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DreamIAS



INTERNATIONAL

THE PHANTOM THAT FLIES

Low-cost, hard to track, harder to stop and capable of overwhelming in swarms, the fibre-optic-guided drones are proving to be a disruptive force in the Russia-Ukraine conflict and parts of the West Asia war.

According to Rahul Bedi, a Delhi-based journalist reporting on military and security matters, fibre-optic drones represent an inflection point in modern warfare — cheap expendable systems that are no longer constrained by electronic jamming or battlefield visibility. “In Ukraine and in southern Lebanon, they have redefined the front line, enabling persistent low-altitude strikes in heavily contested zones. The result is a battlefield where control is increasingly determined not by scale or sophistication of conventional weapon systems alone, but by adapting these phantom-like drones to dominate the environment.”

To Manmohan Bahadur, retired Air Vice Marshal and a former Additional Director General of the Centre for Air Power Studies, fibre-optic drones are the classic result of the cycle of counter-measures and counter-counter measures in warfare. “The net result is that modern and technologically savvy armies are having to face a threat that is difficult to intercept.”

The Russia-Ukraine war has been significantly shaped by drone warfare, with drones accounting for up to 80% of casualties in some engagements. However, the vulnerability of drones that use wireless radio frequency (RF) communications led to further innovation, most notably, the use of drones guided by fibre optic cables. These drones — or what are called single-use fibre optic drones — have become increasingly common. As the first mover in deploying this technology, Russia gained a combat advantage. Its effectiveness prompted Ukraine to adopt it, and fibre-optic drones are now estimated to account for about 10% of Ukraine’s drone production.

In the Israel-Hezbollah conflict, Hezbollah’s lethal use of first-person view (FPV) attack drones, guided by a physical fibre optic cable, has forced personnel manning Israel’s defence and jamming systems to blink, marking a shift in battlefield tactics.

Real-time control

At the core of the operations is a thin fibre-optic line or spool, extending up to even 50 km in some instances. As a direct connection it has two benefits — first, real-time control and second, replacing the earlier grainy drone-generated visuals with high-resolution video transmission and spectacular battlefield imagery right up to the moment of attack.

The fibre controls the signals, telemetry, and also high-bandwidth video which are transmitted using light signals. Though the enemy could be unleashing electronic countermeasures, the operator does not even flinch, getting only a consistent and responsive connection.

But what may seem flawless has its challenges too such as the weight of the attached fibre canister and military payload — which in turn could affect drone battery life — and the loss of communication in case the fibre is destroyed or damaged during flight by even strong winds. There are reports of soldiers snipping the fibre, but as a counter, fibre manufacturers are adding protective coating with an infusion of Kevlar, though this results in a larger fibre diameter.



Israeli forces are reported to be using physical defences, which include protective nets and even metal cages on military equipment to block drones, a point Mr. Bahadur highlights.

“At present, the counter measures to these drones are rudimentary. There is no doubt that a counter-measure would be developed for this technology too, but the impact is the psychological effect on ground troops who, at present, can only try and shoot them down, if they are able to see and engage these small sized drones in time,” he says.

More research in early detection of these unmanned aerial vehicles using infra red or acoustic sensors, apart from among other methods such as disabling of the fibre optic lines using lasers, would be key, he adds.

RATIONALISING IRAN’S NUCLEAR CAPABILITY

The story so far:

Under pressure from U.S. President Donald Trump to abandon its nuclear programme, Iran has “vowed” to protect its nuclear stockpile. At the same time, former supreme leader Ayatollah Ali Khamenei disapproved of the use of nuclear weapons on religious grounds. How does Iran reconcile the two positions?

What does the NPT allow and restrict?

The Treaty on the Non-Proliferation of Nuclear Weapons — NPT for short — discourages countries from developing nuclear weapons, but does not prevent them from developing the ability to make these weapons. This is ostensibly because some of the same technologies and processes are necessary in a civilian nuclear programme, such as generating nuclear power and making nuclear isotopes for medical use. But the NPT does not turn a blind eye altogether: it expects the civilian programme to include some safeguards that resist the ability to develop from becoming the possession of a nuclear weapon. Examples of such safeguards include closely monitoring the use of technologies like uranium enrichment and plutonium reprocessing.

