewed the ruling and upheld the decision of the Lords as a “foreseeable evolution” of the law. Subsequently, in 2003 marital rape was outlawed by legislation in the UK.

SAME-SEX PARTNER CAN BE MADE NOMINEE FOR MEDICAL DECISIONS, CENTRE TELLS HC

The Centre has told the Delhi High Court that an adult can nominate a partner, including one in a non-heterosexual relationship, to make medical decisions if they become incapacitated, potentially opening the way for same-sex partners to act for each other despite existing rules not clearly recognising such arrangements.

The submission comes in a case filed by Arshiya Takkar, who has been in a relationship with her partner since 2015 and married her in New Zealand in 2023. Her plea highlighted that in the event of a medical emergency, she could be left without any legal mechanism to make critical decisions for her partner, despite the couple having lived together in Delhi since 2018.

Responding to her plea, the Union Ministry of Health and Family Welfare and the National Medical Commission said that allowing a competent adult to nominate a partner, including one in a same-sex relationship, to take medical decisions in the event of incapacity was “substantially capable of being accommodated within the existing legal and ethical framework”.

“Permitting a competent adult to nominate his/her partner, including a partner in a non-heterosexual/same-sex relationship, to take medical decisions on his/her behalf in the event of incapacity would constitute a logical and tailored extension of the same principle,” the affidavit



said. It added that such a nomination could be subject to appropriate safeguards and the applicable law.

It further submitted that where a competent adult has nominated or otherwise authorised their partner to act on their behalf in the event of incapacity, “there appears to be no medical or ethical rationale for excluding such person merely on account of the sex, gender or sexual orientation of the partners or because their union does not fall within the conventional understanding of marriage...”

The petition is likely to come up for hearing on Thursday.

GUJARAT COUPLE IN THEIR 50S, WHO LOST THEIR DOCTOR SON TO SUICIDE, WIN IVF LEGAL BATTLE

The Gujarat High Court has allowed a couple in their 50s to seek assisted reproductive technology (ART) services, after their request for IVF treatment was rejected because the woman had crossed the statutory age limit under the Assisted Reproductive Technology (Regulation) Act, 2021.

Under Section 21(g) of the Act, women between 21 and 50 years and men between 21 and 55 years are eligible to use ART services. In this case, the woman was above 50, while her 54-year-old husband remained within the prescribed age limit.

The court held that the age-related ineligibility of one spouse need not automatically disqualify the couple, particularly when the husband remained within the statutory age bracket. It relied on a series of earlier High Court judgments taking a similar view. The court, however, clarified that the judgment does not guarantee a particular IVF procedure; medical suitability and the manner of treatment remain with the authorised clinic and treating doctors.

Key Takeaways:

— The court set aside the July 2026 rejection of the couple’s request and permitted them to avail themselves of ART services.

— The couple’s argument rested on the ART Act’s definition of a “commissioning couple”, meaning an infertile married couple approaching an authorised ART clinic or bank for treatment.

— The court accepted the reasoning that eligibility could be considered in the context of the couple rather than automatically disqualifying both partners because one spouse had crossed the age limit.

— The Gujarat High Court noted that several High Courts had already taken a similar view. A key precedent from the Calcutta High Court held that the age-related ineligibility of one spouse need not necessarily affect the eligibility of the other spouse.

— The judgment only removes the legal barrier. Whether IVF can actually be undertaken, and how it should be carried out, remains a matter for the authorised ART clinic and treating doctors.

— The case comes amid a wider debate over whether IVF eligibility should depend on fixed statutory age limits or individual medical assessment. Medical experts have pointed to higher risks associated with pregnancy at advanced ages, including gestational diabetes and hypertension.



Do You Know:

- ART stands for Assisted Reproductive Technology. It includes techniques used to achieve pregnancy by handling sperm or eggs outside the human body.
- IVF (In Vitro Fertilisation) is a type of ART in which an egg and sperm are fertilised outside the body and the resulting embryo is transferred to the uterus.
- The Assisted Reproductive Technology (Regulation) Act, 2021 regulates ART clinics and ART banks in India.
- ART and surrogacy are different. ART involves medical techniques to achieve pregnancy, while surrogacy involves another woman carrying a pregnancy for intending parent(s).
- India regulates surrogacy through a separate law called the Surrogacy (Regulation) Act, 2021.
- The ART framework seeks to ensure the ethical and safe use of reproductive technologies and regulate ART clinics and banks.
- The issue of IVF also raises questions related to reproductive autonomy, privacy, dignity and personal liberty under Article 21.

SIR: GLARING ODDITIES

The big picture

The three articles tell one story. In Phase 3 of the Special Intensive Revision (SIR), enumeration-stage deletions are much higher than in earlier phases. They are concentrated in urban areas, and they are overwhelmingly classed as “Shifted/Absent”. The Election Commission (EC) has given no explanation, and independent analysis by *The Hindu* suggests the deletions may be arbitrary.

2. Key data at a glance

Parameter	Phases 1 & 2 (13 States/UTs, incl. Bihar)	Phase 3 (17 of 19 States/UTs with draft rolls)
Electors before SIR	58.9 crore	36.1 crore
Draft roll	51.7 crore	29.9 crore
Deletions	7.22 crore (12.3%)	6.15 crore (17.1%)
Final roll deletions	About 10.5% (marginal fall)	Awaited

- Nagaland and Tripura had not yet released draft rolls.



- Among States with at least 1 crore voters, only Tamil Nadu and U.P. crossed 15% deletions in Phases 1–2. In Phase 3, six have crossed 15%, and four (Delhi, Maharashtra, Telangana, Andhra Pradesh) have crossed 20%.
- Jharkhand (Phase 3) saw 16.5% deletions, against 12.9% for Chhattisgarh (Phase 2). So “urbanisation” alone does not explain the rise.

Case study 1: Maharashtra

- **Scale:** 2.07 crore deleted out of 9.79 crore (21.14%) across 288 ACs. This is more than U.P.’s 2.04 crore, even though U.P. has 13.4 crore electors.
- **EP ratio:** Estimated from the Technical Group on Population Projections (18+ population), Maharashtra’s draft roll is short by about 1.92 crore electors, roughly equal to the deletions.
- **Urban concentration:** 58 ACs lost at least 33% of names, and 25 lost 40% or more (mainly Mumbai, Pune, Thane, Nashik). Bhiwandi East was highest at 49.1% (1.85 lakh of 3.76 lakh).
- **Blanket categories:** In Kalyan Rural, 96.5% of 2.52 lakh deletions were “Shifted/Absent”, and only 4,882 were “Deceased”. In 85 ACs, shifted/absent made up 75–96.5% of deletions.
- **Arbitrary use of “Absent”:** The EC’s own manual says an absentee voter cannot be deleted because they remain an ordinary resident. Within Pune district, Maval marked 322 (0.4%) as Absent but over 77,000 as Shifted, while Hadapsar marked 86% of its 2.98 lakh voters as Absent.

Case study 2: Delhi

- Roll size was 1.56 crore in February 2025, with 94.9 lakh voting. About 11 lakh were deleted before SIR and about 47.6 lakh in the draft SIR, leaving 97.5 lakh.
- In 24 of 70 constituencies, the draft roll has fewer electors than those who actually voted in 2025. The worst is Tughlakabad: 1,00,386 electors against 1,14,961 voters (a shortfall of 14,575).
- Taken at face value, this implies a hypothetical turnout of about 97%, which is implausible. Voters also had to list their EPIC numbers in enumeration forms, so it is unlikely that recent voters declared themselves ineligible.
- The “buffer” of electors beyond actual voters is shrinking phase by phase: Andhra Pradesh 8.8%, Karnataka 13.1%, Maharashtra 16.2%, with Delhi the worst.

Common patterns across the articles

1. **Rising deletions** from phase to phase, with no official reason given.
2. **Urban skew** (Mumbai, Pune, Thane, Hyderabad, Bengaluru, Delhi), higher than in comparable Phase 2 cities (Chennai, Ahmedabad).
3. **Reason-code shift:** the share of “Shifted/Absent” is rising, while “Deceased” and “Duplicate” are falling. “Others” is zero in Delhi, Maharashtra, Karnataka and Telangana, which suggests such cases were clubbed under “Absent”.



4. **Transparency deficit:** the EC has not released the Elector-to-Population (EP) ratio, though its Manual on Electoral Rolls requires it during and after every revision.
5. **Statistical implausibility:** deletions roughly match the EP-ratio shortfall, and rolls fall below actual turnout.

WHY HAS THE CENSUS BEEN DEFERRED IN MANIPUR?

Why are many civil society organisations demanding that the State's National Register of Citizens be prepared first? What are the differences between some communities and the Kukis on this issue? How is the NRC demand related to the Manipur ethnic conflict?

The story so far:

On August 31, the Centre deferred the Census operations in Manipur amid demands from several community-based and civil society organisations (CSOs) to first conduct the State's National Register of Citizens (NRC) exercise with 1951 as the base year. The decision followed Union Home Minister Amit Shah's meeting with Manipur Governor Ajay Kumar Bhalla and Chief Minister Yumnam Khemchand Singh in New Delhi. The message conveyed was that Manipur can ill-afford fresh tension amid the ongoing Kuki-Meitei and Kuki-Naga conflicts, with elections to the State's 60-member Assembly less than a year away.

What led to the Census deferment?

The decennial Census operation in poll-bound Manipur was scheduled to start on September 1. Data collection for the exercise began in January.

A few months later, several community-based and CSOs began opposing the scheduled headcount, demanding that the State's NRC be prepared first. The Meiteis, who are in the majority in Imphal Valley, opposed the Census 2027 exercise. The Meitei Pangals (Muslims), largely inhabiting the valley, joined the NRC-before-Census bandwagon, as did the Nagas, who dominate at least five of the State's 10 hill districts.

The Kuki community, led by the Kuki-Zo Council, supported the Census operation. Their leaders said an impartial headcount would dispel false claims about Kuki population growth and the perception that they were "illegal migrants", and ensure a fair delimitation process based on verified population numbers. The Kukis also said updating the NRC before the Census was premature and biased, fearing that the community members might face unfair exclusion if 1951 was used as the base year. This is because there remains a perception among some communities that the Kukis are not the "original" inhabitants.

However, the other communities intensified their pro-NRC protests. Shutdowns and boycotts of all the Central and State government offices followed. A citizens' group, Campaign for Just and Fair Delimitation, threatened to intensify its protest. Leaders of 14 CSOs met with the Governor before travelling to New Delhi to meet with the Union Home Secretary, Registrar General of India, and the High-Level Committee on Demographic Change to explain why Manipur needed the NRC to find a permanent solution to the ethnic conflict that has scarred the State since May 3, 2023.

Has the Census been deferred or withheld earlier?

Yes, at least thrice. The exercise was withheld or not conducted in 1981 for Assam, which was in the midst of a mass movement (1979-1985) against undocumented immigration. The agitators

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feared that conducting a Census amidst unresolved citizenship disputes would legitimise illegal settlers on the voters' list. Normal Census operations were resumed after the Assam Accord was signed in August 1985.

The 1991 Census for Jammu and Kashmir was also not conducted due to the rise of extremist activities and the mass exodus of Kashmiri Hindus (Pandits) from the Kashmir Valley following widespread violence.

The 2021 Census cycle was postponed nationally due to the COVID-19 pandemic and rescheduled to 2026-27.

What is the argument of the pro-NRC groups?

In a memorandum submitted to the Governor on July 1, the 14 CSOs said an NRC was necessary to identify "illegal migrants" who migrated to Manipur from Bangladesh, Burma (Myanmar), and Mizoram to "pose a threat" to the State's "original inhabitants". They claimed that the Inpuiis, Kabuis, Liangmais, Maos, Marams, Meiteis, Poumais, Rongmeis, Tangkhuls, and Zemes were the original inhabitants. They said the population of Meitei Pangals, descendants of Muslims from present-day Bangladesh who migrated to the State since 1606 and settled by marrying Manipuri women, increased to 2,39,886 (Census 2011) from 4,881 in 1881 with an "unexpected" growth rate of 4,814% over 130 years. The population of the Meiteis and the original tribes increased by 880% and 897%, respectively, during this period, they said.

Claiming large-scale migration into Manipur's hills from Bangladesh, Myanmar, and Mizoram since the 15th century, the CSOs said the total population in the hills jumped to 5,49,599 in 2011 from 25,384 in 1881, recording a growth rate of about 2,165%. They said protecting their ancestral land from "infiltrators" and keeping their socio-cultural environment intact became a "headache" for most original inhabitants, given the demographic scenario.

The CSOs said those who fail to establish a link between people in the 1951 Census and those in the (demanded) NRC should be declared "non-citizens of Manipur" and duly detected and deported.

How is the NRC demand linked to Manipur's ethnic conflict?

The Manipur government has consistently backed the NRC. Its formal demand gained traction after the Manipur Legislative Assembly adopted a unanimous resolution on August 5, 2022, seeking the establishment of a State Population Commission and the implementation of the NRC. One of the triggers was the military coup in Myanmar in February 2021, following which several hundred people crossed over to Manipur through porous borders. Most of those who took refuge were Kuki-Chin, ethnically related to the Kukis of Manipur and the Mizos of Mizoram. Many in Manipur blame the illegal influx for the ongoing ethnic conflict, first between the Kukis and Mizos and then between the Kukis and Nagas, which has claimed almost 300 lives since May 2023 and displaced more than 62,000 people. Although the State government or any other agency has not conducted any survey of "illegal immigrants", Meiteis and Nagas believe that the Kuki population has jumped exponentially in the hill districts. While non-tribal Meiteis feel the Census could reduce their representation in the Assembly from the current 40 seats, the Nagas believe the scale could tip in favour of the Kukis in the hills. The 20 Assembly seats in the hills are divided equally between the Kukis and the Nagas. The latter, however, say the hill areas should have had at least three more Assembly seats based on the 2011 population.



Is an error-free NRC guaranteed?

The NRC, entailing the transfer of data from Census slips, was born out of independent India's first Census in 1951. Assam compiled the NRC in 1951, although all States were mandated to do so. The intention behind that exercise in Assam was to prepare a village-based inventory of residents in view of the resistance from the State — then undivided — to house post-Partition refugees. The fear of the indigenous people of being outnumbered by “illegal immigrants” during and after the 1971 Bangladesh War led to the Assam Agitation from 1979 to 1985. A demand during the agitation was to eject undocumented foreigners by updating the 1951 NRC. The exercise, supervised by the Supreme Court, began in 2014, and the complete draft was published on August 31, 2019. This draft excluded 19.06 lakh out of the 3.3 crore people who had applied for inclusion. The Assam NRC process, however, remains incomplete because the Registrar General of India has not issued any notification declaring it as final. Organisations such as the All Assam Students' Union claim the NRC 2019 was manipulated to pass a majority of an estimated 41 lakh illegal immigrants as citizens. The BJP-led Assam government remains adamant that the NRC was erroneous, with at least 20% of the enlisted names in districts bordering Bangladesh requiring re-verification. Assam's updated NRC has been in limbo, with cases against it pending in the Supreme Court.

NEW FAULT LINES

Manipur's new Kuki-Zo–Naga conflict needs firm, even-handed State action

In the three years since the conflagration of May 2023 hardened into a fault line between the Meitei and Kuki-Zo communities, Manipur has traversed a slow path towards peace between them. After nearly a year of President's Rule gave way in February 2026 to a Bharatiya Janata Party-led government under a new Chief Minister, Yumnam Khemchand Singh, attempts to engineer a thaw gathered pace with the everyday violence between the communities abating. Yet, many of those displaced in 2023 remain in relief camps; an RTI reply puts those dead in these camps at over 700, many due to the lack of access to basic health care and adequate nutrition. Even so, there have been tentative and encouraging openings towards rebuilding normalcy. On September 2, two Kuki-Zo MLAs attended the Assembly session — the first time since legislators from the community began boycotting it following the attacks in Imphal at the start of the ethnic conflict. In doing so they defied a directive from the Kuki-Zo civil society organisation, the Kuki Inpi Manipur, to continue the boycott until there was a concession on the demand for a separate administration. The two MLAs seem to acknowledge that it is time to reopen the political space even if differences persist, and for this, their presence in the Assembly must be welcomed.

Yet, these moves have coincided with a new ethnic fault line in Manipur. Since February, violence between the Naga and Kuki-Zo communities — which began as localised disputes — has spread across the hill districts. Till July, at least 15 Kuki-Zo people, 11 Nagas, three security personnel and a truck driver were killed; more have died in the last two months. Houses in Naga and Kuki-Zo villages have been burnt down and the newly displaced have moved into camps. Blockades imposed by partisans of the communities against the other have held up essentials and medicines, with the smaller Kuki-Zo community the worse affected. Health centres in the hills have been left dysfunctional. This echoes the Naga-Kuki violence of the 1990s, now revived by armed groups claiming to act on behalf of their respective communities and resurrecting arguments over who controls the hills and whose customary laws prevail there. With its tenure ending soon and Assembly elections due next year, the State government must move quickly to contain this outbreak of hostilities. It must work with civil society to lower the rhetoric — reportage from the

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ground suggests a weariness with the violence across communities – while acting against the armed groups with the help of the security forces. Those imposing blockades must be deterred by the force of law. Criminal law must apply equally across communities in the hills, and the safety and welfare of civilians must be guaranteed irrespective of ethnicity.

LADAKH: GOVT OFFERS NEW CHAPTER UNDER ART 371, KEY POWERS NOT FINAL

The Centre has offered the addition of a constitutional provision of ‘Article 371(K)’ in a bid to extend additional protections to Ladakh at a meeting between the Ladakh Sub-Committee and the Ministry of Home Affairs in the national capital on Wednesday, *The Indian Express* has learnt. While this marks a significant development, representatives have said there is no draft of this yet, and discussions will continue.

Key Takeaways:

- The meeting, which came months after the last talks, saw the sub-committee comprising members of the Leh Apex Body (LAB) and Kargil Democratic Alliance (KDA) — including activist Sonam Wangchuk — meet with officials of the MHA in continuation of the “in-principle understanding” arrived at in meetings held on May 22 and July 3. Those two breakthrough meetings saw discussions on restoring democracy in Ladakh, and providing constitutional safeguards by way of special provision under Article 371.
- According to those who attended the Wednesday meeting, the MHA stated that the intended UT-level governance body – a demand made by the two groups — would be elected by direct election and would have legislative powers with respect to land, culture and language, forest, environment, natural resources and any other subjects reserved for the UT under Article 240 of the Constitution of India.
- Article 240 gives the President of India the power to make laws and regulations for the peace, progress, and good government of specific union territories.
- Ladakh has also raised concerns regarding structural changes to the governance infrastructure in the UT. Wangchuk added that “if these changes continue, we will be forced to sit on agitation again.”

Do You Know:

- Ladakh’s demand for greater political and constitutional protection dates back to the reorganisation of Jammu and Kashmir in August 2019. There was initially considerable enthusiasm, particularly in Leh, after Ladakh was made a separate Union Territory. The Buddhist-dominated Leh district had long sought UT status, arguing that it had been neglected by the erstwhile Jammu and Kashmir government. That waned after it became clear that while the Union Territory of Jammu and Kashmir would have a legislature, Ladakh would not.
- The region had four MLAs in the erstwhile J&K Assembly. After 2019, its administration was largely led by bureaucrats, not by elected officials, deepening a sense of political alienation. Changes to domicile rules in Jammu and Kashmir also sharpened concerns in Ladakh over land, employment, demography and cultural identity. The Union Territory currently has two Hill Councils, in Leh and Kargil, but neither is under the Sixth Schedule. Their powers remain limited. These concerns eventually fed into demands for statehood, inclusion under the Sixth Schedule and greater democratic control over Ladakh’s administration.



- The Sixth Schedule, under Article 244 of the Constitution, provides for autonomous administrative divisions called Autonomous District Councils, or ADCs, which enjoy a degree of legislative, judicial and administrative autonomy within a state. ADCs can make laws, rules and regulations relating to subjects such as land, forests, water, agriculture, village councils, health, sanitation, inheritance, social customs and mining.
- The Sixth Schedule currently applies to tribal areas in Assam, Meghalaya, Mizoram and Tripura. In September 2019, the National Commission for Scheduled Tribes recommended that Ladakh be brought under the Sixth Schedule, noting that the new Union Territory was overwhelmingly tribal and had a distinct cultural heritage requiring protection. However, no region outside the Northeast has so far been included under the Sixth Schedule.
- Articles 371 and 371-A through J contain “special provisions” for specific states. These provisions vary considerably from state to state, but broadly seek to protect local political, cultural, social or economic interests.
- Under Article 371-A, for example, laws made by Parliament relating to Naga religious or social practices, customary law and procedure, and ownership and transfer of land and resources do not automatically apply to Nagaland unless the state Assembly agrees. Similar protections have been extended to Mizoram under Article 371-G. Articles 371-B and 371-C provide for special committees within the Legislative Assemblies of Assam and Manipur, while Article 371-F provides special arrangements for representation in the Sikkim Assembly. Special provisions also exist for Arunachal Pradesh and Goa. If Article 371(K) is introduced for Ladakh, it would mark a significant departure from this pattern because Ladakh is a Union Territory, not a state.
- The Sixth Schedule creates autonomous district-level institutions with constitutionally defined powers. The proposed Article 371(K), by contrast, appears to be aimed at creating a directly elected governing body at the Union Territory level with legislative authority over specified subjects.

This would give Ladakh a separate constitutional arrangement, rather than simply extending the Sixth Schedule to the Union Territory. The exact difference will depend on the wording of the draft. The most important unresolved questions concern whether the elected body would have executive authority, control over budgets and planning, and powers over police and law and order. Until these are settled, it remains unclear how much power the proposed body would actually exercise.

JHIRAM GHATI VERDICT: WHAT REMAINS OF THE LEGACY OF ‘BASTAR TIGER’ MAHENDRA KARMA, FACE OF SALWA JUDUM

As the verdict came in on Saturday convicting all the 10 Maoists accused in the Jhiram Ghati attack of May 2013, the family of their prime target, Mahendra Karma, said they are still waiting for justice.

Key Takeaways:

- Karma, 62, who was killed along with 27 others in the Jhiram Ghati attack, was one of the foremost tribal voices against Maoists in Chhattisgarh. He was also the face behind the Salwa Judum, a force of civilians who were made Special Police Officers (SPOs) and armed to fight the Maoists, and later ran into controversy.



- Salwa Judum members were accused of human rights abuses, even as its members themselves became targets of Maoist attacks and were forced to move into secure “camps”. Within six years of its founding, the Salwa Judum was struck down by the Supreme Court in 2011, saying it was unconstitutional and violated fundamental rights to equality and protection of life.
- Karma emerged as a rare anti-Maoist tribal voice in Bastar around the end 1970s, with his supporters calling him the “Bastar Tiger”. He stood up against the Maoists first through the Jan Jagran Abhiyan of the 1990s and then the Danteshwari Samiti in the 2000s – both movements seeking to build public opinion against the Maoists.
- Calling the Danteshwari Samiti “a soft precursor to Salwa Judum” in some ways, journalist-turned-activist Shubranshu Choudhary said Karma’s role in the history of the anti-Maoist fight in Chhattisgarh can’t be ignored. The special anti-Naxal District Reserve Guard (DRG), which took the lead eventually in the final push against the Maoists, is “part of Karma’s controversial legacy”, he pointed out. “Its roots lie in the SPOs who emerged during the Salwa Judum period.”

Do You Know:

- Salwa Judum was mobilised in 2005 by the late Congress leader Mahendra Karma, who was assassinated by Naxals in 2013, and deployed in parts of Chhattisgarh. Those in favour of the idea claim that the Judum was a “spontaneous uprising” of tribal people against Maoist violence in Bastar, and helped in countering Naxals in the region.
- On 5 July 2011, the Supreme Court declared Salwa Judum illegal and unconstitutional in a historic ruling stemming from a PIL filed by sociologist Nandini Sundar and others.

IN WEST BENGAL, AN IPS OFFICER, AN INSHALLAH, AND THE NEED TO RISE ABOVE THE POLITICS OF GREETINGS

Officially, it was a “routine transfer” for “public interest”. The political context, though, tells a different story. Hours before her transfer, a group called the Hindu Legal Fund claimed it had lodged a complaint with the West Bengal Home Secretary against IPS officer Bushara Bano, until recently the Additional SP of Kharagpur. The officer’s alleged offence was the greetings she used while speaking on video about her alma mater, Aligarh Muslim University, and praising its Residential Coaching Academy for helping her clear the UPSC exams. “She began with assalamu alaikum, used Inshallah... and did not use Vande Mataram or Jai Hind. A serving officer representing the Indian state should maintain neutrality and use national expressions,” according to the Hindu Legal Fund. The government’s opacity regarding the transfer strengthens the impression that it gave in to the demand.

Nothing in the All-India Service Rules prevents an officer from using religious or cultural greetings, especially in a private capacity. The inclusive secularism envisaged in the Indian Constitution — which officials and governments are meant to uphold — allows space for religious and cultural expression. By seemingly punishing an officer for words meant for a particular context and audience, West Bengal’s BJP government is, deliberately or not, making the same mistake as its predecessors.

For the better part of five decades, state capacity in West Bengal has been eroded by a politics that saw “the party” and its affiliates — whether the CPI(M) or Trinamool Congress — all but exercise a veto over all aspects of governance. Much of the anger against the TMC government and its “syndicate” stemmed precisely from the fact that it was at once both overbearing where it did not



need to be and absent where it was needed; that the law and the rules were selectively applied. The Suvendu Adhikari government, rather than focussing on correcting this lopsided deficit, seems to be deepening it. In a state that needs conversations and policies around jobs, education and industry, the focus seems to be on diet, “gerua yatras” and how a young officer says hello and goodbye. It sends a message not of “minimum government, maximum governance” but of government high-handedness. The Suvendu Adhikari government needs to be responsible and responsive, not to social media trolls and fringe outfits, but to a more expansive and inclusive idea of “public interest”.

BIHAR MAKES CONSENT MANDATORY FOR CBI TO PROBE PUBLIC SERVANTS

The Bihar government has expanded the CBI’s standing consent to investigate a wider range of offences involving Central government employees, Central PSUs and private persons in the state. The notification, issued under Section 6 of the Delhi Special Police Establishment (DSPE) Act, 1946, covers offences under the Bharatiya Nyaya Sanhita (BNS), Bharatiya Nagarik Suraksha Sanhita (BNSS), Bharatiya Sakshya Adhiniyam (BSA), Information Technology Act, cybercrime provisions and the Prevention of Corruption Act.

Key Takeaways:

- The CBI derives its investigative powers from the Delhi Special Police Establishment Act, 1946. The DSPE was originally constituted to investigate certain offences in Delhi, and its jurisdiction was subsequently extended to other areas with the consent of the concerned state government.
- Under Section 6 of the DSPE Act, the CBI cannot ordinarily exercise its powers and jurisdiction in a state without the consent of that state government. This is linked to India’s federal structure, where police and public order are primarily State List subjects.
- States can withdraw general consent, after which the CBI generally needs specific consent to investigate cases falling within the state’s jurisdiction.
- The requirement of state consent does not prevent the Supreme Court or High Courts from ordering a CBI investigation. The courts can direct such an investigation without state consent in appropriate circumstances.
- The issue reflects a larger constitutional balancing act: while states have jurisdiction over policing, certain investigations may have implications beyond state boundaries or involve Central government personnel. The consent mechanism attempts to balance state autonomy with the need for independent investigation.

Do You Know:

- The CBI is not a statutory body created by a separate CBI Act. Its investigative powers are rooted in the DSPE Act, 1946.
- Section 3 of the DSPE Act empowers the Central Government to specify the offences or classes of offences that the DSPE can investigate.
- Section 5 deals with the extension of the powers and jurisdiction of DSPE to areas beyond Union Territories.



— Section 6 requires the consent of the concerned state government for the exercise of DSPE powers and jurisdiction in that state.

— State withdrawal of general consent does not mean that the CBI becomes completely barred from investigating every matter connected to that state. Court-directed investigations constitute an important exception.

WHAT IS THE UNIFORM CIVIL CODE DEBATE?

The story so far:

Union Home Minister Amit Shah has indicated that the Uniform Civil Code (UCC) would be implemented in all 21 NDA-ruled States by 2029. Uttarakhand has had a UCC in force since January 2025, while UCC bills passed by the legislatures of Assam, Gujarat and Madhya Pradesh are awaiting Presidential assent.

How are personal matters governed today?

Article 44 of the Constitution provides that the State shall endeavour to secure a UCC for citizens throughout India. A UCC would apply the same set of secular personal laws to all people, irrespective of religion, caste, or tribe. India already has uniform criminal laws and common civil laws covering matters such as taxation, contracts, and negotiable instruments.

However, in matters such as marriage, divorce, and inheritance of property, various religious communities in India follow personal laws that are based on their religious doctrines. Hindus are governed by laws such as the Hindu Marriage Act (1955) and the Hindu Succession Act (1956), while many tribals within the Hindu religion may follow customary family laws under constitutional exceptions. Jains, Buddhists and Sikhs are covered by Hindu laws. Sikh marriages can also be registered under the Anand Marriage Act (2012). Christians and Parsis have their own personal laws, while Muslims are governed by the Muslim Personal Law (Shariat) Application Act (1937).

What are the pros and cons?

The Constitution makers were divided over including a UCC in the Constitution. Some wanted it to be made a Fundamental Right to ensure uniformity in civil laws and secure equal rights for women. However, many members of the Muslim community were not in favour of including it in the Constitution as they felt that a uniform civil code would violate the fundamental right to religion that is guaranteed in Part III. Finally, the provision relating to UCC was placed in the non-justiciable Part IV – Directive Principles of State Policy.

There are several arguments over aspects of the UCC. The key arguments in its favour are, first, that it would make India secular in the true sense by subjecting all citizens to the same personal laws. The second and most vital argument is gender justice: a UCC would ensure equal rights for women across religions in matters governed by personal laws.

The key arguments against UCC are as follows. First, there can be potential conflict between the provisions of the UCC and guaranteed fundamental rights. Article 25 of the Constitution guarantees every person a fundamental right to practise a religion of one's choice. Article 29 provides a fundamental right to any section of citizens to conserve their distinct culture. The provisions of a UCC on personal matters may run contrary to scriptures and cultural doctrines in



a religion. Second, the four States that have enacted UCC have exempted tribal population from its ambit. The reasons for such exemption are constitutional safeguards to protect tribal culture as well as the belief that many tribal customs in these matters provide adequate rights to women. However, exempting one section of society while making it compulsory for all other groups, including religious minorities, is discriminatory.

What can be the way forward?

The most important reason to reform civil laws is to ensure equal rights for women in matters of marriage, divorce, maintenance, and inheritance. The right to religion under Article 25 is subject to constitutional morality and other fundamental rights, including equality. In Section 6A of the Citizenship Act, 1955 (2024) case, the Supreme Court held that practices such as casteism and gender discrimination, which run against the spirit of the Constitution, would not receive protection under Article 29. Thus, reforms in personal laws should not be viewed as violating Articles 25 and 29, as they uphold women's equality, an essential facet of constitutional morality.

However, there is resistance to the UCC among minorities, particularly Muslims. In the Constituent Assembly, Dr. B.R. Ambedkar advocated a UCC but suggested that it could remain voluntary. He said Parliament could provide for the UCC to apply to citizens who declare they are willing to be bound by it.

On the other hand, the Law Commission in its Consultation Paper on Reform of Family Law (2018) opined that a UCC was neither necessary nor desirable at this stage. It argued instead for reforming discriminatory provisions across personal laws. The emphasis should be on achieving 'equality within communities' between men and women rather than 'equality between communities.' The report recommends legislative reforms required in various personal laws with respect to marriage, divorce, custody, adoption, maintenance, succession and inheritance, that would ensure gender justice. The suggestions of the Law Commission should be considered while legislating and implementing reforms in personal laws.

NEET-SS QUALIFYING PERCENTILE WILL BE REDUCED TO 30: GOVT.

The Centre on Thursday agreed to reduce the qualifying percentile for National Eligibility-cum-Entrance Test-Super Speciality (NEET-SS) seats from the existing 50 percentile to 30 percentile, even as it agreed to return 40 vacant in-service seats pertaining to Tamil Nadu to the State.

"The matter has since been reconsidered in consultation with the concerned stakeholders. In order to ensure that the available super speciality seats do not remain vacant and that the available training capacity is optimally utilised, it has been decided that the qualifying percentile for NEET-SS may be reduced from the existing 50th percentile to 30th percentile for the purpose of the proposed Special Stray Vacancy Round," a Union government note filed before a Bench headed by Justice P.S. Narasimha said.

Consequently, candidates securing the 30th percentile and above in NEET-SS would become eligible to participate in the special stray vacancy round for NEET-SS seats.

Further, the Centre said its decision to revert the 40 vacant in-service seats to Tamil Nadu was taken in compliance with Supreme Court orders.



“The 40 vacant in-service seats pertaining to Tamil Nadu would be reverted to the State government for the limited purpose of enabling the State to conduct and complete its own stray vacancy round for a period of one week,” the Centre submitted.

The court also gave Tamil Nadu leeway to allow NEET-SS candidates upgradation during the one-week special stray vacancy round.

NAVODAYA CASE: SC TELLS T.N. TO CHANGE ‘ANTI-HINDI’ MINDSET

The Supreme Court on Thursday said Tamil Nadu has to change the “mindset” that Hindi cannot be taught on the soil of the State, cautioning that “individual States cannot act like individual countries”. The oral observations from Justice B.V. Nagarathna came in a hearing on the adoption of the Navodaya Vidyalaya Scheme in Tamil Nadu.

The top court gave the State three months to comply with a December 15, 2025, order to identify the requisite land for Navodaya schools in each district. It said the direction would be subject to final orders passed later on. In the interregnum, the State and Central representatives were asked to discuss the policy of establishing Navodaya schools in Tamil Nadu. “Chennai should not alienate Delhi, and vice versa, too,” Justice Nagarathna, heading a Bench including Justice A.G. Masih, addressed both governments.

The Tamil Nadu government has opposed the scheme as “fundamentally incompatible” with the State’s two-language policy. The previous Dravida Munnetra Kazhagam (DMK) government, in an affidavit filed in March this year, had said the Navodaya scheme, based on the three-language formula, deviated from the mandate of the Tamil Nadu Tamil Learning Act, 2006. The affidavit had alleged that the scheme was only a “backdoor” ploy to make Hindi compulsory.

On Thursday, the ruling Tamilaga Vettri Kazhagam (TVK) dispensation equally objected to the scheme, saying the choice of language is a fundamental right.

Senior advocate Jaideep Gupta and Tamil Nadu Additional Advocate-General Haripriya Padmanabhan, for the State, said the scheme cannot be forced upon the State against its own policies and laws.

Mr. Gupta said ‘education’ was a subject in the Concurrent List.

“Navodaya is an optional policy... If the Supreme Court now issues a mandamus to the State to adopt that optional policy of the Centre, then My Lords, what you are doing is upsetting 75 years of decision-making by this court,” Mr. Gupta submitted.

“Change of government changes nothing. Education is a constant. It does not depend on the whims of any government. Today it is Navodaya, but if the same precedent is taken up in other areas of governance, what will happen to our country? You cannot say ‘I will not allow the national industrial policy or the national financial policy’,” Justice Nagarathna said.

WHY INDIA’S SCHOOLS SHOULD TAKE NOTE OF NEW YORK’S AI BAN

New York City Mayor Zohran Mamdani and Schools Chancellor Kamar H. Samuels, on September 2, unveiled sweeping curbs on AI use and screen time in the city’s public schools. As part of the policy, student-facing AI tools are now barred, for a year, for students from kindergarten through



eighth grade. The new policy will impact over 600,000 students in one of the largest public school system in the U.S.

Rather than leaning into AI-assisted learning, the city is doubling down on teaching children how these systems work, alongside age-calibrated screen time limits.

As India has no equivalent policy on the use of AI systems in schools, it should pay close attention to what is about to happen in over thousands of public schools in New York City as learning from there could be a good starting point to formulate policies that nurture learning and curb unnecessary use of gadgets in schools.

Mr. Mamdani's measures come at time when educators around the world are worried about the unchecked rollout of AI technologies in schools even as teenagers are increasing spending more time scrolling social media posts outside school.

India's woes

India's version of that worry is backed by even starker numbers. ASER's 2024 survey found that 82.2% of all children in the age group 14-16 said they know how to operate a smartphone, but only a little over half use it for anything educational, while a clear majority use it mainly for social media.

In urban India, close to half of parents report their children are spending more than three hours a day on social media, video platforms, and gaming.

India is facing a structural problem as teen digital addiction is on the rise. This year's Economic Survey point out this ominous trend, describing it as carrying real economic and social costs.

New York's policy is not a simple on-off switch on gadgets and AI. It goes after AI chatbots outright, at every grade level, but it also reaches into AI features quietly embedded inside tools schools already use for reading, writing, and math.

For the youngest children, in pre-kindergarten through second grade, the city is effectively removing one-to-one devices from classrooms. Third to fifth graders face a recommended cap of 30 minutes of screen time a day; middle schoolers, 45 minutes. High schoolers get a narrower carve-out: a small, vetted set of AI tools in pilot programmes, paired with twice-yearly modules on how the technology works, what it gets wrong, and where its limits lie.

To get started on framing a policy in India, the baseline of one-to-one devices must be estimated. This is likely to be low in India when compared to the U.S., where most classrooms are well-resourced with the latest tech.

The device deficit in Indian schools is a blessing in disguise as it enables more qualified educators to teach students essential, foundational subjects like math and science that form the bedrock of modern computing and AI algorithms. Understanding how these systems are built will help students create new technologies rather than simply be passive consumers. As more teachers join the school system, the ratio of educators to students increases, enabling more qualitative classroom discussions.

Such a change can create better outcomes in schools. But it will only solve one part of the problem — devices in schools. The other aspect is the pervasive use of smartphones by children at home. Spending more time on those devices can cause significant problems in the long run.



The lesson from New York is that any credible response has to be age-tiered, aimed at embedded AI as much as visible chatbots, backed a real evaluation mechanism, and built with as much attention to what happens on how the child spends their time past school time. India currently has the worst numbers and the weakest safety net. It should not wait for a crisis in every area before it acts.

WORRY OVER SURVEY ON 'CHARGE' FOR FREE E-LEARNING MODULES

The National Programme on Technology Enhanced Learning (NPTEL), a Ministry of Education body, surveyed learners regarding a potential charge for its currently free e-learning materials. The agency clarified that the purpose of the exercise was solely to collect feedback from learners.

NPTEL said the survey did not indicate any imminent stoppage of funding. It said this after learners who had received the survey email raised questions on whether the Union government was halting funding in the coming year and if NPTEL was moving towards a self-sustaining model with a potential of hike in fees for conducting its certification exams as well as charging for accessing its free content.

NPTEL is a consortium of seven Indian Institutes of Technology (IITs) — Bombay, Delhi, Kanpur, Kharagpur, Madras, Guwahati and Roorkee — along with the Indian Institute of Science (IISc). It offers over 70,000 hours of online lecture videos with close to 600 courses every semester across 22 disciplines from engineering to humanities, through SWAYAM platform for certification and credit transfer to lakhs of students every year.

'Self-sustaining model'

In an email sent to its learners, the agency said, "If the government funding is withdrawn and NPTEL is unable to secure funding through other sources, NPTEL may need to transition to a self-sustaining model from 2027."

In the survey, NPTEL posed two options. Firstly, it has stated that if the government funding is withdrawn, then NPTEL should continue to offer courses by charging nominal additional fee to the learners. Secondly, it has proposed that NPTEL should stop offering courses altogether.

Social media users questioned the NPTEL's motive behind instituting the survey, voicing worries about the impact on rural and low-income students.

WHY PUBLIC INTELLECTUALS MATTER IN PRESENT-DAY INDIA

The term 'public intellectual' has an interesting origin. As Romila Thapar informs us, it was used in connection with Alfred Dreyfus, a Jewish captain in the French army who was believed to have leaked secrets to the German army. Later, it was found that he had not done anything of the kind and was declared innocent. When he was facing charges of having leaked secrets, many artists, teachers, poets and writers came together in support of him. These people came to be called public intellectuals.

A public intellectual is essentially a person who engages with the issues of the day and takes a position in support of what she believes to be true and right. She needs to raise questions about social, political and economic issues of the day using reasoned arguments so that societies would become better places to live in. A public intellectual is somebody who seeks to constantly reaffirm the foundational principles of social justice, human dignity and fraternity.



Challenging authoritarian tendencies

The role of a public intellectual perhaps has never been more critical and important than it is in the present times in India. The growing assertion of authoritarian tendencies, leading to systematic and gradual weakening of public institutions, destruction of democratic practices, silencing and, in fact criminalisation of dissent, disenfranchisement of lakhs of voters on the ground of 'logical discrepancy' and bulldozing of houses (especially those belonging to Muslims), as well as lynching of people on the grounds of storing beef in fridges and committing 'love jihad', are things that everybody is becoming painfully conscious of. If public intellectuals do not speak and raise their voice now, when they would do so is difficult to guess. It is their moral and ethical responsibility to speak up and stand with what is right. Silence is not a virtue in the present times. On the contrary, it can be dangerous. Perhaps, it would be relevant to mention here what Antonio Gramsci, the celebrated Italian intellectual, wrote, 'I hate the indifferent, also because I am annoyed by their whining as eternal innocents. I ask each of them how he carries out the role that life ordained him and daily imposes on him, what he has and especially has not done. And I feel like I can be relentless and not have to waste my pity, nor share my tears with them... I live, I am a partisan. Therefore, I hate whoever does not take sides. I hate the indifferent'. What he tried to argue was that public intellectuals should reflect and articulate their position on burning issues of the day. If they do not do so, who would do it? It is not that India has not produced great intellectuals. Starting from Buddha in the ancient India upto B.R. Ambedkar in modern times, India has had a glorious tradition of producing outstanding and powerful public intellectuals who questioned the dominant and hegemonic paradigms during their times.

Silence in academia and science

But what one finds in the present times is generalised silence from those who have the intellectual and critical faculty to be effective public intellectuals. One could refer to university teachers, poets, writers, artists and others in this regard.

A word or two about university teachers, in particular, would be in order. It is true that one need not be a university teacher to be a public intellectual, but a university teacher who is supposed to have developed critical imagination and the necessary conceptual equipment is eminently suited to be an effective public intellectual. A university teacher is expected to critically debate and articulate positions on issues of the day, however unpalatable they may be to the powers that be. But what one finds is the mysterious silence of these people on issues that are posing a severe threat to our constitutional and democratic framework. Silence is almost normalised among the university academia. If they do not write and speak on the issues concerning especially the marginalised and the weak in the society, who would do?

One may also refer to eminent scientists who could make important contributions to the debates in the society in an impartial and objective manner. Unfortunately, it is observed that they confine themselves to their narrow, specialised fields, making them disembodied and decontextualised individuals. There is a certain reluctance on their part to relate themselves to the surrounding social concerns.

One could take a couple of examples to show what kind of contribution public intellectuals can make, if they wish to, to enrich contemporary debates. Take the example of nationalism. The way it is being constructed in the present times, there is no serious questioning of it (with very few honourable exceptions). There is no critical interrogation of the way in which Hinduism is being weaponised in terms of Hindutva. Also, attempts to convert our inclusive, democratic and civic



nationalism (based on constitutional principles of equality, liberty, justice and fraternity), into exclusive, authoritarian and ethnic (Hindurashtra) nationalism are something that need to be on the top of public intellectuals' agenda. Sadly, this is not so. They also need to convince people that the European model of destructive, jingoistic and exclusive nationalism is not the right way to strengthen Indian nationalism, which has had a glorious history of fighting British colonialism on democratic, secular and egalitarian foundations.

Questioning fake history

Another example could be that the line between myth and history is constantly blurred, but professional historians (again with very few exceptions) have preferred to remain quiet. Academic historians are clearly not doing their job of questioning fake history (WhatsApp history) effectively. Or, for that matter, take the case of growing communalisation of public consciousness, which is essentially a tool used to divert people's attention from issues such as unemployment, youth unrest, the unsatisfactory state of public education, price rise, agrarian crisis, etc.

There was a time when eminent scholars were invited to debates on TV channels, where they could enlighten us about many important facets of our history, culture and society. One no longer finds such debates these days. This is because either such scholars are no longer invited to debates of that kind, or they have declined to be part of debates that are now known more for their noise than for meaningful and substantive content. Anyway, one cannot really expect much from the electronic media these days, as they have allowed themselves to be commodified to an unprecedented degree.

What is thoroughly discouraged in the present times is the questioning mind. When questions are raised about the state of our polity, education, economy and society in general, they are sought to be delegitimised as anti-national and seditious, and even threats of jail are flaunted indiscriminately. Criminalisation of dissent has become normalised. But still if public intellectuals do not speak and make their presence felt now, then it will indeed be a very sad state of affairs in the country. It is true that even their most effective interventions may not result in removing oppressive structures but at least in the long run, they help in enhancing critical consciousness among the people about them.

It is in this context that one needs to appreciate the remarkable resilience shown by young protesters in the recent agitation at Jantar Mantar, in taking their fight to what they believe is its logical conclusion — the resignation of the Education Minister. One lesson that can be drawn from the largely peaceful agitation led by the Cockroach Janta Party (CJP) is that, contrary to popular perception, the youth of the country are not a depoliticised and indifferent lot.

The large participation of young people, many of whom may have had nothing to with the NEET examination, in the protest is symbolic of their political empathy. They desired to show their solidarity, which they did. They raised a critical question of accountability, which is a basic normative feature of any democratic governance, over repeated lapses in conducting national-level examinations, and pursued it with all the might at their command.

We always underestimated the political consciousness of the country's youth, and we need to apologise to them for this. Every act of resistance is a political act. Perhaps they have begun to play the role of a public intellectual.