This said, even these safeguards are focused on diversion, which is only one of the two pieces of the gap between ability and possession, the other being capability. That is, a country can have the capability to develop a nuclear weapon, but the NPT’s safeguards have been designed to deter the diversion of that capability to military uses. Countries interested in helping tame the spread of nuclear weapons have enforced this fuzzy barrier using export controls and diplomacy, including sanctions. The International Atomic Energy Agency (IAEA) contributes as an independent watchdog that performs intrusive inspections.

Why is not knowing a country’s nuclear intent a problem?

This is one way the world has kept itself from downsliding into nuclear catastrophe. It is a fragile setup because the regulatory regime decision focusing on weaponisation rather than capability has created important downsides. Perhaps foremost among them is the threshold state: a country that learns about and builds everything required to make a nuclear weapon but stops just short of building one. This country may also strategise its breakout — the rapid sequence of events from enriching weapons-grade fissile material to deploying a nuclear warhead. This way, the country does not draw sanctions, but the moment its policy changes, it can ‘breakout’ quickly. North Korea was once an example of a threshold state — and now so is Iran.



Not knowing whether a country will actually build nuclear weapons, especially since it has the ability to do so, is also bad for the non-proliferation regime for a few reasons. When a country breaks out, the regime will be forced to respond very close to weaponisation, which may warrant drastic measures, which does not bode well to limit escalation. Second, a non-nuclear-capable country has to guess whether another country — perhaps a neighbour — intends to build nuclear weapons. Figuring it out requires judgment, diplomacy, and acting in good faith, all of which are powerful but hard to enforce using external pressure. It also muddies international waters. For example, South Korea does not view Japan with suspicion but it may not extend the same courtesy to, say, Argentina.

Another consequence is the nuclear cascade: if Country A is a threshold state and is not on good terms with its neighbours, the neighbouring countries may find it necessary to arm themselves with nuclear weapons in case Country A decides to break out. This is why the world has clusters of nuclear-capable states: South Asia, West Asia, North America, and Eastern Europe.

How close is Iran to a nuclear weapon?

Iran joined the NPT in 1970 but has recently expressed doubts about its participation. It is also a threshold state with a breakout time widely understood to be in the order of a few weeks. It is also thought to possess around 500 kg of uranium enriched to 60%. According to The New York Times, in fact, Iran possesses 11 tonnes of uranium overall enriched anywhere from 2% to 60%. Nuclear power reactors require uranium enriched to significantly under 20%. Weapons-grade uranium requires 90%. The way enrichment works, the road from 60% to 90% is much shorter than getting to 60%. In other words, Iran is for all practical purposes a nuclear-capable state — yet it is not known to have developed a nuclear weapon.

Ayatollah Ali Khamenei spoke against using nuclear weapons, calling them ‘haram’. Many have claimed that he issued a fatwa — a ruling based on Islamic law — against the nuclear bomb. Tehran has held that its stockpile and nuclear infrastructure are “peaceful” and intended for civilian use. This is technically possible because uranium enriched to 20% or more can be transformed in a process called downblending to a lower enrichment and used for civilian purposes. The NPT also treats the use of nuclear technologies for scientific progress as every country’s “inalienable right”.

Iran’s claims to that end were also politically credible as it abided by the 2015 Joint Comprehensive Plan of Action (JCPOA), a.k.a. the Iran deal, until Mr. Trump unilaterally exited it in 2018. In effect, Mr. Trump sought to back Iran into a corner, which backfired after Tehran took licence from Israel’s aggression across West Asia to resume higher enrichment.

Despite the Joe Biden administration’s attempts to restore parts of the deal, Iran progressively scaled back its commitments under the JCPOA. In Islamic jurisprudence, Iran has a valorous duty to defend its homeland against “Zionist” aggression — which includes defending its enrichment sites and, by appealing to its right to scientific progress, its nuclear stockpile as well.

Why are the regulatory options limited?

These reasons alone have not convinced the international community, however, much of which agrees Iran is a threshold state. The UN Security Council, the U.S., and the European Union have sanctioned Iran pre-2015 over Tehran’s failure to declare uranium particles the IAEA found at three undeclared sites and the related past uranium processing activities, as required by its safeguards agreement with the IAEA.



Today, Iran's stockpile and the extent and sophistication of its nuclear infrastructure are believed to mean its breakout time could be short — yet the non-proliferation regime has limited courses of action because Tehran is technically toeing the line.