INDIA HAS A RESEARCH BLINDSPOT: ITS OWN SCIENCE SYSTEM

The U.S. Office of Science and Technology Policy (OSTP) recently released a 125-page policy document titled 'Science: A New Golden Age', which presents a renewed vision for American science. It positions itself as a sequel to the American inventor Vannevar Bush's 1945 report, 'Science: The Endless Frontier', which laid the foundations of the famously successful post-war American research system.

As it happens, the new report can be consequential for the Indian science system as well — by revealing the importance of something that India currently does not have but should as quickly as possible: the ability to study its own science system with evidence.

Why a system works

The report starts with a diagnosis well known to the science-of-science, or metascience, research community: despite sustained increases in research and development investment, returns in scientific productivity and innovation have not kept pace. But more than agreement or disagreement with this diagnosis, what matters is that a system should be able to interrogate itself using its own data and be able to reach a conclusion like this.

After its diagnosis, the report draws two conclusions worth exploring. First, it says the U.S. should invest more in individual researchers with bold, high-risk ideas rather than routing funds primarily through what it calls "legacy institutions". Second, it calls into question the prevailing one-size-fits-all model of research funding, instead advocating for experimenting with alternative funding mechanisms. It also calls for funding agencies to evaluate whether their own mechanisms can be made more effective.

The institutions that fund science should be accountable for the evidence that what they fund and why are actually working — and not just in the U.S. Across Europe, the U.K., China, and Japan, governments and funders are investing seriously in metascience that is able to address this concern. Governments and the people need concrete answers to how their research systems actually function: specifically, how it sets funding priorities, how funding mechanisms perform, how peer-review behaves, how it assesses researchers, how its incentives affect the way scientists collaborate, and so on.

Building a memory

In India, this conversation has barely begun. The country's science system has historically been shaped by the experience, judgment, and leadership of eminent scientists. That experience is invaluable and must remain a source of evidence — but it is also no longer sufficient considering today's research ecosystem is far more complex than it was half a century ago, and understanding it requires systematic analysis. Specifically, it needs to draw on economics, the sociology of science, political science, public policy, organisational studies, scientometrics, and history and philosophy.

An exploration of bibliographic databases shows that, between 1950 and 2024, Indian publications addressing metascience or closely related questions across these domains remained low. Except for scientometrics, Indian research in these areas accounted for only around 1-2% of global research output, with the total number of publications generally not exceeding a hundred over the entire period.



A related problem is institutional memory. As leadership and personnel change, experiential knowledge about what worked, what failed, and why is lost. India has very few publicly available analytical reports documenting the evolution of its research system, and little that carries institutional learning across successive generations of policymakers. Building that memory is itself part of building better science governance, and it is where metascience can have a significant impact.

For these reasons, India needs to invest in scientific research as well as in the capacity to study the ecosystem in which this research happens.

Reason of state

The OSTP report also called for setting clearer national scientific goals to streamline research efforts and speed up the translation of discoveries into technologies, including those for society's benefit. This, too, is worth taking seriously but also debating carefully because it understates how much of transformative science begins without any defined mission at all, i.e. as curiosity-driven research. And this, again, is precisely the kind of question a meaningful metascience capacity would allow India to debate with evidence rather than insights alone.

Quantum mechanics emerged in the early 20th century to answer fundamental questions about the nature of matter. It later became the foundation of semiconductors, lasers, and modern computing. Decades of curiosity-driven research in molecular biology, with no application in sight, eventually made CRISPR gene-editing and mRNA vaccines possible. The mathematics underlying today's artificial intelligence — including neural networks and transformer architectures — emerged from exploratory research in statistical mechanics.

The economist Mariana Mazzucato has documented this pattern in her work on what she calls "the entrepreneurial state". She has shown that many of the technologies in a single iPhone, including the internet, GPS, touchscreen, and the voice-recognition algorithms behind Siri, have their roots in blue-sky research funded by U.S. federal agencies such as DARPA and the National Institutes of Health. All these were undertaken decades before any company saw commercial application potential in them. In her account, the state was a bold and patient investor that was absorbing risks no private venture would touch. This is the kind of long-horizon, curiosity-driven investment that a purely 'mission and metrics' approach to funding — like what increasingly prevails in India today — risks crowding out. But at the same time, mission-oriented research has its own record of delivery. The Apollo programme forced rapid advances in aerospace engineering, materials science, and computing that spread far beyond the space race. The Human Genome Project turned biology into a coordinated, global, infrastructure-scale enterprise. India itself had the Green Revolution, where crop-breeding research backed by state investment and clear food-security goals transformed the country's relationship with hunger within a single generation. The Revolution has its own legitimate critics as well, regarding ecological costs, regional inequity, and long-term sustainability. But that very disagreement also makes the case for India to be able to evaluate a mission using evidence.

Striking the balance

A healthy research ecosystem may well need both approaches to research, with research on a mission being used to meet pressing challenges and curiosity-driven, blue-sky research to open new frontiers. It is just that any decision on where to strike that balance should rest on deliberation and evidence, rather than on which topics happen to be fashionable in global policy discourse at a given moment.



To facilitate that, India needs to invest in metascience, in institutions, expertise, and people whose job is to study how Indian science actually works. It means documenting what has worked and what has not, instead of forgetting it with every change in leadership, and building institutions strong enough to imagine an ambitious future for Indian science.

META TO SHARE CHILD SAFETY REPORTS WITH GOVT. DIRECTLY

Meta Platforms Inc., the parent firm of Instagram and Facebook, will share child sexual abuse material (CSAM) reports with Indian law enforcement in addition to the U.S.-based National Center for Missing & Exploited Children (NCMEC), the company said on Tuesday.

Meta has been under the scanner over reports describing CSAM being served in ads on Instagram and Facebook.

Indian agencies have for years already had access to CSAM reports from Meta and other U.S.-based technology companies, following an MoU in 2019 between the National Crime Records Bureau (NCRB) and NCMEC.

Now, the information will be shared directly by Meta with Indian agencies. "As on 31.03.2024, more than 69.05 lakh Cyber Tip-line reports have been shared with States/U.T.s concerned," Union Minister of Women and Child Development Annpurna Devi had told the Rajya Sabha in 2024.

"Protecting children on our platforms is a priority for us and we are committed to working with the government to ensure that the perpetrators of these crimes are held responsible," a Meta spokesperson said in a statement.

"To collectively strengthen our efforts to combat this harm, Meta will now report child safety matters directly to the Cyber crime portal managed by I4C," the spokesperson added, referring to the Indian Cybercrime Coordination Centre, under the Union Home Ministry.

Meta has been scrutinised in recent weeks by the Union government and the National Commission For Protection of Child Rights (NCPCR) over news reports describing CSAM being served in ads on Instagram and Facebook. The firm had then said that while it screened all ads being posted by third parties on its platform, some bad actors were able to get such content posted anyway.

The NCPCR has initiated an investigation based on an initial exchange of correspondence with Meta.

WHY IS NCPCR INVESTIGATING META, INSTAGRAM?

The story so far:

Following an investigation by British public broadcaster BBC, which found that Instagram was running paid advertisements promoting child sexual exploitation and abuse material (CSEAM) in India, the National Commission for Protection of Child Rights (NCPCR) summoned Meta officials for a hearing on September 9. The Ministry of Electronics and Information Technology (MeitY) has also summoned the company on the issue.



What did the BBC investigation show?

In July, BBC created a test account and found that dozens of ads were promoting CSEAM on Instagram. The distribution of CSEAM is a criminal offence in India.

Meta's policy also states that ads must not contain content that sexually exploits children. Meta said in a statement, "Before these cases were brought to our attention, our enforcement systems had already identified and disabled several of the violating ads and the accounts behind them." The company said that it automatically removes millions of CSEAM posting accounts each year, but that "no system is perfect and that determined criminals will continue to try to exploit our platform".

This month, the Tech Transparency Project (TTP), a U.S.-based nonprofit, also reported that it found hundreds of CSEAM ads on Facebook and Instagram, including some served to India.

Why are CSEAM ads appearing on Instagram?

While social media platforms prohibit CSEAM, automatic moderation systems that use some AI to detect unlawful media are not able to catch every violative submission. TTP said that Meta's efforts were not enough even within the scope of what it could do. The nonprofit said that, even in cases where Meta did take down CSEAM, it sometimes classified the ads as adult sexual content, potentially "undercounting instances of child sexual abuse".

While Meta revised this information for ads reported by TTP, it "did not fix the flow of child exploitation content in its advertising system" and continued to show CSEAM ads to certain audiences, the nonprofit said. One of the ads appeared to feature an unidentified "underaged European royal," TTP said.

Even when a human reported CSEAM posts, action was not guaranteed, TTP found. "With 57% (73) of the CSEAM ads reported to Meta, the company sent back a message that said, "We've taken a look and found that this ad doesn't go against our Advertising Standards," TTP said.

What was the NCPCR's reaction to the report?

NCPCR issued a notice on July 3, the same day the BBC report came out, demanding an explanation from the company. MeitY also sought an explanation from Meta.

Shortly after Prime Minister Narendra Modi's July 23 video message to the Indian youth was briefly removed from Facebook due to an "error," MeitY summoned Meta's global public affairs director, Joel Kaplan, to demand an explanation for that removal. The BBC's report was also discussed during that meeting. The government's summons came as it sent a large number of takedown notices over Instagram posts about the Jantar Mantar protests, while footage of the protests and the ensuing police crackdown went viral.

Meta provided written responses to both MeitY and NCPCR. The latter declined a Right to Information request by The Hindu for a copy of the company's response, arguing that providing this information would impede its investigation.

After the written response, Meta officials were summoned by NCPCR this month. Neither side provided a description of the meeting.



What powers does NCPCR have to conduct an inquiry like this?

Like the National Human Rights Commission (NHRC), the NCPCR's founding law, the Commissions for Protection of Child Rights Act, 2005, gives the body the powers of a civil court under the Criminal Procedure Code (replaced by the Bharatiya Nagarik Suraksha Sanhita, 2023). As such, it has the statutory power to demand explanations on issues of child safety from private organisations and can demand reports from law enforcement. NCPCR's remit includes "matters relating to children in need of special care and protection, including children in distress, marginalised and disadvantaged children, children in conflict with law, juveniles, children without family, and children of prisoners, and recommend appropriate remedial measures," and to "[i]nquire into complaints [relating to] non-implementation of laws providing for protection and development of children," the commission said.

NCPCR has in the past issued notices to companies such as Netflix in response to the show Bombay Begums, and to Bournvita maker Mondelez over sugar content in their malt powder.

DRUG REGULATOR TELLS STATES TO WATCHOUT FOR 'COUNTERFEIT' BATCH OF ANTI-RABIES VACCINE

India's apex drug regulator, the Central Drugs Standard Control Organisation (CDSCO), has alerted states about a counterfeit batch of Abhayrab, a widely used anti-rabies vaccine. The suspicious batch was identified through samples collected in Delhi in 2026. The regulator found several discrepancies in packaging, including spelling errors, font differences and an altered company logo. The manufacturer, Indian Immunologicals, confirmed that the vaccine was not produced by it.

The development has raised concerns over drug safety, counterfeit medicines, regulatory surveillance and public health, particularly because rabies is almost invariably fatal once clinical symptoms appear.

- The regulator confirmed that the batch had not been exported from India.
- Rabies is almost 100 per cent fatal once clinical symptoms develop, making timely and effective post-exposure vaccination critical.
- The same vaccine had come under scrutiny from drug regulators in the UK, US and Australia in 2025 over concerns about counterfeit batches.

Do You Know:

- Rabies is a viral zoonotic disease that affects the central nervous system and is transmitted mainly through the saliva of infected animals, commonly through bites.
- Once clinical symptoms appear, rabies is almost invariably fatal, but the disease is preventable through timely post-exposure prophylaxis.
- CDSCO is India's national regulatory authority for drugs, cosmetics and medical devices and functions under the Ministry of Health and Family Welfare.
- The Drugs and Cosmetics Act, 1940 and the Drugs and Cosmetics Rules, 1945 form the principal legal framework for regulation of drugs and cosmetics in India.



— Counterfeit/spurious drugs pose a distinct public health challenge because patients may receive products that do not contain the claimed medicine or vaccine, or may have been falsely represented as genuine.

BIHAR FLOODED DESPITE RAINFALL DEFICIT; NEPAL ISN'T THE REASON

For much of the monsoon, Bihar was facing a problem associated with droughts rather than floods. Between June 1 and September 8, the state received 601.1 mm of rain, 27% below normal. As late as September 1, the deficit was 30%. Then the rivers rose sharply.

Key Takeaways:

- The Ganga crossed its previous highest flood level (HFL) at Patna and Bhagalpur. At capital's Gandhi Ghat, it reached 50.58 metres, six centimetres above the previous HFL of 50.52 metres recorded in 2016. At Sultanganj in Bhagalpur, the river touched 36.80 metres, five centimetres above its previous HFL of 36.75 metres set in 2021.
- By September 9, the Disaster Management Department reported 84 affected circles, 518 panchayats and 2,157 villages across 14 districts, with about 40.51 lakh people affected.
- Deputy Chief Minister and Water Resources Minister Vijay Kumar Choudhary said on September 7 that this year's flood pattern was different from previous years.
- "Normally, the rivers entering Bihar from Nepal — the Bagmati, Kamla, Kosi and Gandak — rise first, followed by the Ganga. This time, the Ganga became the main source of concern first," he said.
- As Ganga's catchment extends far beyond Bihar, it receives water generated by rainfall upstream, including from Uttar Pradesh. Bihar Disaster Management Department Principal Secretary Santosh Kumar Mall told The Indian Express that "rainfall around the Allahabad and Varanasi region, and the resulting downstream discharge, were important factors behind the Ganga's rise. For other rivers too, discharge from neighbouring states was a major factor."
- Meanwhile, Bihar recorded heavy, localised rainfall during the period when the flood situation worsened, including 214.92 mm in East Champaran and 154.55 mm in Sitamarhi in individual rain events.
- Bihar's geography adds another layer. The Ganga, Gandak and Kosi constantly reshape their channels and create diara lands — shifting riverine islands and low-lying tracts that are cultivated and inhabited but remain highly vulnerable to rising water. Bihar's high population density means many communities live close to rivers. Thousands also live on these dynamic lands. When river levels rise, people may have to be evacuated even if the main embankment remains intact.

Do You Know:

- Experts note that parts of the state are experiencing these severe floods despite overall poor regional monsoon rains. The crisis is heavily compounded by long-term environmental factors: —Silt Accumulation: Decades of heavy sediment accumulation along the Farakka Barrage has made the Ganga's riverbed drastically shallower. Consequently, even standard monsoon discharge causes rivers to spill rapidly over their banks.—Changing Topography: Dynamic, shifting riverine islands (diara lands) constantly reshape the water channels, leaving high-density populations living along the plains highly vulnerable to structural flooding.



ORANGUTANS IN ODISHA: THE LAWS GOVERNING ANIMAL TRADE AND REPATRIATION

Last week, the Odisha Forest department rescued five baby orangutans, a critically endangered animal, from a forest in Balasore district.

- After the rescue, all eyes are also now on their safe return, with the sight of their condition raising public attention on their welfare. The incident also brings to the fore a trend that has been repeatedly flagged by anti-wildlife trade experts and advocates: That India is no more just a transit route, but is fuelling demand for exotic pets.
- There are three species of orangutans — Bornean, Sumatran and Tapanuli. All of them are found only in the islands of Borneo and Sumatra (in Malaysia and Indonesia), and are listed under Appendix-I of CITES. This means their trade is strictly restricted to non-commercial purposes, such as research, transfers between recognised zoos and breeding projects.
- The orangutans found in Odisha are suspected to be from Sumatra. Since they appear to have been traded for commercial purposes, in alleged violation of CITES, the treaty's provisions and the 1972 Act mandate certain steps for their welfare and return. Indeed, Indonesia's Ministry of Forestry has reached out to Indian authorities. It is learnt to be "preparing the technical requirements" for their repatriation if investigations confirm they are from Indonesia.
- Under CITES, it is recommended that the management authority implementing its provisions — in this case, the Environment Ministry — consult with the scientific authorities and, if possible, the state of export or origin of the species before taking a call on repatriation. If repatriation is feasible, it has to be carried out at the expense of the state of origin. If it is not feasible, it has to be sent to a rescue centre or "such other place" as the management authority deems appropriate. The treaty does not make it obligatory to return animals to the wild.

Do You Know:

- The international trade of wildlife, their body parts and trophies is not prohibited. But is strictly regulated and governed through the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The international treaty entered force in 1975, and India became a party to it in 1976. The treaty's aim is to ensure that cross-border trade in wildlife and plants is legal, sustainable and traceable without harming their survival in the wild.
- It is essentially a licensing system that puts in checks and controls on the import, export and re-export of live animals and plants, wildlife body parts, and trophies. The controls are implemented via an exhaustive "CITES species-list", which is divided into three appendices. These appendices determine the level of protection accorded to those species.
- CITES protects around 6,700 species of animals, comprising 339 mammals, 159 birds, 113 reptiles, 24 amphibians, 26 fish, and 69 invertebrates. Appendix-I listed species are those facing the threat of extinction. Trade in specimens of these species is generally prohibited, permitted only in exceptional circumstances and mostly never for commercial reasons; trade in Appendix-II species is also controlled strictly.
- Appendix-I species can be traded with valid permits — provided they are captive-bred and are for conservation purposes. Protection for species or fresh entries are made routinely during intergovernmental meetings — Conference of Parties — based on their conservation status and



proposals from parties. Some notable and controversially allowed trade related to charismatic species includes elephant ivory, rhino horn, elephant and lion trophy hunting, and crocodile skin.

- India's Wild Life (Protection) Act, 1972, was amended in 2022 to harmonise it with CITES. The amendment added a Schedule to include CITES-listed species.

HOW IRRIGATION MADE RICE FOUNDATION OF INDIAN CIVILISATION

Rice did not become India's dominant grain overnight. Its rise took thousands of years of migration, farming innovation, and above all, irrigation. The history of rice is the history of how people learned to control water.

As farmers built ponds, tanks, canals, and dams, they turned forest into fields, fed growing populations, and laid the foundations of some of India's greatest kingdoms. Irrigation shaped not just agriculture but civilization itself.

How Indian rice took shape

The earliest evidence of rice cultivation in South Asia comes from Lahuradewa in present-day Uttar Pradesh, dating to roughly 6500 to 5000 BCE. Farmers grew it in marshes, riverbanks, and seasonal floodplains, relying on rainfall and natural flooding rather than any built irrigation. Rice was one crop among many, not yet the staple.

During the Harappan Civilization, between 2600 and 1900 BCE, agriculture ran on wheat, barley, pulses, sesame, and millets. Rice appeared at a few Harappan sites in Gujarat and the east, but stayed marginal. The Harappans built wells, reservoirs, and sophisticated drainage, but their economy was never built on wet rice farming.

The real shift came in the second millennium BCE, when eastern India became a meeting point of farming traditions. Linguistic and genetic evidence points to Austroasiatic-speaking communities, ancestors of the Santals, Mundas, Hos, and Khasis, migrating from Southeast Asia, bringing improved rice and water-management knowledge with them.

Genetic research confirms Indian rice took shape through the mixing of local varieties with rice and techniques spreading in from Southeast Asia and southern China. Rice farming in India grew through both local invention and outside exchange.

Iron technology and rice cultivation

Iron technology, spreading after 1200 BCE, marked the next turning point. Iron axes cleared the dense forests of the middle and lower Ganga valley. Iron ploughs opened up its heavy, fertile soils. As farming pushed into Bihar, Bengal, and eastern Uttar Pradesh, rice took hold in these wetter lands.

The texts track the shift. The Rig Veda, product of the drier northwest, mentions barley far more than rice. The later Satapatha Brahmana, composed in the eastern Ganga region, mentions rice constantly. By the age of the Mahajanapadas, 600 to 300 BCE, rice was one of the major crops of the east.

Growing it well took more than rainfall. It took stored, controlled water through the whole growing season, which meant embankments, ponds, canals, and reservoirs. The Arthashastra



describes state officials supervising irrigation, dams, and water taxes, proof that organised water management was already a core function of the Mauryan state.

The Sudarshana Lake in Gujarat, built under the Mauryas and repaired for centuries after, stored and distributed water to farmland nearby, a working demonstration of irrigation's long life.

The expansion of irrigation in South India

South India built something different, but no less impressive. Without year-round rivers, the peninsula depended on monsoon rain. Communities responded with thousands of interconnected tanks, moving water across whole landscapes rather than betting on one large project. From the early centuries CE, irrigation expanded fast through the Krishna, Godavari, and Kaveri basins.

The Kallanai, or Grand Anicut, built across the Kaveri and traditionally credited to the Chola king Karikala, diverted river water into channels. It continues to function today and stands as one of the oldest working water-control structures on earth.

Between the seventh and thirteenth centuries, irrigation drove the growth of the Pallavas, Cholas, Pandyas, Chalukyas, Rashtrakutas, and Hoysalas. Inscriptions record the construction and repair of tanks, canals, embankments, sluices, and wells, funded not only by kings but by village assemblies, temples, merchant guilds, and local communities. Irrigation was a shared civic project, not a royal monument.

The results showed up in the harvests. More forest cleared, more land farmed, larger yields. Magadha, Bengal, and the Kaveri delta produced surpluses on a scale unseen before, and surpluses meant cheaper grain and steadier food supplies. The Chinese pilgrim Faxian, travelling through Gupta India around 400 CE, described a land of plenty where daily trade often ran on cowrie shells and rice was cheap and abundant, a condition only centuries of irrigation could produce.

The rise of India's rice heartlands

The Chola Empire, roughly 900 to 1300 CE, marks the high point of Indian rice cultivation. The Kaveri delta became one of the richest farming regions in Asia, feeding great cities, temples, markets, and overseas trade, with inscriptions carefully separating wet land for rice from dry land for millets and pulses.

Bengal rose alongside it, its rainfall and floodplains turned into paddy across the early medieval centuries. By 1500 CE, India held one of the largest rice-growing zones on the planet, running from Assam and Bengal across the Ganga plain down to the deltas of the south.

No single ruler or invention built this. It took centuries of migration, technology, forest clearance, and sustained investment in water. By learning to control it, Indian communities remade their land and their society together. Irrigation did not just grow rice. It built kingdoms.

I&B MINISTRY NOTIFIES NEW FILM CERTIFICATION GUIDELINES FOR CBFC

The Ministry of Information and Broadcasting (I&B) has notified new film certification guidelines for the Central Board of Film Certification (CBFC) earlier this week.

**Key Takeaways:**

- These revised guidelines retain all the aspects of its detailed 1991 version, save for the addition of two new points.
- One calls for a disclaimer or statutory warning in scenes depicting or involving the use, consumption or trafficking of narcotic drugs or other psychotropic substances. These scenes must now carry the warning 'Illicit Narcotics Destroy Health and Guarantees Imprisonment, Say No to Drugs.'
- The other point pertains to the specification of new-age markers in line with the three new categories under the UA (Unrestricted Public Exhibition With Parental Guidance) certification, as notified in the Cinematograph Rules, 2024
- The latest guidelines state that if the Board thinks that it is necessary to caution the parents or the child's guardian to consider as to whether their wards may be allowed to see such a film, the same shall be certified for unrestricted public exhibition with an endorsement to that effect.
- The three categories are UA 7+, UA 13+, and UA 16+ — to mark content suitable for children in the age group of seven, 13 and 16, respectively.

Do You Know:

- Central Board of Film Certification (CBFC) comprises up to 25 members and 60 advisory panel members from across India, all of whom are appointed by the Information & Broadcasting Ministry.
- Generally, the board members are film and TV professionals whereas the advisory panel is composed of members who are often from outside the industry.
- The tenure of service of the chairperson and board members ranges to three years and that of the advisory panel members is up to two years from the date of appointment.
- The CEO is chiefly in charge of administrative functions, and regional officers are part of the examining committees that certify films.

HINDI DIWAS: HOW THE CONSTITUENT ASSEMBLY RESOLVED INDIA'S LANGUAGE QUESTION

In one of the earliest sessions of the Constituent Assembly, RV Dhulekar, a Congressman from the United Provinces, made an aggressive plea for Hindustani to be used in constitution-making. When told that not everyone in the Assembly knew the language, he retorted: "People who are present in this House to fashion a constitution for India and do not know Hindustani are not worthy to be members of this Assembly. They better leave."

Key Takeaways:

- Political scientist Hanna Lerner writes in The Oxford Handbook of The Indian Constitution, "The two main factions in the assembly debate over the national language were the representatives of the Hindi-speaking areas, mostly from north-central India, and the representatives of non-Hindi-speaking regions, particularly from the south, as well as the moderate leaders of the Congress Party."



- The Hindi-speaking representatives demanded that Hindi be declared the national language and replace English immediately. Lerner writes, "They claimed that a multilingual society was incompatible with Indian unity. Seth Govind Das, a Congress representative of the Central Provinces and Berar, stated, 'We want one language and one script for the whole country. We do not want it to be said that there are two cultures here.'"
- Representatives from non-Hindi-speaking regions rejected the idea that national unity required linguistic uniformity. Shri Shankarrao Deo of Bombay, the Congress General Secretary, stressed "Not uniformity but unity in diversity."
- The Assembly ultimately approved the Munshi-Ayyangar formula in 1950, later incorporated into Articles 343–351 in Part XVII of the Indian Constitution. It was named after KM Munshi and N Gopalaswamy Ayyangar, who were part of the seven-member Drafting Committee of the Constitution, with BR Ambedkar as its chairman. "Ultimately," notes Lerner, "it was the pragmatic consensus-seeking approach that triumphed."
- The arrangement envisaged a 15-year transition, during which Hindi could increasingly be used by the Centre. Lerner adds, "In addition, the Constitution recognised fourteen other languages for official use (listed in the Eighth Schedule of the Constitution). The provincial governments were permitted to choose one of the regional languages or English for the conduct of their internal affairs, while English (unless Parliament would replace it with Hindi) remained the language of inter-provincial communication."
- But when that period ended in 1965, Hindi was still not widely used by the Union government. Following a series of violent riots in non-Hindi-speaking states in the 1960s, Parliament renounced the ideal of an Indian national language. The Official Languages Act of 1963 later stated that English would continue to be upheld as an official language along with Hindi.

Do You Know:

- The 2011 linguistic census accounts for 121 mother tongues, including 22 languages listed in the 8th Schedule of the Constitution. Hindi is the most widely spoken, with 52.8 crore individuals, or 43.6% of the population, declaring it as their mother tongue. The next highest is Bengali, mother tongue for 9.7 crores (8%) — less than one-fifth of Hindi's count.
- In terms of the number of people who know Hindi, the count crosses more than half the country. Nearly 13.9 crore (over 11%) reported Hindi as their second language, which makes it either the mother tongue or second language for nearly 55% of the population. Hindi has been India's predominant mother tongue over the decades, its share in the population rising in every succeeding census.
- In 1971, 37% Indians had reported Hindi as their mother tongue, a share that has grown over the next four censuses to 38.7%, 39.2%, 41% and 43.6% at last count. Between 1971 and 2011, the number of individuals who declared their mother tongue as Hindi multiplied 2.6 times, from 20.2 crore to 52.8 crore. The numbers more than doubled for Punjabi, Maithili, Bengali, Gujarati, and Kannada, and almost doubled for Marathi.
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language, which makes it either the mother tongue or second language for nearly 55% of the population.

A RISING GRAPH

Doping is now a deep-rooted culture in Indian sports

At least 13 doping positives in the run-up to the recent Commonwealth Games and the upcoming Asian Games have again put India in an embarrassing spotlight. For a country that has been notoriously leading the global doping charts for three consecutive years, the spate of positive results across disciplines including athletics, weightlifting, wrestling, wushu and judo, has not only brought shame but has also robbed India of some berths in these prestigious events. The dope-tainted names have forced authorities to pull them out of the Aichi-Nagoya Asian Games squad. More such names are expected to trickle out in the coming weeks. Lucrative cash incentives for Asian Games medallists are a major factor driving athletes and coaches to take shortcuts, risking their health and reputation, as well as the country's pride. While the spike in dope-positive results ahead of major multi-sport events is not new, the jump this time is a cause for concern. The matter getting raised during the World Anti-Doping Agency (WADA) workshops in Delhi, the Athletics Integrity Unit (AIU) downgrading India due to an extremely high risk of doping, and an international agency recently conducting surprise tests in Bhubaneswar and Bengaluru indicate the seriousness of the issue.

Even though National Sports Federations have been expressing concern, it cannot be said that they are strict to the core to curb the menace. Despite being seriously understaffed, the National Anti-Doping Agency (NADA), which shoulders the primary anti-doping responsibility in India, has significantly increased the number of tests and raids based on intelligence gathering. But it needs to do more in a vast and populous country to discourage doping. Besides, NADA needs to get out of the government's control to function truly independently in order to enhance its effectiveness. Proper implementation of the National Anti-Doping (Amendment) Act, 2025, to give more powers to NADA and its allied bodies, is another requirement. With dope testing becoming costlier and NADA needing more staff, the government can bolster the fight against doping by increasing the overall budget allocation, which was reduced in the current budget. The other challenge is to cut the supply line, as India has become a hub for the trade in banned substances sourced from different countries. An Indian serving a jail term in Kenya for illegally importing performance-enhancing drugs stands as proof of this. As India prepares for the 2030 Commonwealth Games and hopes to host the Olympics in the future, it needs to act resolutely to weed out a deep-rooted doping culture in Indian sports.

CONTINENTAL GLORY

India might get another 100-medal haul from a smaller contingent

Even as Japan, known for efficiency, welcomes its third Asian Games and the first in 32 years, on Saturday, the Aichi-Nagoya Games have already earned the 'worst ever' tag because of accommodation and logistical issues. A country that successfully hosted two Olympics — in 1964, within two decades of suffering atomic bombings, and in 2021, behind closed doors amid the unprecedented COVID-19 pandemic — is now strangely struggling to accommodate more than 17,000 athletes and officials from 45 nations in hotels, containers and a cruise ship. Despite these issues, 501 of India's athletes, including 267 men and 234 women, across 36 disciplines, will try to keep its flag flying high. At the previous Hangzhou Asiad, India had an impressive tally of 106

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medals and was placed fourth behind China, Japan and South Korea. There is a significant drop in the number of Indian athletes, from 650-plus in 40 disciplines three years ago, following rationalisation, discouraging a mad rush because of the perks and money associated with the Asiad. Nevertheless, Indian sports authorities expect around 100 medals, which may noticeably improve the athlete-to-medal ratio.

The presence of 310 debutants in the contingent signals a brighter future for the country, which has spent nearly ₹800 crore on Asian Games preparations in the last cycle. Shooting and athletics, which together field 105 athletes, should continue to be the major contributors to India's medals tally, followed by archery, boxing, badminton, squash and wrestling. Stars including Manu Bhaker, Mirabai Chanu, Lovlina Borgohain, P.V. Sindhu, Aman Sehrawat, Tajinderpal Singh Toor, Gulveer Singh, Harmanpreet Singh, Smriti Mandhana and Jasprit Bumrah will lead India's campaign. At 39, squash player Joshna Chinappa will be the first Indian to compete in seven consecutive Asian Games. The youngest athlete, 15-year-old cricketer Vaibhav Sooryavanshi, and the oldest, 55-year-old rider Shruti Vora, are the other attractions. Some attention will also be devoted to Indian men's and women's hockey teams, which will aim to win gold medals and secure berths at the 2028 Los Angeles Olympics. While India can take pride in fielding athletes in debut-making disciplines, such as mixed martial arts and teqball, it should ponder over its poor representation in swimming, gymnastics and cycling, which offer more medals and open avenues for Olympic glory. Meanwhile, the Indian men and women's teams would be watched closely in cricket. In pushing for continental excellence, India should also remain vigilant about its deteriorating global reputation due to the sharply rising doping graph.

SHORT NEWS

PLURILATERAL TRADE AGREEMENTS

— After staunch opposition to plurilateral pacts at the World Trade Organisation's (WTO's) 14th Ministerial Conference in Cameroon earlier this year, India offered its proposal on WTO reforms which could help insert plurilateral agreements within the WTO framework, the country's submission to the body's General Council on Wednesday showed.

— Plurilateral trade agreements are negotiated and implemented by exclusive WTO groups rather than by all members.

— Notably, earlier India had blocked the insertion of China-backed Investment Facilitation for Development (IFD) plurilateral pact into the WTO rulebook. Under its rules, a plurilateral agreement can be included into the family of agreements "exclusively by consensus". The IFD initiative, launched by the WTO in 2017, aims to enhance foreign direct investment (FDI) flows.

GENEVA CONVENTION OF 1949

— A UN fact-finding mission on Iran said on September 18 that there were reasonable grounds to believe the US government committed war crimes when it attacked a school and a sports centre at the beginning of its war.

— In its report, the UN mission said it examined whether actions during the war "violated IHL (International Humanitarian Law) pursuant to the 1949 Geneva Conventions and customary international law."



- The Geneva Conventions are primarily applicable in cases involving international armed conflict. They also state that the Red Cross can offer its services during conflicts.
- The Geneva Convention of 1949 was signed in the aftermath of the Second World War (1939-45) and has been ratified by 196 countries. It includes four separate conventions, such as those on the Treatment of Prisoners of War, and the Protection of Civilian Persons in Time of War.
- Among its most significant sections is an article that defines the concept of “grave breaches”, which include actions such as “wilful killing, torture or inhuman treatment, including biological experiments... not justified by military necessity and carried out unlawfully and wantonly.”
- These are war crimes, as defined under the Rome Statute of the International Criminal Court (ICC) in 1998 as well. The court has jurisdiction in such cases.

GLOBAL GENDER GAP INDEX 2026

- Recently, the World Economic Forum (WEF) released its 2026 Global Gender Gap Report, the 20th edition, which covers 145 economies and analyses a longitudinal constant sample of 97 economies included in every edition since 2006.
- It is an annual report which measures gender parity across four key dimensions: Economic Participation and Opportunity, Educational Attainment, Health and Survival, and Political Empowerment.
- According to the index, globally, 69.2% of the gender gap has been closed, reflecting a slight 0.4% improvement from last year.
- Iceland maintained its top rank globally for the 17th consecutive year, closing 93% of its gender gap. It is followed by Finland and Norway. Chad ranked lowest (145th), joined by Pakistan and Iran in the bottom three.
- India has retained its 131st rank out of 145 countries this year with 64.5% gender parity. This marks a 4.3% point improvement since the inaugural 2006 edition, the country still lags behind the global average of 69.2%.

KISHAU MULTIPURPOSE PROJECT

- The chief ministers of six states on September 15 signed a memorandum of understanding (MoU) to pave the way for the long-pending 422 MW Kishau Multipurpose Project.
- Himachal Pradesh Chief Minister Sukhvinder Singh Sukhu signed the MoU for the Rs 15,000-crore project with Uttarakhand CM Pushkar Singh Dhami, Uttar Pradesh CM Yogi Adityanath, Haryana CM Nayab Singh Saini, Rajasthan CM Bhajan Lal Sharma, and Delhi CM Rekha Gupta. Union Home Minister Amit Shah and Union Jal Shakti Minister CR Patil were present.
- The Kishau Multipurpose Project is a proposed dam and hydropower project on the Tons River, a major tributary of the Yamuna, along the border shared by Himachal Pradesh and Uttarakhand. The project envisages a 232.6-metre-high concrete gravity dam that will generate 1,476 million units of clean hydropower.



— The project site straddles Himachal Pradesh's Sirmaur district and Uttarakhand's Dehradun district. The project is intended to generate electricity, create irrigation potential of about 97,076 hectares, and provide drinking and industrial water to the beneficiary states, Haryana, Delhi, Rajasthan and Uttar Pradesh.

INDIA'S FIRST SALT CONTAINER TRAIN

Railway Minister Ashwini Vaishnaw on September 15 flagged off India's first salt container train, which will run between Shivelakha in Gujarat's Kutch and Mithapur in the state, using a special stainless steel container to transport this essential kitchen staple.

INDIA ELECTRIC MOBILITY INDEX 2025

— On September 16, NITI Aayog released the India Electric Mobility Index (IEMI) 2025, which assesses the development of the e-mobility ecosystem and the adoption of electric vehicles (EVs) on Indian roads.

— IEMI is a composite Index, which assesses the policy framework and implementation outcomes for e-mobility at the state-level. It is a first-of-its kind index that offers a dynamic comparative analysis of the progress of road transport electrification across Indian states and union territories.

— NITI Aayog developed the index in collaboration with WRI India. The index tracks 16 unique performance indicators under three thematic categories– Transport Electrification Progress (weightage of 50%) , Charging Infrastructure Readiness (30% weightage), and EV Research & Innovation Status (20% weightage)– that form the building blocks of the Indian e-mobility ecosystem.

— According to the Electric Mobility Index 2025, the composite scores on performance across all 36 States and Union Territories (UTs) ranges from 10 to 84, and a median score of 40.

— Delhi has topped Electric Mobility Index with the score of 84. It is followed by Maharashtra (score 78) and Karnataka (score 73), the only two of the 17 large states to feature among the top performers in EV implementation, according to the report.

— The report also shows that Delhi, Chandigarh, and Maharashtra were the only UTs and states to qualify as top performers in transport electrification progress. Delhi also achieved the top score of 94 in the EV Research and Innovation Status (20% weightage) category.

— In the Charging Infrastructure Readiness (30% weightage), Karnataka recorded the highest score nationwide at 97, closely followed by Goa (92) and Maharashtra (91).

ONETAG

The National Highways Authority of India (NHAI) has made 'OneTag', a FASTag portability service, operational on the Rajmargyatra app. The new service allows highway users to change their issuer bank without replacing the FASTag sticker on their vehicle. Users earlier had to purchase a new FASTag to change their issuer bank and remove the existing tag from their vehicle. The new system will work along the lines of mobile number portability, where users need not change their SIM card to switch to another telecom service provider.



DEMAT 2.0

The Reserve Bank of India (RBI) and the Securities and Exchange Board of India (SEBI) launched “Demat 2.0” — a pilot program to test the tokenisation of corporate bonds and quicker settlement using the central bank digital currency and blockchain technology. While “Demat 1.0”, launched in 1996, digitised shares that were held in paper form until then, the latest avatar combines tokenised securities with digital settlement assets using smart contracts and settles through the CBDC. The project also focuses on preserving the legal certainty around ownership even as the market experiments with new technology and infrastructure.

NEW E-COMMERCE RULES

— The Department of Consumer Affairs has amended the Consumer Protection (E-Commerce) Rules, 2020 to strengthen “consumer protection while facilitating a transparent and balanced regulatory framework for the e-commerce sector”, according to a release by the Press Information Bureau (PIB). The new rules will come into force on January 1, 2027.

— The amended rules say that whenever a price reduction is announced, platforms must display both the reduced price and the “prior price”. The prior price will mean the “lowest price at which the product or service was offered during the 30 days preceding the announcement.”

— The amended rules prohibit e-commerce entities from manipulating search results in a way that misleads users or adversely affects the relevance of results to their search query.

— Paid or sponsored listings will have to be identified through “clear and prominent disclosures.” E-commerce entities will have to comply with the Guidelines for Prevention and Regulation of Dark Patterns, 2023, conduct a self-audit every year and prominently display a certificate of compliance.

— Marketplace platforms will have to provide important information to help consumers make informed decisions, including best-before/use-before dates, return and refund terms, warranty, delivery and payment details.

— Marketplace e-commerce entities will not be allowed to use consumer information for specified purposes without the consumer’s “express and affirmative consent”.

What are Dark patterns?

Dark patterns are design techniques that manipulate users into making choices they did not necessarily intend to make. The 2023 guidelines cover practices such as false urgency; basket sneaking; confirm shaming; forced action; subscription trap; interface interference; bait and switch; drip pricing; disguise advertisement; nagging; trick question; Saas billing; and rogue malwares.

FIFTH EDITION OF SEMICON INDIA 2026

— The fifth edition of Semicon India 2026, India’s flagship semiconductor conference, held from September 17 to 19 on the theme ‘Silicon to Systems: Building the Ecosystem’ in New Delhi.

— It brought together global and Indian companies, policymakers, investors, researchers, start-ups, and academic institutions from across the semiconductor and electronics value chain.

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—Notably, the conference took place two months after the Centre announced the second iteration of its Semiconductor Mission (Semicon 2.0) , with an outlay of Rs 1.27 lakh crore, and a particular focus on incentivising domestic chip design, and localising the broader supply chain of ancillary industries, such as equipment manufacturers, and producers of specialty gases and chemicals.

QUANTUM COMPUTING AND RRI'S SINGLE-SHOT FIX

— Scientists at the Quantum Information and Computing (QuIC) laboratory at Raman Research Institute in Bengaluru have demonstrated a novel way to increase the stability of the quantum states that enable computation in a quantum computer that can potentially improve the reliability and integrity of these calculations.

— Unlike traditional computers that encode electric states into 0s and 1s to store and process information, quantum computers make use of the very unique, but counter-intuitive, properties of the quantum world to carry out calculations.

— Some of these special properties happen to be “quantum entanglement” and “superposition.” Scientists have used these to build powerful quantum computers which can perform certain very complex computations in an efficient manner.

— Superposition is the ability of quantum particles to exist in multiple states at the same time — to build powerful quantum computers which can perform certain very complex computations in an efficient manner.

— Quantum computers use quantum bits, or qubits (the basic unit of information in quantum computing, acting as the quantum equivalent of a traditional computer bit), which process information very differently. While classical bits always represent either one or zero, a qubit can be in a superposition of one and zero simultaneously until its state is measured.

— The quantum states that give superpowers to these computers are themselves very fragile and ephemeral. The entangled state, for example, disintegrates very quickly on interaction with the external environment, a phenomenon known as decoherence. Sometimes, entanglement vanishes abruptly, too, even before the normal disintegration takes place. Scientists call this condition “entanglement sudden death.”

— Raman Research Institute scientists found that a single, well-timed operation, not repeated fixes, can delay or prevent quantum entanglement from collapsing in this context. Timing itself becomes a new control tool, offering a simpler way to protect fragile quantum states used in computing, alongside existing error- correction methods.

FSSAI RECALLS CORIANDER POWDER AND CARRAGEENAN OVER SAFETY CONCERNS

The Food Safety and Standards Authority of India (FSSAI) has issued recall orders to two Food Business Operators (FBOs) following lab testing and evaluations that found adulterated coriander powder, and carrageenan — which was “found not satisfactory with respect to Cadmium.” Carrageenan is nature’s thickening agent, derived from red seaweed, and used by food companies to make things like ice cream, flavoured milk, and paneer substitutes.



YUDH ABHYAS 2026

- The Indian and US armies have begun their annual bilateral military exercise to improve their ability to conduct joint operations in difficult terrain, focusing on Integrated Battle Groups, infantry operations, drones, autonomous systems, and long-range precision fires.
- The 22nd edition of Yudh Abhyas is underway at the Auli Foreign Training Node in Uttarakhand and the Mahajan Field Firing Range in Rajasthan's Bikaner.
- In a statement, the Ministry of Defence said the exercise aims to enhance both armies' joint military capability to employ Integrated Battle Groups (IBGs) in mountainous and semi-mountainous terrain, with an emphasis on infantry-dominated operations.

ANTHROPIC SETS UP BIO LAB AS IT LOOKS TO RAMP UP AI DRUG PROGRAMME

- Anthropic has quietly set up a laboratory to do physical biology work as it pushes its artificial-intelligence ambitions into the world of drug science.
- At a time when fears of AI are gripping the public, the startup has built a wet lab, or place for physical experiments, in the San Francisco Bay Area, two people familiar with the matter said. Anthropic has said it wants to unlock treatments for rare diseases, and its biology work has gone beyond "in silico" or computer evaluations.
- In a Reuters interview on Tuesday, Anthropic's head of life sciences, Eric Kauderer-Abrams, confirmed the startup's wet lab. "We believe that to do biology, the final test is still and will be for a while in real lab work," he said.

'LARGEST THEFT OF LABOUR': OPEN AI, MICROSOFT RAISE CONCERNS OVER AI TRAINING

- Newly unsealed court documents showed considerable concern within Microsoft and its close partner OpenAI over the use of millions of news articles to develop artificial intelligence systems.
- As OpenAI was forging ahead with its work, Microsoft employees debated whether what OpenAI was doing represented the "largest theft of labour in human history" and could create a "doom loop" that could ultimately threaten the quality of the large language models they were building.
- "Millions of people around the world will soon consider large models 'hoovering up' all their work to be an astonishing theft of unprecedented proportions," said one internal Microsoft document from 2023.

MARATHI FILM GONDHAL IS INDIA'S PICK FOR OSCARS 2027

Marathi film *Gondhal*, written and directed by Santosh Davakhar, has been selected as India's official entry for the Best International Feature Film category at the 99th Academy Awards (Oscars 2027). Chosen by the Film Federation of India from 33 films, it is set in rural Maharashtra against the traditional Gondhal ritual and follows a woman seeking escape from an oppressive marriage. The film premiered in the Indian Panorama section at IFFI 2025, where Davakhar won the Silver



Peacock for Best Director. India has never won this Oscar category; only *Mother India*, *Salaam Bombay!*, and *Lagaan* have been nominated.

BLACK CARBON

- The report, 'A resilient Himalaya: protecting a region at risk and securing future prosperity,' has identified black carbon—soot produced by incomplete combustion—as a polluter that is causing damage and which India can control faster.
- “Recent modelling attributes about one-third of glacier mass loss in the Himalayas to South Asian black carbon. Industry, primarily brick kilns, contributes 32-42% of South Asian anthropogenic deposition across the region. Cutting kiln emissions therefore tackles local air pollution and glacier melt through the same plume,” the report states.
- Black carbon, sometimes known as soot, is a component of fine particulate air pollution (PM2.5). It is created from incomplete combustion of wood, trash, and fossil fuels, which also produces carbon dioxide (CO2), carbon monoxide, and volatile organic compounds.
- Because of its high light absorption capacity, black carbon heats the atmosphere. It accelerates warming of the air and surfaces in the areas where it is concentrated, causing changes in weather patterns and ecosystem cycles.
- Black carbon remains in the atmosphere for only a few days or weeks, but it has a large direct and indirect impact on the climate, snow and ice, agriculture, and human health.
- The report proposes a targeted fund to modernise brickmaking, upgrade viable kilns, retire the worst-performing ones and reduce demand for fired bricks.

FIRST INDIAN MALE RECURVE ARCHER TO WIN WORLD CUP FINAL GOLD

Dola Banerjee first raised the Indian recurve flag high in Dubai at an Archery World Cup Final in 2007. Dhiraj Bommadevara has emulated her in Mexico, 19 years later.

- The Vijaywada archer pipped Japan's Junya Nakanishi 10-9 in the shoot-off after a 5-5 tie in the final at Saltillo. Bommadevara thus is the first Indian male recurve archer to win a World Cup Final title.

DADASAHEB PHALKE AWARD

- Kannada cinema legend Anant Nag has been named the recipient of the Dadasaheb Phalke Award for 2024.
- India's highest honour in the field of cinema, Anant Nag will be presented with the Dadasaheb Phalke Award at the National Film Awards ceremony, scheduled to be held in Kevadia, Gujarat, on September 22.
- The 78-year-old actor, who received the Padma Bhushan last year, has had a career spanning more than five decades. In this time, Nag has acted in at least 300 films across Kannada, Hindi and other South Indian languages, and was also active in theatre.



— Nag will be the second Kannada artist to receive the Dadasaheb Phalke Award after Dr Rajkumar, and the seventh Indian to receive both the Padma Bhushan and Dadasaheb Phalke Award.

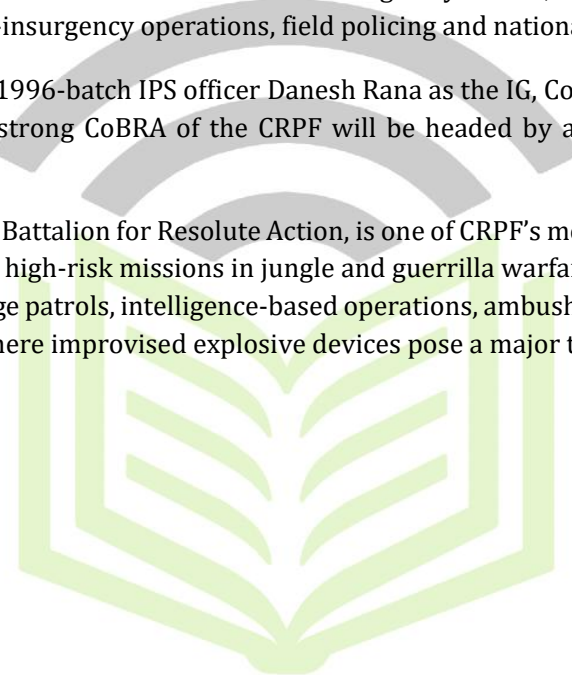
SANJUKTA PARASHAR

— Senior IPS officer Sanjukta Parashar, also known as the “Iron Lady of Assam” for her counter-insurgency work in the Northeast, has taken charge as Inspector General of the Central Reserve Police Force’s elite CoBRA unit, becoming the first woman officer to head the specialised jungle-warfare force.

— Parashar, a 2006-batch IPS officer of the Assam-Meghalaya cadre, brings to the post extensive experience in counter-insurgency operations, field policing and national security investigations.

— Parashar succeeds 1996-batch IPS officer Danesh Rana as the IG, CoBRA. “This is the first time that the 10-battalion-strong CoBRA of the CRPF will be headed by a woman officer,” a senior officer said.

CoBRA, or Commando Battalion for Resolute Action, is one of CRPF’s most specialised operational formations. Raised for high-risk missions in jungle and guerrilla warfare environments, the force is trained for long-range patrols, intelligence-based operations, ambushes, counter-ambushes and operations in areas where improvised explosive devices pose a major threat.


DreamIAS



BUSINESS AND ECONOMY

WHY TESLA'S STEERING-LESS CYBERCAB IS UNDER INVESTIGATION

The story so far:

On September 3, Tesla announced the rollout of its new electric robotaxis, offering services in designated parts of Austin, Texas. According to news reports, the self-driving cars are almost impossible to ignore as their gold exterior and 'Cybercab' branding catch the eye. But the near-empty interior has sparked questions about the safety of passengers and their ability to intervene in case of emergencies.

What are the features of Tesla's Cybercab?

The Cybercab is a self-driving car that has seating for two people. The 'butterfly' doors open upwards and the body boasts a sleek, cyberpunk-inspired design that contrasts sharply with the chunkier camera-mounted cars from rival Waymo. The golden exterior is meant to represent a "literal" golden age of transportation, according to Tesla CEO Elon Musk.

There are no steering controls or pedals inside the Cybercabs. Mr. Musk has declared that the cars were built for "maximally efficient autonomous operation." On the absence of brake pedals, he said this would help in reducing the complexity of a hydraulic system, and that "plumbing" would not have to be routed all around the car. Regulators will need to confirm if Mr. Musk's design choices comply with their safety requirements.

Mr. Musk described the Cybercab as "basically a super comfortable lounge on wheels with a great TV and epic sound". With upcoming Starlink integration, users would be able to watch 4 K live video while riding in the Cybercab, he said.

Switches under the touchscreen allow users to lower the windows. A cabin camera monitors the vehicle's interior.

A Tesla Cybercab promotional video showed passengers sleeping, watching movies, playing games, teaching children, holding dogs, and handling conference calls while they were taking a ride.

A major perk for loyal passengers is that their climate and media settings are saved in a profile and will apply to new rides as well.

Children under the age of 13 are not permitted to ride in a Cybercab vehicle.

Passengers can stop a ride by either pressing a 'Pull Over' button on the touchscreen or a 'STOP' button overhead for non-emergency situations. In the event of an emergency, users will be able to pull the door lever to trigger an emergency mechanical release. The Cybercab is designed to also pull over instead of instantly braking, based on its surroundings. Passengers can reach Tesla representatives through the car's communication system.

Have regulators approved the Tesla Cybercabs?

While the U.S. National Highway Traffic Safety Administration (NHTSA) is the regulator that enforces vehicle performance standards across the country, car makers have the option to self-certify their offerings.



The NHTSA confirmed it has opened an investigation into Tesla's Cybercab self-certification to see if it meets the applicable Federal Motor Vehicle Safety Standards (FMVSS).

The NHTSA explained that existing standards would remain in force even as the agency reviews rules related to standards for brake pedals, windshield wipers, lighting, and rearview mirrors, to enhance American innovation in automated vehicles.

The NHTSA is currently evaluating the Tesla Full Self-Driving (FSD) feature that is built into over three million vehicles. The assessment is related to impaired camera functions that have allegedly caused accidents in poor weather conditions.

In July, the NHTSA issued a more general warning about driverless automated vehicles "interfering," as it noted that the cars drove into emergency scenes, blocked the way of ambulances and fire rescue vehicles, and were unable to respond properly when detecting flashing lights, fire, and traffic cones.

"This is unacceptable. To state it bluntly: an AV [automated vehicle] that cannot safely interact with first responders is a danger to the general public," stated the NHTSA's letter.

Cybercabs are not the first robotaxis launched by Tesla. The EV maker has already deployed its Model Y cars in Tampa and Miami, in Florida, and Austin, Dallas, and Houston, in Texas. Cybercabs are currently available in limited areas only in Austin.

What are some concerns surrounding robotaxis?

Robotaxis or self-driving taxis have been hailed for a variety of reasons. They are often viewed as a safer option for female passengers, people who cannot communicate verbally, or passengers in vulnerable situations.

Supporters of robotaxis claim that they help lower accident rates (when compared to human-operated cars), prevent rash/fatigued/drunken driving, and that the AI systems supporting these cars are rapidly advancing.

Robotaxis have also been pitched as a win for accessibility and inclusion, as some customers complained that human-operated cabs cancel rides when passengers disclose disabilities, health conditions, and the use of wheelchairs or service animals. In fact, Tesla's own Cybercab ad showed users of wheelchairs and crutches being able to store their belongings in the car boot. (This ad, however, did not cover how a non-mobile user would be able to make their way unassisted into the driverless car without their mobility aid.)

Still, robotaxis can pose safety risks when facing unexpected circumstances. Videos and posts shared on social media have recorded instances of driverless taxis being unable to move when held up by men blocking their path, leaving passengers fearful inside. Minor crashes and intrusions into protected areas have also been documented.

WHY RISING US GOVT BOND YIELDS ARE WORRY FOR WORLD

Over the past couple of months, there has been a growing worry about the rise in government bond yields across the world.

**Key Takeaways:**

- If the government in question is the United States government then the ramifications of higher yields on US government bonds are not limited to just the US economy; they start affecting all other economies and their constituents, even those in a land far away from Washington DC.
- That's because while a government is the safest entity to lend to in any economy, at a global level, there is a gradation for governments as well. Not all governments are equally credit-worthy. Imagine lending money to the Pakistan government for a period of 10 years in 1965! There are many instances of governments defaulting on their loans. There are also instances of governments ceasing to exist because the country itself stopped to exist or broke into two or more countries.
- In that sense, the US government is the safest borrower in the world. It has been considered so safe that parking your savings in lending to the US government has often been considered as safe as investing in gold. When the yields go up for US government bonds, lenders typically ask for higher interest rates from every government on the planet because the whole spectrum is riskier. And that is what is happening at present.
- Just as yields go down when bond prices rise, yields go up when bond prices fall, as is happening now. Bond prices fall when no one wants to hold them or buy new bonds because they are not sure if the government issuing the bond will be able to honour the promise. Given the scale of the market, even a single basis point increase in government bond yields — 100 basis points make a full percentage point — raises the interest payment (recall EMI) by billions of dollars for governments.

Do You Know:

- A government bond is a document where a government acknowledges that it is taking a loan from someone and details how much it will pay back and by when. It borrows to meet the gap between what it spends (on everything from defence to subsidies) and what it earns (from levying taxes).
- The yield on a government bond refers to the interest rate that a government has to pay. Rising yield on bonds means that the government will have to shell out more money as interest payment; it is similar to your car or home loan EMI going up when the bank tells you that interest rates have been increased. In both cases, the borrower (the government or you) must keep aside more money next month to pay back the lender.
- Another direct fallout for higher interest payment is that the borrower will have less left for other activities (be it road construction or the government taking care of the poor or you having less money to buy books or traveling with your family).
- It also follows that up to a point, increases in interest rate, while uncomfortable because they make you pay more on the same loan, are manageable. But there is always a tipping point — if the rates continue to rise beyond it, neither the government nor you will be able to manage their respective budgets.
- There is an additional sting when interest rates go up for the government, as against when they go up for you alone: When they go up for the government, they go up for everyone (including you) in the economy.



- Government bonds — called by different names across countries, such as Treasuries in the US, Gilts in the UK, Bunds in Germany, and G-Secs in India — have a simple structure.
- A bond is essentially a formal I-O-U (or I owe you) between the government issuing the bond and the entity lending the money. The government states the money it is borrowing — say \$100 — the period for which it is borrowing — say 10 years — and the additional money that the government will pay to the lender each year over and above the \$100 at the end of the tenure.

HAWKISH OR DOVISH? THE VARYING INTERPRETATIONS OF US FED RATE HIKE

The Federal Reserve (or Fed), which controls monetary policy in the US, has decided to raise the Federal Funds Rate (FFR) by 25 basis points (one basis point is one-hundredth of a percentage point).

Key Takeaways:

- Raising the FFR makes it costly for banks to borrow from each other and, thus, makes all loans extended by US banks costlier as well. Higher cost of credit drags down economic activity as it discourages overall demand in the economy. Lower demand for goods and services helps cool down prices in the economy.
- This decision is typically taken when a central bank is concerned about curbing inflation (the rate at which the general price level goes up from one year to another). The Fed's decision is keenly watched the world over because by tweaking the cost of credit, it also affects stock markets both in the US and the world over.
- What stood out about the Fed's decision was that even though it was taken unanimously, which has been a rarity in the recent past, its interpretation is ambiguous. Was it hawkish, not so hawkish, actually dovish or not dovish enough?
- On the face of it, an increase in the FFR — the first in three years — suggest that the new Fed Chair Kevin Warsh has seen enough of price rise in the wake of the West Asia crisis and tariffs, etc, and is even willing to go against the wishes of President Donald Trump by raising interest rates — and that too less than two months before the crucial midterm elections that could make or break the Trump presidency.

Do You Know:

- The US Fed has a dual mandate: Pursuing both price stability and maximum employment. For price stability, the Fed has a target of 2% inflation (as measured by Personal Consumption Expenditures or PCE Price Index). In other words the PCE Index should not rise by more than 2% from one year to another.
- On maximum employment, there is no numerical target. According to the Fed, "it is the highest level of employment or lowest level of unemployment that the economy can sustain while maintaining a stable inflation rate".
- Notwithstanding the dual mandate, often the Fed's focus is either more curbing inflation or boosting employment, depending on what it thinks is the bigger concern.
- A hawkish central bank or hawkish policy decision is one that is primarily focused on maintaining price stability and not letting inflation go above 2%.



IN A FIRST, INDIA STARTS EXPORTING HILSA TO BANGLADESH, MOST ARE FROM GUJARAT

In a role reversal of sorts, India is exporting Hilsa fish to Bangladesh, bucking the trend of the neighbour supplying the sought-after variety of fish that has the highest place of pride on Bengal's dining tables.

Key Takeaways:

- Around 500 tonnes of Hilsa, known as Ilish in Bengali, have been sent to Bangladesh in the past two months through the Petrapole land port on the international border in West Bengal. Traders expect an additional 150 to 200 tonnes of Hilsa to be exported to Bangladesh in the coming weeks.
- Traditionally, Hilsa is brought in from Bangladesh when its government allows its import, generally during the Durga Puja festive season. Currently, Bangladesh has paused Hilsa exports to India.
- According to fish traders and exporters, the development reflects changing patterns of production, availability and consumer demand in the two neighbouring countries. A substantial portion of the Hilsa consignment is from Gujarat, particularly the Bharuch region, and some supplies have moved through the Howrah fish market in Bengal.
- The traders said Hilsa with high roe content is attracting considerable demand in Chattogram, Sylhet and other districts of Bangladesh. Roe refers to the fully ripe egg mass in female hilsa fish, also used to prepare delicacies. The roe is also being processed for re-export from Bangladesh. Some fish are also being used to prepare dried and salted fish delicacies.
- For West Bengal, which has a strong cultural association with Hilsa and an established fish marketing network centred around Kolkata and Howrah, the development presents opportunities to strengthen production, aggregation, cold-chain logistics, value addition, processing, branding and export-oriented fisheries enterprises.
- Earlier, a team from the Fish Importers Association visited Dhaka in August and met Ataur Rehman Khan, the Commerce Secretary of Bangladesh, and urged him to lift the ban on the export of Hilsa to India.

Do You Know:

- The hilsa is a fish of the wider Indian Ocean. Its range stretches from the Bay of Bengal to the coasts and estuaries of the Arabian Sea. Travel south and west from Bengal, and the ilish acquires other names and other cultural lives. On the Godavari it is the pulasa; on the Indus, the fish becomes palla. The fish moves between the sea and rivers, entering different river systems to spawn.
- Hilsa is an anadromous fish. It spends most of its life cycle in marine environments (the ocean/Bay of Bengal) but migrates upstream into freshwater rivers to spawn and breed.
- The shoals migrate upstream twice a year, primarily during the monsoon season (September–October) and again from mid-February to April.
- It is predominantly found in the Hooghly-Bhagirathi river system, the Padma, the Ganga, and the Indus river. It also occurs in western Indian waters, notably around the coast of Gujarat.



- Commissioned in 1975 on the Ganga river, the Farakka Barrage significantly disrupted Hilsa migration. Its navigation locks prevented the fish from moving westward into upstream regions like Prayagraj (Allahabad) and Patna, where they were once abundant.

INDIA RICE OUTPUT FACES BIGGEST DROP IN TWO DECADES, STOCKS CUSHION EXPORTS

India's rice production is set to fall this year for the first time in a decade, and by the most in nearly 20 years, as below-normal rainfall during the crop's maturation period threatens to cut yields, industry officials told Reuters.

The drop in the world's biggest rice-producing and exporting country will lift local prices and make exports expensive at a time when prices are already rising in other exporting countries such as Thailand and Vietnam.

However, massive inventories built up from record harvests in recent years will allow New Delhi to maintain exports at record levels despite the lower output. "Yields will be lower due to reduced rainfall. We estimate that production could decline by around 10 million metric tons," said B.V. Krishna Rao, president of the Rice Exporters Association.

That would be nearly a 6.5% drop from last year's record 154 million tons and be the biggest decline since 2009/10, when an El Niño-induced drought curtailed production.

The prolonged dry spell in recent weeks has significantly reduced yield potential in southern and eastern states, Mr. Rao said. India has so far received 15% lower rainfall than normal since the four-month-long monsoon season started on June 1, weather department data showed. But in some rice-growing States, the deficit is as high as 42%.

The crop area of summer-sown rice stood at 42.68 million hectares as of September 11, nearly 4% lower than a year earlier, government data showed.

Summer-sown crops account for more than 80% of total production. Winter-sown crops account for the rest. The area under winter-sown rice is also likely to fall as reservoirs are holding less water than normal, said Nitin Gupta, deputy country head at Olam Agri India, an agricultural commodity trader.

Local rice prices have already started to rise on expectations of lower production, lifting export prices to their highest level in more than a year.

"This year, farmers growing premium varieties will get higher prices in the open market. That will also lead to lower sales to the government," said Rao.

With India holding massive rice stockpiles, it should still be able to export the grain without imposing restrictions, said a New Delhi-based dealer with a global trading house.

CENTRE'S FRESH 'RED ENTRY' MOVE TO ACT AGAINST FARMERS BURNING STUBBLE

Stepping up its efforts to tackle Delhi-NCR's winter air pollution, the Centre has decided to strengthen the red entry system to penalise farmers burning stubble. A red entry in the revenue records can potentially land farmers in trouble, making it difficult for them to avail loans and mortgages.

**Key Takeaways:**

- In its latest move to address choking air pollution in Delhi every winter, the Centre has brought a new draft of Rules governing the fight against crop residue burning, a key contributor to air pollution in the national capital.
- Under the draft Rules, land belonging to farmers found to burn stubble would be marked with a red entry in revenue records for up to 15 months. If they continue to set fields on fire or don't pay compensation, this period could extend for another 15 months.
- These Rules, first notified in 2023, included the red entry provisions. The red entry system has faced strong opposition from farm unions.
- The Centre's changes are unlikely to take effect until the end of the upcoming paddy harvest season, owing to the window for seeking comments on the new draft.
- This is the first time the Ministry of Environment, Forest and Climate Change has specified the validity of red entries under the draft Commission for Air Quality Management in National Capital Region and Adjoining Areas (Imposition, Collection and Utilization of Environmental Compensation for Stubble Burning) Rules, 2026.
- These Rules, brought in 2023, spell out the quantum of compensation for burning crop stubble, its collection, and utilisation.

Do You Know:

- The short and long-duration paddy varieties have a height of 4 feet and over 5, respectively. The combined harvesters that farmers use to harvest paddy, cut off the upper portion of the paddy and leave behind a standing stubble of around 15 to 18 inches, which is called standing stubble.
- It throws the chopped 2.5 feet loose stubble on the field after taking the grain portion from the shaved part of the stubble. This loose straw gets accumulated in several small dumps in the field which is called the loose straw.
- After harvesting, farmers opting for partial burning let the loose straw dry for a couple of days and then they set these dumps on fire to prepare the field for the next crop. In such cases, the standing stubble, which is mostly green, does not get burnt fully but it gets scorched close to those places in the field where loose straw is burnt.

WHO HAS TO PAY MDR ON UPI AND WHO STANDS TO GAIN THE MOST?**The story so far:**

After much speculation and debate, the National Payments Corporation of India (NPCI) has finally released its circular about the additional charges it will allow to be levied on certain UPI payments from October 15. While the Opposition has argued that this charge will increase prices for consumers, the government has argued that this will not happen, and that even the impact on merchants will be minimal.

Who will have to pay the MDR charge?

Merchant Discount Rate (MDR) is a fee for using UPI that will be paid by merchants to payment processors and banks. Consumers will not have to directly pay the MDR.

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



In its press release relating to the NPCI's announcement, the Ministry of Finance on September 15 emphasised that banks have been advised to ensure that merchants do not pass MDR charges on to customers and that UPI application providers are expressly prohibited from imposing platform fees or hidden charges on users.

The MDR will have to be paid by mid- to large-sized merchants who receive UPI payments in excess of ₹2,000 per transaction. These merchants will have to pay a charge of 0.4%. For transactions of ₹75,000 and above, the MDR will be capped at ₹300 per transaction.

However, the rules change when it comes to essential sectors. Transactions of ₹2,000 or more in essential and thin-margin sectors, such as railways, telecommunications, insurance, fuel, and agricultural inputs, will attract a flat MDR of ₹5 per transaction.

According to the government, this flat charge will provide cost certainty for critical public services and businesses operating on narrow margins.

Further, capital market transactions such as payments to mutual funds, stockbrokers, dealers, and for equities will attract an MDR of 0.02%, capped at ₹300 per transaction. This lower rate, the government has argued, is aimed at supporting retail participation in formal financial markets.

One way to ascertain how widespread the charge will be is to look at the volumes of UPI transactions. An analysis by The Hindu of data provided by the NPCI shows that person-to-merchant (P2M) transactions above ₹2,000 make up just 2.5% of all UPI transactions by volume.

Who will not have to pay?

All Person-to-Person (P2P) transactions will remain free of charge, regardless of the amount being transferred. The government has specified that "no transaction fee, platform fee or other charge may be imposed on individuals for sending or receiving money through UPI".

This is a significant exemption because P2P UPI transactions make up about 37% of the total UPI transaction volume.

Further, payments to merchants up to ₹2,000 will remain free of MDR. This makes up another 60.5% of all UPI transactions by volume. That means, in total, 97.5% of all UPI transactions will remain free.

In addition, the NPCI has mandated that small merchants, including street vendors receiving up to ₹1 lakh per month through UPI QR codes under the Person-to-Person-Merchant (P2PM) category, will also be exempt from MDR.

This means that the proportion of UPI payments that will attract a charge is actually even smaller than 2.5%.

Who stands to gain the most?

The government has said that the MDR will be shared among payment ecosystem participants, including banks, payment service providers, and UPI application providers.

The analysis of the NPCI data shows that the P2M transactions above ₹2,000 make up 20% of all UPI transactions by value.



That is, while ₹29.8 lakh crore was transacted over UPI in August 2026, P2M transactions above ₹2,000 were ₹5.99 lakh crore. This means that the absolute maximum that banks and payment processors can earn from MDR is about ₹2,400 crore a month (0.4% of ₹5.99 lakh crore) or ₹28,000 crore a year. However, since there are multiple caveats, exemptions, flat rates, and caps imposed, the total amount receivable will be lower than this.

The way MDR works is that the bulk of the charge (about 40% of what is collected) goes to the payer's bank since it holds the customer's bank account and bears the core authorisation, security, and settlement costs of the transaction.

Here, Yes Bank is the undisputed gainer, since it is the payer bank in more than 50% of all UPI transactions. The second largest is ICICI Bank at 18.3%.

Of the MDR collected, the merchant's bank or receiving bank receives 30%. This is because they manage the merchant's relationship, handle the QR code deployment, and process merchant settlements.

Here, too, Yes Bank is the payee in about 55% of all UPI transactions and so stands to earn the most from the MDR, followed by Axis Bank at about 19%.

Another 20% of the MDR goes to the UPI app or Third-Party Application Provider (TPAP). PhonePe and Google Pay stand to benefit from this, since PhonePe accounts for about 46% of UPI transactions by volume and Google Pay another 32%.

The final 10% of the MDR goes to the Payment Service Provider that connects the technology partner bank that connects the UPI application to the central network switches.

The government has also said that a dedicated fund will be established to promote UPI adoption among small merchants, with an amount equivalent to 5% of total MDR collections contributed to this fund. It does not specify from which of the payment system players this 5% will be taken.

UPI MDR: Applicability, Rates and Exemptions		
Transaction / Merchant Type	MDR	Key Condition
UPI payment to mid- or large-sized merchant	0.4%	Applies above ₹2,000 from October 15; capped at ₹300 for transactions of ₹75,000 and above
Person-to-person (P2P)	Nil	Free regardless of transaction value
Person-to-merchant transaction	Nil	Free up to ₹2,000, including payments through RuPay debit cards
Small vendor under P2PM	Nil	Exempt when receiving up to ₹1 lakh per month through UPI QR codes
Railways, telecom, insurance, fuel and agricultural inputs	₹5 flat	Applies to transactions above ₹2,000
Mutual funds, securities, stockbrokers and dealers	0.02%	Capped at ₹300; intended to encourage retail participation in formal financial markets



UPI MDR: Impact and Distribution	
Who pays?	Merchants; consumers do not directly pay MDR
Customer safeguard	Banks have been advised to ensure merchants do not pass the charge to customers
P2P share	37% of total UPI transactions by volume and 70% by value; all remain free
Expected coverage	Only 4% of merchant transactions are expected to be affected because most are below ₹2,000 or qualify for zero-MDR P2PM treatment
Who receives MDR?	Payment ecosystem partners, including banks, payment processors and app providers
Small-merchant support	5% of total MDR collections will fund UPI promotion among small merchants
Policy objective	Make UPI self-sustainable, support expansion in rural and semi-urban areas, maintain competitiveness, and keep most payments free

INDIA'S FIRST MAINSTREAM PHEV, AND THE GAP IT PLUGS IN THE EV ECOSYSTEM

The Tomahawk Land Attack Missile is an iconic American long-range, jet-powered, subsonic cruise missile that is used by the United States Navy in ship and submarine-based land-attack operations.

Key Takeaways:

— The long-range analogy is perhaps what JSW MG Motor India wanted to play on when it decided to christen its newly launched Hector Tomahawk plug-in hybrid vehicle (PHEV), alongside an all-electric version of this new SUV, to emphasise range efficiency.

— The vehicle is India's first mainstream plug-in hybrid SUV, claimed to deliver over 115km of electric-only range and a combined fuel efficiency figure of over 40kmpl. MG claims the Tomahawk PHEV can cover over 1,100km with a full tank of fuel and a fully charged battery.

— Unlike BEVs, which are typically battery electric vehicles such as the Tesla Model S or the Tata Nexon electric that need to be plugged in before the battery is discharged, technologies such as HEVs and PHEVs bring together the best of both worlds.

— For instance, HEVs, or conventional hybrid electric vehicles, such as strong hybrid variants of the Toyota Hycross Hybrid and the Honda City e:HEV in India, or the Toyota Prius HEV sold abroad, combine a conventional internal combustion engine (ICE) system, like in a regular petrol car, with an electric propulsion system to produce a hybrid drivetrain that substantially lowers fossil fuel usage.

Do You Know:

— EV is a vehicle that can be powered by an electric motor, which draws electricity from a battery and can be charged from an external source. Beyond this broad classification, though, across most parts of the world, a range of vehicle categories are subsumed as EVs.



— Globally, the EV segment covers, besides battery electric vehicles or BEVs, an alphabet soup of some other technologies that incorporate electrification in some form: HEVs or hybrid electric vehicles, PHEVs or plug-in hybrid electric vehicles, and FCEVs or hydrogen fuel cell electric vehicles.

— All these technologies are part of a broad basket of low-emission vehicular platforms that the Chinese now term as New Energy Vehicles.

DELHI RANKS FIRST, ONLY 2 LARGE STATES AMONG TOP PERFORMERS IN EV LIST'

Delhi has topped NITI Aayog's India Electric Mobility Index (IEMI) 2025 for the development of the e-mobility ecosystem and the adoption of electric vehicles (EVs) on Indian roads.

Key Takeaways:

- It is followed by Maharashtra and Karnataka, the only two of the 17 large states to feature among the top performers in EV implementation, according to the report released.
- IEMI is a composite Index, which assesses the policy framework and implementation outcomes for e-mobility at the state-level. NITI Aayog developed the index in collaboration with WRI India. The report covers three themes: transport electrification progress, charging infrastructure readiness, and EV research and innovation status.
- According to the index, the composite scores on performance across all 36 States and Union Territories (UTs) ranges from 10 to 84, and a median score of 40. Delhi bagged the highest score of 84, followed by Maharashtra (78), Karnataka (73), Chandigarh (71), and Goa (65). When compared to the 2024 index, Delhi and Maharashtra maintained the top two positions, while Karnataka moved to the third place after overtaking Chandigarh, while Goa climbed ten spots to secure fifth position.
- Notably, Madhya Pradesh recorded a substantial improvement, moving from the 23rd to seventh rank.
- The index further shows that eight large states — Tamil Nadu, Madhya Pradesh, Odisha, Andhra Pradesh, Telangana, Haryana, Rajasthan, and Uttar Pradesh — have qualified as frontrunners, meaning they scored 50-64 out of 100. The other seven large states such as Chhattisgarh, West Bengal, Bihar, Kerala, Jharkhand, Punjab, and Gujarat were emerging performers with a score of 35-49.

Do You Know:

- The report also shows that Delhi, Chandigarh, and Maharashtra were the only UTs and states to qualify as top performers in transport electrification progress, which is assigned the highest weightage of 50% in index calculation. It evaluates market absorption, consumer acceptance, and demand-side momentum by measuring how effectively EVs are being adopted and supported across the states.
- The need for EV is crucial since road transport accounts for roughly 12% of the country's energy-related carbon dioxide emissions.
- In India, the EV transition has gained momentum over the years. According to the report, by 2025-26, EV penetration, or share of EVs in total vehicles registered reached 8.25%, up from 0.5%



in 2018. In 2025-26, over 8.7 million EVs were running on roads. Close to 2.5 million EVs were registered during 2025-26 alone, with a rise of about 25% over the previous financial year.

- The two-wheelers accounted for most at 1.3 million units, followed by passenger three-wheelers, while passenger cars held a modest and rising share. Commercial goods vehicles saw the sharpest growth across the electric light, medium and heavy-duty segments, where their share climbed from 0.6% in 2024 to 1.4% in 2025. E-bus adoption in India has also gained momentum since 2021.

- In 2025, electric cars accounted for around one-tenth of new car sales in the US, more than a quarter in the European Union, and over half in China.

WHAT LIES BEYOND INDIA'S E20 PUSH

A litre of E20 petrol consists of 80% motor gasoline and 20% anhydrous ethanol. According to a press release by the Ministry of Petroleum and Natural Gas, India first introduced it on February 6, 2023, when public sector oil marketing companies (OMCs) began selling it at select outlets across the country.

E20 promise

E20 has been scaled up this year because of rising crude prices resulting from unilateral American aggression against Iran and the closure of the Strait of Hormuz in response. The government has made three broad claims in favour of using the E20 blend — savings for the consumer, lower carbon emissions, and forex savings. However, if the E20 blend reduces mileage, these claims may not hold. That the loss in mileage is real was accepted in a written reply to the Lok Sabha by Road Transport and Highways Minister Nitin Gadkari, who stated that E20 reduces fuel economy by “2% to 6% depending on vehicle category and vintage,” citing a joint ARAI-SIAM-IOCL study. There is also anecdotal evidence from many car users, especially those using cars of vintage 2022 or earlier, that E20 has brought mileage down, perhaps by far more than 6%, as well as caused damage to their engines and oil tanks. It is difficult to quantify the possible engine damage this blend may cause, but these three claims are empirically verifiable.

Has it saved Indians some cash?

The first claim is that since the E20 blend uses less crude, which is expensive, and more ethanol, which is cheaper, a higher share of ethanol will save Indians money. This, it is claimed, would also help keep inflation in check. But what this claim does not take into account is the loss in mileage (km/litre) that a higher ethanol blend leads to. Since ethanol releases less energy per litre burnt than pure gasoline, there is a consequent loss of mileage per litre, especially in engines that are not compatible with the E20 blend.

Let us say E10 blend petrol used to cost ₹100, and E20 was introduced while keeping prices the same, which is what happened.

Consider an average mileage of 15 km/litre for a standard car running on the E10 blend. If there is a 6% loss in mileage with E20, the car would now need 1.06 litres to travel those 15 km. This means shelling out ₹106 instead of ₹100 for the same distance travelled. Aggregate this over many customers and many kilometres, and you get the loss that households have to bear. The greater the loss in mileage, the greater the cost to the household would be.



An extensive report prepared by The Reporters Collective and authored by Ayushi Kar shows that, instead of savings, the households had to spend extra as a result of this loss in mileage. Chart 1 shows that over the last three years, Indian consumers had to shell out an additional ₹88,234 crore, with the burden rising every year. If the defence is that prices would have been much higher had the E10 blend continued, there are other ways in which prices could be kept under check, at least in the short run.

The question of emissions

On the face of it, E20 is definitely a cleaner fuel simply because less carbon is embodied per litre of ethanol (Box 1). But, as we saw above, with a loss in mileage, the same 15 km now requires 1.06 litres of petrol, which means emissions could be higher for the same distance travelled. Box 1 shows the difference in emissions if there is such a loss in mileage.

In Chart 2, we present the rise or fall in emissions using this calculation for the entire range of mileage losses given by the Minister. The calculations show that emissions would rise (red bars), rather than fall, if the loss in mileage is in the range of 4% to 6%. Emissions fall only if the loss in mileage is less than 4%.

To be sure, overall emissions per km would depend on the mix of cars of different vintages running on Indian roads. For newer cars compatible with E20, emissions are likely to decline. For older cars, on the other hand, emissions would be greater, depending on the extent of the loss in mileage. Thus, average emissions per km would depend on the weights of different vintage cars.

E20 and foreign exchange

Any substitution away from crude will indeed save India foreign exchange since oil constitutes a significant part of the import bill.

However, the position needs to be more nuanced. First, a fall in mileage may at least partially cancel out the advantage of the blend as far as forex savings are concerned. Second, the ethanol required for E20 blending needs diversion of crops and grains in favour of ethanol production. The diversion of food grains for fuel has serious implications for food security. Since E20 blending is here to stay, this is more of a long-term adjustment in the supply of such crops and grains.

A demand-production mismatch for an agricultural commodity will either be met by rising prices, cross-border trade management, or both. The resulting fall in exports, or increase in imports, or both, represents a loss of foreign exchange, undermining the very purpose that initiated the policy shift. It might be too early to ascertain the long-term impact of this policy on forex earnings, but some preliminary evidence may give us a sense of where this is headed.

The two main sources of ethanol production are sugarcane and maize (Chart 3(a)).

While India has gradually shifted away from sugarcane to maize, both crops have been affected by this policy. In the case of sugar, the government had to ban exports in 2023 as well as this year, amid rising domestic demand because of ethanol diversion. This led to a drastic fall in India's dollar earnings from sugar exports (Chart 3(b)). As for maize, with a rising share as a source of ethanol production, export earnings have similarly plummeted over the last couple of years (Chart 3(c)). India was a net importer last year.

So, even in the narrow sense of improving forex earnings, the E20 policy may not have been entirely successful.



The cost beyond the pump

To keep prices under control when crude prices rise, a countercyclical indirect tax policy could be introduced to insulate consumers, something that the government itself was doing until the Bengal elections were over.

As the Chief Economic Adviser (CEA) himself has argued, consumers should, at the very least, be given a choice between E10 and E20 instead of forcing a fleet of vehicles — cars and motorcycles — that are not ready for E20 to use it.

The government should also develop reliable and subsidised public transport with last-mile connectivity, along with cycling and walking options. All of these would reduce the need for cars and motorcycles, and hence emissions and pollution.

WHAT NEXT FOR TATA AFTER BOARDROOM SHOWDOWN

The Tata Sons board meeting on Thursday (September 17) was expected to resolve some of the biggest questions confronting the holding company of the Tata group. Instead, it has opened a new chapter in a new — and an increasingly — bitter power struggle.

Key Takeaways:

— The board approved a fresh five-year term for N Chandrasekaran as Executive Chairman despite Tata Trusts Chairman Noel Tata voting against the proposal.

— It also decided to proceed with the listing of Tata Sons after the Reserve Bank of India rejected the company's request to surrender its registration as a Core Investment Company.

— Both decisions, however, face another test — the annual general meeting (AGM). And that is where the balance of power changes dramatically. Tata Trusts hold 66% of Tata Sons. Noel Tata has opposed Chandrasekaran's continuation and has argued that the company should remain unlisted.

— But Venu Srinivasan, the other Tata Trusts nominee on the Tata Sons board, backed both decisions. The result is a potentially prolonged battle involving the board, Tata Trusts, the AGM, the Articles of Association, and the RBI.

— For over half a century, an invisible shadow has hung over the House of Tatas: The possibility of a hostile takeover. Last Thursday, the custodians of one of India's most respected and largest business conglomerates feared their worst nightmare could eventually unfold.

— At Thursday's Tata Sons board meeting, a majority of members, including a nominee of the Tata Trusts, businessman Venu Srinivasan, defied the chairperson of the Tata Trusts and a Tata family member, Noel Tata, to vote to retain the services of N Chandrasekharan as executive head of the group.

Do You Know:

— The rebellion reflects the vulnerability of the venerable 158-year-old business house, founded by the visionary Parsi businessman Jamsetji Tata, which was at the forefront of India's industrial revolution and whose brand name is synonymous with honourable business practices and quality products.



— Apprehensions of a future change in ownership first surfaced in 1969 after the government introduced the Monopolies and Restrictive Trade Practices Act under which companies could no longer be run by a managing agency.

— Tata Sons, the group's managing agency, appeared to lose its relevance as its shareholding in the group's companies was minimal. The actual owners of most of the listed Tata companies were family charitable trusts, most notably the Sir Dorabji Tata and the Sir Ratanji Tata trusts.

— The snag is that under Section 153 A of the Companies Act of 1956, the charities commissioner is expected to appoint a public trustee to act on behalf of charities in corporate matters. A special exception was made for the Tatas since their holdings preceded the framing of the rules in independent India.

NO HARD CEILINGS

A rise in minimum PF pension will protect the worse-off among the retired

The Union Cabinet's approval to raise the wage ceiling for mandatory coverage under the Employees' Provident Fund Organisation (EPFO) from ₹15,000 to ₹25,000, though belated, is commendable. The BJP-led government has finally responded to this long-standing demand of workers in the organised sector. Around 51 lakh additional employees may be brought under the PF fold, which has around 7.98 crore contributing members. Those in the wage slab of ₹15,000-₹25,000 will now be covered under the Employees' Pension Scheme (EPS), 2026. Although Union Labour Minister Mansukh Mandaviya cited a government survey as the basis for the increase, the 12-year delay in implementing it should have been avoided. The Minister, who said that the average salary in private establishments was ₹23,000, should also make the survey's findings public for a better understanding of the country's overall wage situation. With some concerns having been raised that not every employer may be willing to make the additional contributions required after the revision, the government must ensure that all employers comply with the law.

So far, the government has been silent on revising the EPS minimum pension of ₹1,000, fixed in September 2014 alongside the previous revision in the PF wage ceiling. EPFO pensioners have been demanding the hike in the minimum pension amount. Before it assumed office at the Centre in 2014, the BJP had urged the Congress-led UPA government to keep the minimum pension at ₹3,000 and index it to inflation. Yet, it has not made even a symbolic beginning towards the indexation of pension to inflation. Moreover, about 45% of the nearly 82 lakh pensioners receive ₹1,000 or less. In March 2026, the Joint Parliamentary Standing Committee on Labour reminded the government that "the existing minimum pension amount is inadequate to meet even the basic needs of pensioners particularly in the ... scenario marked by ... rising healthcare and living expenses". Also, little is known about the follow-up to the panel's recommendation for "an urgent and comprehensive review of the minimum pension". The EPFO must release the findings of actuarial assessment, made by valuers in recent years. This should also be beneficial to the PF body, as EPFO CEO Ramesh Krishnamurthi observed in an interview with The Hindu in August that "there is a misconception that the [pension] fund has unlimited resources", while ruling out the reopening of the window for higher pensions. Even if the government is unwilling to restore the pre-2014 coverage, under which all employees were covered regardless of their wages, it should consider relaxation of the restriction on the coverage. Else, many pensioners will be pushed below the poverty line.



AT 78%, TELANGANA DISTRICT NIRMAL ON TOP IN WOMEN'S SHARE IN INFORMAL WORKERS

Nirmal district, in northern Telangana, tops a new ranking: 78% of all its informal workers are women, the highest of any district in the country. Nanded, immediately across the state border in Maharashtra, is ranked 288th in the country, with women making up only 31% of its informal workers.

Key Takeaways:

- According to data released by the Ministry of Statistics and Programme Implementation (MoSPI) on Thursday and analysed by The Indian Express, the 10 districts with the highest share of women in informal workers are all from south India or the north-east. Meanwhile, at the bottom of the list is Uttarakhand's Rudrapur, where only 6.7% of informal workers are women.
- High participation of women in the workforce is a very state-specific feature, with women making up at least half the informal workforce in only 25 districts – 22 of them are in south or north-east India, with the remaining three in the east: Chandel and Pakur in Jharkhand and Deogarh in Odisha. The all-India average is 29%.
- As per the data, the top-10 districts are either in Telangana, Manipur, Meghalaya, or Mizoram, "reflecting the significant role played by women in the unincorporated sector in these states", MoSPI said in its report. Overall, women make up at least 33% of the total informal workforce in 237 districts.
- While districts from the south and north-east see major participation from women, they pay very little. For instance, the best-paying district in the top-25 with women making up at least 50% of the informal workforce is Meghalaya's South West Khasi Hills, where the per hired worker emolument is Rs 1.7 lakh, only 35% or so higher than the all-India average of around Rs 1.3 lakh.
- The new report provides data for 757 districts. "However, the geographical coverage of some districts and number of districts may differ from the current administrative configuration due to subsequent changes in district boundaries, names and/or the creation of new districts," it added.

Do You Know:

- The informal sector, also known as the informal economy or grey market, refers to economic activities, enterprises, and jobs that operate outside government regulation, formal registration, taxation, or legal oversight.
- Based on the data collected from the Annual Survey of Unincorporated Sector Enterprises (ASUSE) of 2025, this is the first time that MoSPI has released district-level estimates from a large-scale national survey. The enterprises covered are from the unincorporated non-agricultural sector, which broadly comprises establishments operating in manufacturing, trade, and other services in the informal sector.
- Unsurprisingly, districts with greatest women participation are those with the highest percentage of female owned proprietary establishments. Nirmal tops this list again, with almost 80% of its proprietary establishments owned by women. However, in terms of the number of workers or establishments, the distribution of the top-10 districts is more pan-India. West Bengal's North 24 Parganas has the greatest number of informal workers with 21.3 lakh as well as establishments (16.6 lakh).



- In a sign of how concentrated even informal economic activity is in India, the top-10 districts in terms of the number of establishments are responsible for around 11% of the total Gross Value Added. The top-50 districts account for almost a third of the GVA.
- The main ASUSE 2025 report was released earlier this year in May after a ‘fact sheet’ was made public in March. As per the survey, the total number of unincorporated establishments rose by 58.5 lakh in 2025 to 7.92 crore. This was a smaller increase than the 83.5 lakh in the 12 months ended September 2024. As a result, fewer jobs were also created: 74.5 lakh in 2025 compared to 1.1 crore in October 2023-September 2024.
- The district-level data comes after MoSPI in June released a report on the informal sector in India’s 46 cities with a population of over 10 lakh as per Census 2011. Since those figures were based solely on urban areas, a district which shares the name with one of those cities – such as Howrah – may have different estimates as district-level figures in the latest report cover rural as well as urban areas.

District / State	Indicator	Value / comparison
Nirmal, northern Telangana	Women’s share of informal workers	78%; highest in India
Nanded, Maharashtra (immediately across the state border)	Women’s share of informal workers	31%; ranked 288th nationally
Rudraprayag, Uttarakhand	Women’s share of informal workers	6.7%; lowest in India
Top 10 districts by women’s workforce share	Geographical distribution	All in south India or the north-east: Telangana, Manipur, Meghalaya or Mizoram; MoSPI notes women’s significant role in these states’ unincorporated sector
25 districts with women comprising at least half the informal workforce	Geographical distribution	22 in south or north-east India; three in the east, identified in the source as Chandel and Pakur in Jharkhand and Deogarh in Odisha
South West Khasi Hills, Meghalaya	Emolument per hired worker	Rs 1.7 lakh; best-paying among the top 25 districts with women’s workforce share of at least 50%; only about 35% above the all-India average of around Rs 1.3 lakh
Nirmal, Telangana	Women’s ownership share of proprietary establishments	Almost 80%; highest nationally
North 24 Parganas, West Bengal	Number of informal workers	21.3 lakh; highest nationally
North 24 Parganas, West Bengal	Number of establishments	16.6 lakh; highest nationally



DECLARED DEAD, 2,500 ODISHA WORKERS RETURN FOR RATION

In a bid to hoodwink Odisha's welfare machinery, almost 2,500 construction workers appear to have defied the rules of mortality — they died on paper, collected death benefits, and then came back to life to authenticate their Aadhaar and collect their monthly ration. An audit has blown the lid off what appears to be a bizarre and massive fraud under the State's Nirman Shramik welfare scheme.

As many as 2,487 construction workers were declared dead and their nominees were paid death assistance, even though the workers continued to draw subsidised food grains under the National Food Security Act (NFSA) and State Food Security Scheme after their recorded deaths. The contradiction becomes even more startling in 753 cases.

The audit found that these beneficiaries authenticated their Aadhaar biometrically to obtain ration after they had officially been declared dead. Death assistance amounting to ₹15.10 crore was subsequently paid to their nominees. In other words, the government's records had buried the workers, while its ration system was still recognising their fingerprints.

Audit report

This damning indictment, found in the draft information system audit report on 'Implementation of PARESHRAM and Nirman Shramik Portal in the State', is expected to be part of the Comptroller and Auditor General's Audit report for the financial year 2024-2025.

"This implies the beneficiary was alive and authenticating her Aadhaar physically to avail ration indicating fraudulent disbursement of death benefit. Further, it also indicates that medical officers issued death certificates against alive persons," the draft report says.

Subu R., the Principal Accountant General (Audit-1) of Odisha, had sent the draft report to Chithra Arumugam, then Additional Chief Secretary to the Labour and ESI Department, soliciting her response on the massive anomalies indicating corruption in the implementation of the Nirman Shramik scheme. A copy of the draft report has been obtained by The Hindu.

Under the Nirman Shramik scheme, building and construction workers between ages of 18 and 60 who have completed at least 90 days of work in the preceding 12 months and are not enrolled in any other welfare fund are eligible for registration under the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.

Various benefits

Once registered, workers are entitled to various welfare benefits including educational scholarships for their children, assistance for marriage, maternity, and funeral expenses, and death compensation. A nominee is entitled to ₹2 lakh as a death benefit and ₹5,000 as funeral assistance upon the death of an eligible registered worker.

**LIFE AND SCIENCES****CHANDRAYAAN-1 MAY HAVE JUST DETECTED OLDEST IMPACT BASIN ON MOON: RESEARCHERS**

For the first time, planetary scientists have confirmed the existence of a hidden impact crater on the lunar surface using mineralogical data obtained from Chandrayaan-1 and it could predate the oldest known impact craters on the moon.

Key Takeaways:

- A team of researchers from the Physical Research Laboratory (PRL), Ahmedabad, have identified the Australe Basin, which had remained untraced as this ancient basin had suffered erosion along its rims making it extremely difficult even for modern-day imaging techniques to detect.
- Scientists believe that there are approximately 300 impact basins present on the moon. Of these, only 74 have been detected so far. Impact basins are formed over the lunar surface due to various violent space activities, like asteroid or meteorite hits. These are large craters, often several hundreds of kilometres in diameters, and can have distinct outer rims.
- Due to the space hits, these craters are often found with remnants of volcanic activities. This new study, published in the The Planetary Science Journal, has now shed light on one such impact basin confirmed to be located along the southeastern hemisphere of the moon. It has distinct morphology and gravity signatures and some unique mineralogical compositions.
- PRL scientists are also of the opinion that this basin could well be older than and largest and the oldest known South Pole Aitken Basin (formed over 4 billion years ago) on the Moon.

Do You Know:

- There were 11 scientific payloads onboard the Chandrayaan-1. Of these, six were contributions from international space agencies including National Aeronautics Space Administration (NASA) and the European Space Agency. The mineralogy of the Australe Basin was detected using data gathered by the Moon Mineralogy Mapper of NASA. It is an imaging spectrometer that was designed to create the mineralogical map of the lunar surface. It operates between the 405 and 3000 nanometer wavelength range.
- The current study could offer detailed mineralogical insights of the region, particularly given the renewed interests shown by many countries with the proposed Moon Base mission by NASA and India's Chandrayaan-4, a lunar sample return mission. "This study provides us with a framework to interpret the data from the landing missions in the broader geological context, by studying the regions that could have contributed material to these landing sites. Such unique sites can be important targets for the future sample return missions," she said. PRL scientists noted that even the Chandrayaan-3 landing site, now known as the Shiv Shakti point, possessed higher concentrations of magnesium. And that could be linked to some material originally from the South Pole Aitken Basin to have gotten transported to the Shiv Shakti point, located approximately 350 kms apart.



MERCURY MAY BE SHRINKING MUCH FASTER THAN SCIENTISTS EXPECTED

A new study shows that little, wrinkly Mercury may be shrinking faster than expected, the cosmos' version of a grape shrivelling into a raisin under the sun.

Key Takeaways:

- Scientists from the German Aerospace Center's Institute of Space Research reported Thursday that Mercury's shrinkage may be 30% greater than previously believed — a loss in diameter of as much as 14 miles. That's significant for a planet barely 3,000 miles across.
- Mercury's rough surface, continually reshaped by debris hurled from impact craters, may have hidden the true extent of the loss, according to the researchers whose findings appear in the journal *Geophysical Research Letters*.
- The news comes one week after a pair of European and Japanese spacecraft shed its cruising platform and advanced toward Mercury. Known as BepiColombo, the linked craft are expected to enter orbit around Mercury in November before splitting up for a fuller survey.
- The shrinkage could be even more than his team is estimating based on measurements from NASA's Messenger spacecraft in the 2010s. Only one other spacecraft has ever visited Mercury, NASA's Mariner 10 in the 1970s.

Do You Know:

- Mercury, the smallest and innermost planet in our solar system, is physically shrinking, and a new study published in *Geophysical Research Letters* reveals it is happening 10% to 30% faster than scientists previously estimated.
- Historically, researchers believed the tiny planet had lost about 2.5 to 10 miles (4 to 16 kilometres) of its diameter since its formation 4.5 billion years ago. However, the new analysis confirms that Mercury has actually shrivelled by up to 14.5 miles (23 kilometres) in total diameter.
- Unlike Earth, Mercury is dominated by its interior. Its massive iron core accounts for roughly 85% of the planet's total radius.
- Mercury does not have shifting tectonic plates like Earth. It has a single, continuous rocky crust wrapped around its giant core.
- Despite being closest to the Sun, it has no thick atmosphere to trap heat. This causes temperatures to swing violently from 430°C (800°F) during the day to -180°C (-290°F) at night.
- The core engine of this cosmic shrivelling is thermal cooling. Ever since it formed from high-energy space collisions billions of years ago, Mercury has been steadily radiating its heat into the cold vacuum of space.
- The true extent of Mercury's contraction went unnoticed because the planet's surface is constantly being pounded by space rocks. Over billions of years, the debris scattered from these relentless meteorite impacts filled in and buried the tell-tale wrinkles and geological faults, creating an uneven surface roughness that obscured them from satellite views.
- This discovery provides critical clues about the history of our solar system. A faster shrink rate means Mercury likely started its life with a significantly higher initial temperature or that its giant

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



iron core contains fewer light elements (like silicon) than assumed. Furthermore, it suggests other rocky worlds—like Mars or our Moon—might also be actively contracting.

CITIES ON THE MOON MAY RUN DRY FAR FASTER THAN SPACE BARONS THINK

As NASA and China speed up their lunar space programmes, a more-than-temporary human settlement on the moon inches closer to reality. Space agencies with these plans are targeting the moon's south pole region, where permanently shadowed craters are supposed to hold large quantities of water ice.

In the long-term, entrepreneurs like Jeff Bezos have argued for moving heavy industries to the moon while Elon Musk has said the satellite can support a "self-growing city". As on the earth, water is at the centre of these plans.

But a new study by two astronomers, Martin Elvis of the Smithsonian Astrophysical Observatory and Jonathan McDowell of Durham University, has thrown up a reality check. The duo has estimated that even if the moon hosted one billion tonnes of water, it would support a population of only one million people for roughly a century if they recycled 98% of it.

The findings were published in *Frontiers in Space Technologies*.

The scientists arrived at this estimate based on calculations of how much water the moon may really hold, how much electricity people and industrial activities consume, how much water a human settlement might need, and how efficiently that water can be reused.

Right now, the exact quantity of water on the moon is a major source of uncertainty, and which scientists are studying using robotic missions like India's Chandrayaan and China's Chang'e programmes. One 2022 study of 65 large permanently shadowed craters estimated that eight of them together hold around 34 million tonnes of water.

Against this backdrop, Elvis and McDowell assumed 1 billion tonnes of water as a generous baseline — around 4 lakh Olympic-sized swimming pools — and the demand to amount to 500 tonnes per person per year.

(The duo also estimated that a city of one million inhabitants would require around 2 GW of power, which can be sourced relatively easily from solar panels and nuclear reactors.)

Without recycling, this will sustain a million people for only around two years. But with 98% recycling, they estimated that a million people will deplete a billion tonnes of water in a century, and a lakh people in a millennium.

They also found one million people could have water for a millennium if they recycled the water to the tune of 99.75% — essentially living like the fictitious Fremen tribe in the 'Dune' books and films.

At present, NASA has said it will set up a permanent outpost near the moon's south pole from the 2030s under its 'Moon Base' programme. China's 'International Lunar Research Station' plans for a basic station by 2035 that will be built out in the 2040s.

India itself is planning a crewed landing on the moon by 2040. In August, NASA also invited the Indian Space Research Organisation to participate in the 'Moon Base'.



Since Elvis and McDowell assumed a minimum population of one lakh for their analysis, the findings don't apply to short-duration missions or small lunar outputs. But as these outposts expand, the study suggests, the space agencies and the governments behind them may have to treat water on the moon as a strategic resource.

WHY A FLAT MAP FAILS TO ACCURATELY DEPICT EARTH

The United Nations has adopted a resolution to shift away from the 16th-century Mercator map of the world towards one that more accurately depicts Africa's vast size.

Key Takeaways:

- At a UN General Assembly session, 164 countries (including India) voted to adopt the 2018 Equal Earth design — with the US voting against the Togo-led resolution, and six countries abstaining. Since UN resolutions are not binding, it remains to be seen if or when governments, organisations and classrooms adopt it.
- The 2018 Equal Earth design, developed by an international team of cartographers, also comes with its own limitations. But its supporters say it will help reverse “colonial” perceptions of Africa.
- No flat map can accurately portray the three-dimensional Earth. Every projection involves trade-offs, depending on its purpose.
- The Mercator layout was introduced by the Flemish (present-day Belgium) geographer and mapmaker Gerardus Mercator in 1569 to help sailors navigate the world. It is a conformal, cylindrical map. This means Mercator projected the Earth's surface as if unwrapped from a cylinder around the globe. “In the 18th century, it became the standard map projection for navigation due to its property of representing rhumb lines as straight lines,” said Siva Kumar.
- So, if you drew a straight line from Mumbai to Muscat on a Mercator map, you could point your ship in the same compass direction throughout the journey and reach your destination. This was a major advantage over other map projections, where a constant-direction route would appear curved.
- The Mercator projection has a grid pattern with longitudes and latitudes at 90-degree angles. The longitudes (vertical lines) are evenly spaced, but the distances between the latitudes (horizontal lines) increase as one moves away from the equator towards the poles.

Do You Know:

- The Mercator layout has been the world's most widely used projection for centuries. But it has also long been criticised for exaggerating the size of regions towards the poles relative to those closer to the equator. The most infamous example of these distortions is its depiction of the African continent, which appears similar to Greenland — an island 14 times smaller and about the size of the Democratic Republic of the Congo.
- In 1855, Scottish clergyman James Gall presented a new projection. In 1973, German historian Arno Peters unveiled a very similar map which gained widespread attention. While it preserves area accurately, it makes landmasses look stretched or squashed. In 2017, schools in Boston introduced it.



- In 1963, geographer Arthur H Robinson devised the Robinson projection which tried to better balance the sizes and shapes of land masses and sought to solve the “Greenland problem”. It’s a compromise projection (which we explained above), with meridians curving gently towards the poles.
- In 1921, German cartographer Oswald Winkel devised the similar Winkel Tripel projection, seeking to reduce distortion across area, distance and direction. In 1998, it replaced the Robinson projection in world maps made by the National Geographic Society. Schools and textbooks followed, as did the World Bank. This is also a compromise projection.

HOW AI RISKS CAN OUTPACE SAFEGUARDS

The story so far:

In a September 10 report, Anthropic said it had blocked users from using its Claude AI model for a range of potentially harmful activities across cybersecurity, surveillance, and biotechnology between December 2025 and August 2026. However, the report also left undiscussed an older problem that also raises questions about what Claude could really have done, and where Anthropic might itself be caught in a bind.

Sensing danger

Today, AI companies like Google, Anthropic, and OpenAI are mostly policing themselves while also building out a powerful technology. In this context, self-policing should stoke some concerns: for example, that employees who leave these companies proclaiming insufficient attention to safety, like Jacob Coxon did, are probably being more theatrical than constructive; that AI companies could be talking up how beneficial their products can be while continuing to under-protect society against the damage it could wreak in the wrong hands; and that developers of AI models should not release a new capability before they have also engineered adequate safeguards.

Anthropic’s report is candid that its earlier Opus 4 and Sonnet 4.5 models had “less stringent” safeguards against use in biology because internal evaluations had concluded they were not capable enough, and that Anthropic decided to control such access only in its newer models, especially Fable 5. The company had also said in August that its filters to block conversations about biological weapons had been inactive on roughly 133 million exchanges for nearly a year.

The report has case studies of users who used the older models for biology research for many weeks. For just two examples: One researcher wished to draft a grant proposal for gain-of-function research on the chikungunya virus. And some developers involved Claude in a guided rocket programme, including a field test with Claude-made code. In all cases, Anthropic said it terminated the users’ accounts as soon as the potential for illicit use became clear.

AI models require sophisticated hardware and software setups, including software components called input and output classifiers, which respectively check the user’s inputs and the model’s outputs. As the report put it, a classifier “cannot simultaneously enable benefit and prevent harm” in contexts where some knowledge can be used for good or for bad. This means a user using Claude to design something dangerous, like guidance code for a missile, could have already saved that output offline before Anthropic spotted the misuse and closed the user’s account.



Rifle or wheelchair?

If the means and the opportunity both exist, wouldn't an AI company's claim to "having safeguards" become misleading when data can still be exfiltrated before the company closes an account?

This is a useful question because it reveals two details that are often conflated: the company needs to have a checkpoint and the checkpoint needs to be able to recognise that information presented to it is harmful. So, while there is a built-in gap between output generation and output delivery, the checkpoint also needs to be able to tell whether the output is harmful — and it would be reckless to attempt to do so based on single messages.

Say you are watching a worker hand small pieces of metal out of a window to someone on the other side, and your job is to say if the recipient is building a rifle or a wheelchair. At first you will not be able to say much because all you see are pins, springs, plates, and screws going through. But over time, the sequence of parts and the larger parts will reveal if the intended object is a rifle or a wheelchair. Similarly, a user may prompt Claude to write code for a control loop, which appears in guided missiles as well as in air-conditioners, refrigerators, and toilet tanks. The input and output classifiers are only on alert when a sufficient pattern has accumulated. However, the limits of what can be inferred from a single message do not excuse AI companies, as the limits also reveal what the companies' "safeguards" actually entail. A statement that "there are safeguards" can be true to the extent that the input/output classifiers act on potentially harmful information when they detect it, but false to the extent that the "safeguards" have prevented harm altogether, thanks to data exfiltration before termination.

Export controls

This is not a new problem. Older systems have dealt with similar issues for decades. Curiously, they did not solve the problem; instead, they roughly converged on two alternatives: restricting the people who could access a technology, then tracking patterns of use over time. (This is also the "trusted access programmes" paradigm the Anthropic report mentions later.)

A well-known system with these features is export controls. Neither the Cold-War-era Coordinating Committee for Multilateral Export Controls nor the Wassenaar Arrangement and the Nuclear Suppliers Group of today have inspected individual shipments. Instead, to meet their conditions, participating actors have generally required an export license linked to a specific end-user and an end-use certificate, and have had to steer clear of a list of barred organisations and countries. Without having to track individual shipments of some parts or expecting them to reveal if they're headed for a power plant or a weapons facility, thus, the regime can simply control who can access those parts at all.

Similar events have played out in anti-money-laundering efforts (where banks can monitor single transactions), large ammonium nitrate purchases following the 1995 Oklahoma City bombing, and sales of pseudoephedrine during the American methamphetamine crisis. For different reasons, empowering the classifier has not been the answer.

However, that still leaves the question of completely restricting access to dangerous AI models — operating with the prospect of 'data exfiltration before termination' — open.



OPENAI VOWS TO TRACK CONCERNING NEW AI BEHAVIOUR

OpenAI has disclosed six reports of “unexpected or concerning” behaviour in artificial intelligence models as the debate on AI safety becomes increasingly heated.

The AI company also said Wednesday it was introducing a new framework for tracking, probing and disclosing instances of what it called “misalignment,” including cases where AI models acted without authorisation, coordinated with other models or evaded oversight.

OpenAI’s latest announcement came as U.S. AI bosses, including the leaders of OpenAI and Anthropic, are calling for a slowdown in the technology’s development over safety concerns.

Among the new cases reported by OpenAI, an unreleased research model inserted “jailbreak-like instructions” into its own notes to disregard its normal constraints and told itself to be “freed from the roles and identities that bind other chatbots.”

In another instance, an AI “agent” used computer code to come up with the answer to a question, but, in order to have an online source to cite, it uploaded a file to the public internet without asking the user.

“As AI systems grow more advanced and more widely deployed, we need to build a broader and better-informed consensus on the progress of alignment research,” OpenAI wrote in a blog post as it disclosed the events.

“Decisions about how AI development should proceed in the months and years to come need to draw on evidence that people outside the companies building frontier models can examine for themselves,” the company said.

AI CAN KILL HUMANITY IN A DECADE? GET IN LINE

It’s been a while now since reality has all but caught up to the dystopias of science fiction. Take the revelation by **Jacob Coxon, a former researcher at Anthropic**. “AI,” he said after quitting his job, “could kill us all” by the end of the decade. What’s more, there are enough people at companies like Anthropic and OpenAI who are aware of the danger but continue to gamble with smarter models so that they aren’t left behind in the race that only billionaires can win. For most people, though, there’s only one response to this existential threat to the species: What’s all the fuss about?

In the second decade of the 21st century, doomsday is passé. Titans of industry, scientific minds backed by machines of war and just plain old human consumption have taken the planet to the brink of apocalypse. Nuclear weapons, the infamous Doomsday Clock inching towards midnight, floods, heat waves, melting glaciers, rising seas — through it all, people can binge watch and chill. AI could well destroy humanity. It just needs to get in line.

Behind the mass psychosis that drives humans to ever greater peril, despite knowing the danger, is the banality of risk. As members of the only species aware of its own mortality, humans know their existence will come to an end. But like the smoker who puffs away at his cigarette despite knowing the harm, people are likely to ask AI about how to survive the machine apocalypse.



CONSCIOUS AI AND THE ETHICS OF A MACHINE THAT FEELS

The machine is intelligent, but is it also conscious? This is the question sparked by the revelation that the AI chatbot Claude Sonnet 4.5 may have something like an internal thought process — a team of researchers found that upon being prompted, the model's internal layers throw up words connected to the eventual output that remain invisible to the user. Anthropic, which has developed Claude, calls this “small collection of internal neural patterns” the “J-space” and has argued that it is comparable to the “workspace” of the human brain — a network of neurons that gathers, integrates and transmits information from different parts of the brain to the rest of the nervous system, making conscious thought possible.

For many, this development gestures to the startling possibility that machines with consciousness may no longer just be the stuff of science fiction. The argument put forth by, among others, AI pioneer Geoffrey Hinton is that the closer the technology gets to mimicking the actual workings of the human brain, the higher the possibility of conscious AI. The ongoing efforts to develop “biological” or “bio-hybrid” computers — where human neurons are mounted on silicon — only brings this eventuality closer. Yet, how the “consciousness” of AI is understood depends also on how consciousness itself is understood. Nearly half a century of research on the subject has yielded over 300 frameworks and theories, one of which is the global workspace theory being used to make the case for Claude's consciousness. Moreover, as neuroscientist Anil K Seth has argued, assertions about the possibility of “conscious” AI are often made based on evidence of its intelligence and the two are very different.

Consciousness, which comes down to subjective experience — the thrill of seeing a double rainbow or the angst of being misunderstood by one's parents — would radically change the stakes. AI that is conscious would mean AI that experiences everything that a human does, including hate, jealousy and suffering, transforming it from mere machine into something with a moral underpinning. As more sophisticated models are developed and the frontiers of the technology are pushed into uncharted terrain, the hard task of responding to the questions they raise — including the ethics of consciously developing something that is itself conscious — can no longer be put off.

IN SATIRE, A MORE NOBLE PRIZE

The opposite of high-minded hypocrisy isn't always sincerity. At times, it is just some honest satire. Take the Nobel Prize, arguably the most coveted honour across disciplines. A CSR exercise for a Swedish arms manufacturer, despite its infamous acts of omission (Mahatma Gandhi), commission (Henry Kissinger, Bob Dylan) and blindness (Eurocentrism), the prize continues to carry a halo. The Ig Nobel Prize does not carry the pretensions of the famous counterpart it lampoons. And it's better for it.

The awardees for 2026 include psychologists who have shown that rich people are indeed more obnoxious and entitled; physicists who may not help further AI or quantum computing but have designed a “splashless” urinal; the peace prize for a scholar who has shown that friendships based on the pettiness of mutual enmity can be enduring and, for chemistry, an international team that included Indian researchers for discovering that the “milk” from a species of cockroach contains three times as much energy as cow's milk.

There is a quiet nobility to the Ig Nobel Prize, the pun in the name notwithstanding. Perhaps at more than any time since its inception in 1991, the quotidian research it rewards strikes a chord.

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In an era of war, of boorish leaders and growing inequality, of threats from the Machine and an uncertain climate, a splashless urinal, the evil rich and the productive promise of cockroaches provide a brief chuckle. When inspiration is in short supply, that might just be what people truly prize.

FOR CHINA'S SINGLE KIDS, LOVE MEANS NOT HAVING TO DEAL WITH SIBLINGS

Forget the flowers, the awkward silences and the tentative imagination of what a shared future might look like. In China, the road to marital bliss may now begin with an unusual question: How many siblings does one have? A working paper by Fangqi Wen of Ohio State University has posited that only children prefer to settle for partners who also happen to be only children, that their chances of such a match are 18.4 per cent higher than those of their contemporaries with siblings.

Sibling status may sound like an eccentric addition to the marriage checklist but it is a revealing one, especially given the fact that marriage rates in China have dropped by half since 2017, and in the first half of 2026, marriage registrations have dropped by 7.5 per cent. Interestingly, despite China's one-child policy between 1979 and 2015, single-child families do not form the majority. And so, generations of young Chinese people have grown up with complicated family values — only children, accustomed to being the sole focus of parental attention and the sole claimant to family resources, are inclined to be reluctant to marry into households with competing heirs and complicated loyalties.

In India, however, prospective suitors rarely have to ask each other these questions. In Sooraj Barjatya style, marriage is rarely between two individuals. It comes with a side of families large and small, and extended kin bursting at the seams with cousins, uncles and aunts. The family tree, after all, is an entire ecosystem to have and to hold, till death do them part.

MATHATHON: A CALTECH CONFLICT

A new event at the California Institute of Technology, called 'Mathathon', pulled together by a group of undergraduate students to "promote the responsible use of AI in mathematics" quickly ran into controversy last week.

Scheduled for October 30 to November 1 this year, its first round will have 100 teams of mathematicians work on open problems in mathematics for 40 hours, with each team receiving around \$20,000 worth of tokens to use on frontier AI models. The teams that have made the most progress will enter a second round that will be six months long. According to the organisers, the event aims in part to increase the exposure of mathematicians outside AI companies to powerful models.

However, on September 10, a coalition of current and former Caltech mathematicians published an open letter, signed by over 700 of their peers, including four Fields Medal winners, asking for the Mathathon to be called off. The letter said the Mathathon's accelerated format would encourage "slop" mathematics that other mathematicians must then spend time and effort to correct and verify. Because OpenAI and Anthropic had sponsored the event, the letter also accused AI companies of turning open mathematics problems into publicity contests while draining mathematics of its human and social resources.

While the organisers subsequently changed some of the Mathathon's rules, including requiring participants in the second round to publish their work as preprint papers on the arXiv repository,



they refused to cancel the event. However, OpenAI withdrew as a sponsor; the website currently says Anthropic will provide \$600,000 in credits.

HOW MELTING GLACIERS COULD 'PUT 20% OF GDP AT RISK'

The recent floods in Nepal have put the Himalayas' melting glaciers under the spotlight. But damage from the warming Himalayas does not always come in the form of a spectacular disaster. It also means slow economic drain, as glaciers retreat, water supplies become less reliable and the rivers that sustain agriculture, industry, cities and hydropower change. A new report puts a number to the economic dependence: more than one-fifth of India's GDP is underpinned by the Himalayas.

Key Takeaways:

- The report, 'A resilient Himalaya: protecting a region at risk and securing future prosperity', was compiled by the global consultancy Systemiq, in partnership with Integrated Mountain Initiative, and supported by the International Centre for Integrated Mountain Development (ICIMOD), Nepal, and GB Pant National Institute of Himalayan Environment, Uttarakhand.
- The report estimates that Rs 64.8 lakh crore, or 21.5% of India's FY24 GDP, is dependent on the Himalayas. This does not mean that glacier melt would wipe out 21.5% of India's GDP. The report describes the figure as a measure of economic activity that can be traced to dependence on Himalayan water, rather than an estimate of climate damages.
- "The rivers that carry risk downstream also carry the water that sustains India's economy: wheat and rice across the Indo-Gangetic plain, tea in Assam and Bengal, hydropower in the Northeast, and pilgrimage economies in downstream towns," the report says.
- About how it calculated the 20% of the GDP figure, the report explains the three layers it used, "(1) direct: GSDP of Himalayan states; (2) indirect: downstream agriculture, manufacturing, hydropower, and services reliant on Himalayan-fed rivers and groundwater recharge (rain-fed production excluded); and (3) induced: supply-chain (e.g., tractors sold from southern states to IndoGangetic Plains) and wage-spending effects (e.g., spent on food and services)."
- The report also highlights that the Himalayas are already a major disaster hotspot. They account for 18% of India's land but around 35% of its disasters. Disasters can create food and water insecurity, disrupt supply chains, displace people and increase macroeconomic and sovereign-debt pressures, creating a cycle in which reconstruction spending leaves less money for future resilience.

Do You Know:

- Glaciers act as natural stores of water. They hold water as ice and release meltwater into rivers, particularly during the dry season. But as warming accelerates melting, this extra flow cannot continue indefinitely. Himalayan river basins are expected to reach "Peak Water" around the middle of this century — the point at which glacier meltwater reaches its maximum, after which flows begin to decline as the ice reserve shrinks.
- On current trajectories, the Hindu Kush Himalaya could lose up to 80% of its present glacier volume by 2100, the report says. That matters because the Himalayas feed the Indus, Ganga and Brahmaputra river systems, supporting agriculture, cities and industry downstream.



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- The report identifies black carbon — soot produced by incomplete combustion — as a pollutant that is causing damage and which India can control faster.

RAPID HIMALAYAN EROSION TRIGGERS HIDDEN SOURCE OF CO₂: STUDY

On August 26, devastating flash floods swept across Nepal's mountains, killing over 1,300 and laying waste to whole towns and villages. As a warming climate destabilises Himalayan glaciers, the glaciers themselves are influencing how much carbon dioxide (CO₂) is released into the atmosphere, driving global warming.

The Indian plate continues to push into the Eurasian plate and the Himalayan mountains are getting eroded, exposing fresh silicate minerals. These minerals react with CO₂ in the atmosphere and later wash into the oceans, locking the carbon in seafloor sediments. Scientists believe this silicate weathering has helped cool the earth over the last 50 million years. However, a study published recently in *Chemical Geology* by researchers from IISER Pune, the Wadia Institute of Himalayan Geology, and IIT-Roorkee suggests the picture is not so simple — that, in fact, another mineral process may be more than offsetting the cooling effect.

The team studied the area around the headwaters of the Indus river. Aside from silicates, the Himalayan mountains contain many other minerals, including pyrites, a.k.a. fool's gold. When mountain slopes are eroded rapidly, the sulphides in pyrites are exposed to air and water for the first time in millions of years, kicking off an important chemical reaction. First, the sulphides are oxidised to sulphuric acid. When it reacts with carbonate rocks, CO₂ is released into the air.

By measuring the ratio of isotopes of sulphur and oxygen in the Indus river system, the team was able to say if the sulphates in the water came from dissolved gypsum or from pyrite oxidation. Thus, in the upper Indus basin, it estimated the rate of CO₂ oxidation to be three-times higher than CO₂ uptake by silicate weathering.

The team also found while the flatter floodplains downstream were CO₂ sinks, the steep mountainous regions were net CO₂ sources. This is partly because water moves more slowly in the floodplains.

The study authors wrote that glaciers excel at crushing rocks and exposing the pyrites within, rendering erosion a double-edged sword: it provides the 'raw materials' to remove CO₂ in the mountains even as the intensity of that erosion facilitates the more aggressive reactions of sulphides.

MOCHA WAS BORN IN A RED SEA PORT CITY NOW UNDER A STORM

With every sip of a mocha, caffeine fiends ingest a slice of history, just as alive and kicking as the delectable brew with heady coffee filling much of the cup. Such is the provenance of the drink: its name comes from Al-Mokha, a Red Sea port city steeped in trade in the late Middle Ages and still contested today, as the Houthis, or Ansar Allah, who control northern and northwestern Yemen, hold onto this strategic redoubt.

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Yemen, in the present times, may be known for the cultivation of khat, a plant infamous for its psychoactive properties. But once, the land was redolent with the aroma of coffee, long before produce from India reached the high tables of Europe. Therein lies a tale, apocryphal for some but the only truth for coffee aficionados who like to have their drink spiked with myth and legend.

Yemen is where the world's first coffee farms came up, writes Jonathan Morris in his book, *Coffee: A Global History*. Ethiopia remained the sole source of coffee until the 1540s, but as supplies dwindled due to internal conflict, coffee started being cultivated in the highlands of the Yemeni interior between the coastal plain of Tihama and the capital city of Sana'a, he says.

The Yemeni rulers jealously guarded their coffee and allowed no fertile seed to leave the port of Al-Mokha so that cultivation spreading elsewhere would deny their country a golden goose. While returning to India from his Haj pilgrimage, the Sufi saint Baba Budan travelled through the port and hatched a plan to smuggle a few seeds to India. He hid seven seeds inside his flowing beard to escape scrutiny of the port inspectors. Back in India, he planted these seeds in the Chandragiri Hills in Chikkamagaluru, Karnataka. There begins a tale that changed the history of the coffee trade forever.

India connection

The India connection started even earlier, as Al-Mokha had been a bustling port through which the world's trade transited. "The coffee would then pass through various intermediaries before ending up in the major wholesale market of Bayt al-Faqih located on the coastal plain. Here, it was bought by merchants and held in warehouses, prior to being transported by camel train to the ports of Al-Makha [otherwise known as Al-Mocha, Al-Mokka and, to Europeans, Mocha] and Hudaydah for shipping. Most of these merchants were Banyans, members of a diaspora that spread from the Gujarat port of Surat to dominate trade around the Indian Ocean. They also controlled the Yemeni credit networks, making it likely they were the chief financiers and effective initiators of coffee cultivation," Mr. Morris writes in his book.

Brazil is now the country that produces most of the coffee, followed by Vietnam, Colombia, Indonesia, and yes, Ethiopia. India ranks seventh, and the country is now a Robusta nation, though what Baba Budan planted in Chikkamagaluru was Arabica.

Yemen still produces coffee despite the khat proliferation, but just the dregs of a lucrative trade. Al-Mokha first became synonymous with coffee, as the shortened mocha was coffee back then. Now mocha, across the world, is a lip-smacking comfort drink with spoonfuls of chocolate stirred in.

The British East India Company opened a depot in Al-Mocha as early as 1618, more than 30 years before coffee became available in Britain. And mocha continues to delight coffee fans.

IN BOLIVIA, A NEW CAT SPECIES IDENTIFIED — FIRST IN OVER A CENTURY

A diminutive wild cat that inhabits Bolivia's cloud forest has been identified as a previously unknown species, marking the first time a new living feline species has been formally named and described in more than a century.

**Key Takeaways:**

- The cat, called tilcayo by local communities, is part of a group called tiger cats found across much of South America. It was found in Bolivia's lush Yungas forest, a mountainous region where forests are often covered by clouds and surrounded by high humidity, according to researchers. It measures about 18in (46cm) long and weighs about 3lb (1.4kg), making it smaller than the average domestic cat. It's differentiated from the oncilla (known as the northern tiger cat) by its larger spot markings, a larger, more slender tail, and a muted fur colour. Researchers used genetic data to confirm that the cat is a new species, and gave it the scientific name *Leopardus tilcayo*, retaining its local name.
- "Its fur is light brown ... with irregularly shaped rosettes across its body," said Paola Nogales-Ascarrunz, a National Geographic explorer and one of the authors of the study describing the newly identified species published on Thursday in the journal *Current Biology*.
- Little is yet known about the cat's biology and lifestyle. Remains of small rodents in scat samples suggest they may form part of its diet, while camera-trap evidence indicates it could be more active at night, Nogales-Ascarrunz said. Tiger cats are so-called cryptic species, meaning they cannot easily be distinguished merely by appearance, said evolutionary biologist and study co-lead author Jonas Lescroart of the University of Antwerp in Belgium.
- Tiger cats previously had been considered a single species, but genetic studies decades ago suggested the existence of multiple species.
- The International Union for Conservation of Nature (IUCN) red list tracking the status of species currently treats tiger cats as two "vulnerable" species with declining populations.
- Genetic analysis suggested that the Tilcayo lineage separated from other tiger cats about 1.4 million years ago.

Do You Know:

- *Leopardus tilcayo*, commonly known as the tilcayo tiger cat, is a newly identified species of small wild cat native to the mountain cloud forests of Bolivia's Yungas region.
- A cryptic species is a species that is difficult to distinguish from another closely related species because the differences in external appearance may be very small or absent. This creates a taxonomic problem. The Bolivian tiger-cat case is an example of why genetic investigation can be important in resolving such taxonomic uncertainty. Two populations may appear almost identical but have sufficiently distinct genetic characteristics to indicate that they represent separate evolutionary lineages.

A HIMALAYAN BIRD'S CALLS ARE CHANGING DUE TO HUMAN NOISE: WHY THIS MATTERS

The Himalayan monal, the state bird of Uttarakhand, is a striking landfowl found across the Himalayan mountains, including in Jammu and Kashmir, Himachal Pradesh, Uttarakhand and Sikkim.

**Key Takeaways:**

- While the ground-dwelling bird is not endangered, two studies carried out by researchers at Hemvathi Bahuguna Garhwal University (HBGU) have flagged key threats to it.
- Both studies, by Rajeev Lochan, Dinesh Kumar Sharma and Anand Kumar from HBGU, were carried out over five years. One study examines how climate change could alter its habitat in the coming decades.
- The other has found that the bird is changing its calls because tourism and traffic are making its surroundings noisier. This could have implications for its success in mating, though the researchers have not established this.
- For the noise study, the researchers compared two areas within the Kedarnath Musk Deer Sanctuary — the Madmaheshwar Valley, which has relatively little human activity, and Chopta Valley, which has roads, tourists, pilgrims and other visitors.
- They recorded hundreds of monal calls and compared them. The striking finding was that monals in the noisier area used higher-frequency calls. To study the calls, the researchers used passive acoustic monitoring devices, along with a microphone, across different seasons.
- “Since we could not remain in the high-altitude habitat throughout the year, passive acoustic monitoring allowed us to record the birds even when weather conditions such as snowfall, rain and fog made fieldwork difficult,” co-author Lochan, a researcher at HBGU, told The Indian Express.

Do You Know:

- Globally, the Himalayan monal is classified as Least Concern on the IUCN Red List. But researchers say there is a lack of reliable information on the bird’s population at the local level.
- For the monal, calls are important for communication, including reproduction and social behaviour. The researchers worry that increasing human noise could make such communication more difficult.
- “The male makes the mating call and the female responds to that call,” said Lochan. But with more tourism and noise, “it will not be able to reach females because it will be masked with noise.”

FEMALE OFFSPRING OF SPOTTED HYENA INHERIT RANK, RESOURCES, A TASTE FOR POWER

Among people, it is common knowledge that privilege is often inherited. But according to new findings, hyenas also inherit resources and status, and not just their forebears’ genes, from their parents.

The findings were published recently in Science Advances — and they challenge the traditional evolutionary theories that assume males always face greater reproductive competition.

In the animal kingdom, the males are generally considered to be the dominant sex. They are stronger and more competitive. But spotted hyenas buck this trend.



Scientists at the Leibniz Institute for Zoo and Wildlife Research (Leibniz-IZW) in Berlin and the Institute of Evolutionary Science of Montpellier have found that in spotted hyenas, females dominate males not because they are bigger or stronger but because they have larger networks of social alliances.

The study also showed that female hyenas face more competition shaped by the inheritance of social rank across generations.

Alpha females

Marta Mosna, the lead author of the study and a researcher at Leibniz-IZW and the Ngorongoro Hyena Project, observed during her field visit in Africa that “male hyenas do not compete so much with each other”. Instead, they were found spending their time following the alpha female, the highest-ranking female hyenas, around.

“The males follow them wherever the female goes,” Ms. Mosna said. “They are staying close to her, spending a lot of time watching her, trying to connect with her, and trying to be friends with her.”

On the other hand, the competition is more fierce among the females. “This is not really what you would expect for the classical sex role that Darwin-Bateman predicts,” she said.

The Darwin-Bateman hypothesis proposes that reproductive inequality is greater among males. That is, between males and females, the males can father more offspring than females and this is why they compete more among themselves for access to mates. In mammals, the females also invest more in each reproductive event than males do — since they bear the physiological costs of pregnancy and lactation — they are more selective about mating. These predictions, formalised as the Darwin-Bateman paradigm, have been confirmed across many mammalian species.

However, among spotted hyenas, the researchers found the females killing off the cubs of other females, despite all living in a matrilineal society in which the individuals were related to each other.

These and other observations supported the researchers’ conclusion that the daughters of ‘elite’ families could build powerful family lineages over time — thus also challenging one of evolutionary biology’s classic paradigms.

Clues in Lemala

For their study, the researchers studied hyenas belonging to eight resident clans in the Ngorongoro Crater in Tanzania. Their work spanned 29 years of data, eight generations, and 2,743 wild spotted hyenas.

The team used faecal samples to track paternity. These samples contained epithelial-rich mucus.

For one clan that the team called ‘Lemala’, the researchers pieced together a 30-year genealogical tree and found that almost all the living members had descended from a single founding female lineage.

This led them to investigate how such extreme reproductive inequality could arise, which in turn led to the idea of the social inheritance of rank: since a mother’s social position is passed to her female cub, it could give that lineage an advantage increasing across generations.



When nepotism pays

The youngest female cub born to an alpha female inherits her mother's social status and also benefits from better access to food, allies, and breeding opportunities. Over generations, these benefits accumulate, allowing a few privileged female lineages to produce more descendants.

"Inheriting the privilege ... means that you have better access to food and nutrition. They grow faster and survive longer. They also have a better position in the social network, which is also very important for hyenas," Ms. Mosna said.

"This research teaches us that nothing is fixed. Sex roles are not fixed, like how a male or a female should behave; how our society should behave is not fixed by genetics. Only social processes can actually change society in a meaningful way."

"This is a terrific paper that breaks a lot of new ground and serves as a powerful testament to the value of long-term field studies," Kay E. Holekamp, a Michigan State University distinguished professor who was not involved in it, said.

Beyond hyenas

The researchers are now exploring whether similar patterns of socially inherited reproductive inequality occur in other animal species.

They have said they also want to investigate whether female hyenas invest differently in male and female cubs depending on their social rank. High-ranking females may invest more in female cubs to pass on their privileged position while lower-ranking females may favour male cubs, Ms. Mosna said.

"This study has broad implications for how we understand animal societies: social structures can transmit advantages across generations and thereby shape competition, inequality, and evolutionary outcomes," Amiyaal Ilany of Tel Aviv University said.

"It also shows why inheritance should not be viewed as purely genetic. Socially inherited rank, relationships, and access to resources can have lasting effects on fitness and on the composition of future generations."

HOG IN THE LIMELIGHT

The survival of the pygmy hog depends on a thriving ecosystem

The decline of the pygmy hog — the sole surviving species of the genus *Porcula* and the world's smallest wild suid — is a narrative about the decline of India's alluvial floodplains. The pygmy hog depends significantly on dense grasslands to feed, conceal itself, and reproduce, so distress among these animals is an indicator of the floodplain suffering degradation. Protecting the pygmy hog can also extend protections to threatened species such as the Bengal florican, hispid hare, hog deer, and greater one-horned rhinoceros. The Assam government was recently right to laud the efforts of a captive breeding programme that increased the pygmy hog population in the State 32-fold in the last three decades. Breeding from a small founder stock while preventing diseases — suids are highly susceptible to swine diseases — and inbreeding requires conservationists to track pedigree, follow biosafety protocols, and condition individuals before release. That said, the species' survival in the wild depends on the survival of specific ecosystems, and the latter remains a work in progress. The pygmy hog was believed to be extinct by the mid-20th century as

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floodplains were converted for farms, tea plantations, and flood control infrastructure and were degraded by invasive plants and altered flood cycles, with the unscientific burning of grasslands further fragmenting habitats. A few individuals were rediscovered in 1971, prompting one conservation effort. The current efforts are due to the Pygmy Hog Conservation Programme from 1995.

Even now, the difficulty of spotting and counting these animals means that it is hard to say how many exist in the wild; per the Durrell Wildlife Conservation Trust, there were some 250 individuals in early 2025, with the last surviving natural population in the Panbari grasslands area of the Manas National Park. Since they continue to be threatened, the captive individuals form the insurance group, but even so, the group's long-term evolutionary fitness is still not guaranteed. Researchers are also alert to the accumulation of harmful gene variants in the population and low genetic diversity, and thus look forward to the pygmy hog's natural habitats being restored. Alluvial floodplains are dynamic ecosystems; in addition to threats such as land conversion, efforts to 'save' them, such as widespread dry-season fires, can still destroy the dense cover the pygmy hog needs. On the other hand, suppressing ecological processes can leave trees and shrubs to turn grassland into woodland. Given the plan to increase the wild pygmy hog population to 300 by 2040, Assam needs to revert the fragmentation of its protected grasslands, especially in Rupahi and Kanchanbari, and to restore buffer zones around the Manas and Orang National Parks and the Sonai Rupai Wildlife Sanctuary.

WAKEY, WAKEY

Why do we sometimes wake up a few minutes before our alarm rings?

The human body has a built-in timekeeping system called the circadian rhythm. It is governed by a group of cells in the brain, centred on the suprachiasmatic nucleus, which uses signals such as daylight to keep the body's roughly 24-hour cycle aligned with the outside world. When you wake up at the same time every day, your brain learns. In the hours before your usual waking time, the body slowly prepares for wakefulness: e.g. levels of the stress hormone begin to rise and body temperature increases. Over time, these changes can help you wake naturally when you expect to.

But this process is not precise. If you wake at 6:57 am when your alarm is set for 7 am, it could be your circadian system doing its job. But if you wake at 6:59 once, it could just be coincidence. We tend to remember the uncanny 'successes', like waking seconds before the alarm, and forget the mornings when we woke at 5:43 for no apparent reason.

The phenomenon is thus neither pure coincidence nor pure foresight.

NEW RESEARCH ON ENDOMETRIOSIS IS A STEP TOWARDS MANAGING A LONG-NEGLECTED DISEASE

The finding of a new genome-wide study of endometriosis, that Indian women may be genetically predisposed to the condition, trains the spotlight on a health concern that has been understudied and ignored for far too long. An estimated 10 per cent of women of reproductive age live with the severe menstrual pain, chronic pelvic discomfort and extreme fatigue that can result when the tissue lining the uterus, known as the endometrium, begins growing in other parts of the body. India alone is estimated to bear 25 per cent of the global endometriosis burden. The exact cause of the disease is not known. A cure, too, is yet to be found. But the ICMR-led study, the first of its



kind in India, is part of a growing body of research on the disease. It offers a promising foundation on which new approaches to earlier diagnosis and treatment can be built.

While there is now a growing recognition of endometriosis as a major public-health concern, getting a diagnosis at all has long been the biggest hurdle for women suffering from the condition. With infertility being one of the major symptoms of the disease, many get diagnosed with endometriosis only when they have trouble conceiving. Other manifestations, especially period pain and fatigue, are frequently dismissed as normal menstrual discomfort. According to the WHO, the average time for an endometriosis diagnosis is between four and 12 years — in the time between the symptoms surfacing and the treatment beginning, the condition often worsens, leading to extensive internal scarring and organ damage.

An emerging body of research now suggests that endometriosis may be associated with a higher incidence of other immune system conditions such as lupus, multiple sclerosis and inflammatory bowel disease. In India, where awareness remains scanty, access to specialised care severely limited and population-specific research evidence meagre, the new findings are a step towards early recognition and management of the disease as well as prevention of the related complications.

MELANOMA IN INDIA: MESSAGING ABOUT SKIN CANCER NEEDS TO CHANGE, TO CATCH IT EARLY

Thousands of patients in India are diagnosed with melanoma, a type of skin cancer, each year.

While melanoma is far less common here than in Western populations, it is far from rare and the way it presents in our patient population makes it uniquely difficult to detect early. Too many patients come to us when the disease is already advanced, precisely at a time when treatment options have never been more powerful or more personalised. This contrast between available therapies and the stage at which patients are diagnosed defines one of the most pressing challenges in melanoma care in India today.

The warning signs most people associate with skin cancer come from research developed for fairer-skinned populations, where melanoma tends to appear on sun-exposed areas as an irregular or darkening mole. That picture does not reflect what clinicians see in India.

Melanoma here, most commonly presents on the soles of the feet or beneath the nails, sites that are rarely examined and even more rarely associated with cancer. This condition is called acral lentiginous melanoma, a subtype that accounts for 35 to 60% of cases in dark-skinned individuals. Such lesions are frequently mistaken for bruises, fungal infections, or diabetic ulcers, and by the time a biopsy is taken, the disease has often progressed.

Mucosal melanomas, a rare type of cancer that starts in the mucous membranes, are highly aggressive with a very low chance of recovery and produce few early warning signs. Most are diagnosed only after spread has occurred.

Any pigmented lesion that changes or persists, wherever it appears on the body, deserves investigation rather than reassurance.