The U.S. and Israel have nonetheless repeatedly gone to war against Iran because they are nervous and want to eliminate even its status as a threshold state. This includes the ongoing conflict as well as the Twelve-Day War last year, and attempts over the years to assassinate Iranian nuclear scientists and mount covert attacks, such as the Stuxnet virus in the late 2000s.

How did the Iran-Iraq war shape Iran's stance?

In fact, the fatwa is also not necessarily binding, thanks to a policy called Maslahat-e-Nizam, meaning 'expediency of the system'. Specifically, in Shia Islam, a fatwa is not necessarily eternal but can be a ruling based on existing circumstances. If those circumstances change, so can the decision. Since the threats to Iran from Israel and the U.S. have been deemed existential of late — a point the U.S. has been happy to parrot as part of its brinkmanship — the Supreme Leader, currently Mojtaba Khamenei, could supersede his predecessor's diktat.

In the post-revolution era, Iran's leadership has been opposed to nuclear weapons on religious or ethical grounds because of the country's experiences during and after the Iran-Iraq war (1980-1988). In the early and mid-1980s, Iraq deployed chemical weapons against Iranian soldiers as well as civilians, killing tens of thousands. The Ayatollah Ruhollah Khomeini famously resisted retaliating in kind, appealing to his religion forbidding indiscriminate killing and securing a moral victory for his regime.

But Tehran revived its interest in the nuclear programme after officials argued that the international community, including the UN, had however failed to respond adequately to Iraq's use of chemical weapons.

INDONESIA'S 'NEW' AIRCRAFT CARRIER: DEFENCE BOOST OR EXPENSIVE GAMBLE?

On April 28, the Italian Parliament backed the Georgia Meloni-led government's plan to donate a decommissioned aircraft carrier, Giuseppe Garibaldi, to Indonesia. If things go as planned, the Indonesian Navy may welcome its first-ever aircraft carrier as early as October 5, as per the Naval Chief, Admiral Muhammad Ali.

With this, Indonesia will become only the second country in Southeast Asia, after Thailand, to operate an aircraft carrier. This purchase is being seen as a part of President Prabowo Subianto's push to modernise the Indonesian Armed Forces, in an effort to maintain strategic autonomy in the face of growing enmity between the United States and China.

Push for modernisation

"A big nation like us needs a strong military. No nation can be independent without having a strong military," were the words of President Subianto while addressing Indonesian Military personnel in 2025.

As per Rajiv Bhatia, distinguished fellow at Gateway House and former ambassador, "President Subianto's modernisation push in defence has been his guiding principle since his time as the Defence Minister." A former special forces operative and General in the Indonesian Army, Mr.



Subianto served as the country's Defence Minister from 2019 to 2024 in President Joko Widodo's government before ascending to the Presidency.

As a result, Mr. Subianto has inked and overseen a flurry of defence deals with a host of countries. Major deals included six FREMM-class and two Maestrale-class frigates from Italy; 42 Rafale fighters, 13 long-range radars, and two Scorpène-class submarines from France; and 48 KAAD fighter jets and two Istanbul-class frigates from Türkiye.

Mr. Bhatia added, "President Subianto's foreign policy has been more independent and resilient than his predecessor Jokowi [Joko Widodo]. He has been favouring better relations with the West, especially the U.S. However, he still prefers a balanced approach with respect to Beijing."

In 2024, Mr. Subianto stated, "Partnerships are better than conflicts," when questions on Chinese claims over Indonesian water arose after his visit to Beijing.

Strategic tightrope

Since swearing in, Mr. Subianto has been walking a diplomatic and strategic tightrope to balance China and the U.S., while trying to maintain the Bebas dan Aktif (free and active) policy of non-alignment that has guided Jakarta since independence. But recent times have proved difficult for the archipelagic nation.

China has been using increasingly aggressive postures on the Natuna Islands dispute. The dispute centres on Indonesia's Exclusive Economic Zone in the North Natuna Sea, roughly 650 nautical miles north of Jakarta, which China claims falls within its so called nine-dash line.

While Indonesia, for long, maintained that it had no territorial dispute with China in the South China Sea, the Natuna Islands have witnessed several confrontations since 2005. In 2020, when President Subianto was the Defence Minister, a major standoff drew warships, jet fighters, and even the then President Joko Widodo to the remote islands.

In 2024, a joint statement by China and Indonesia, after President Subianto's visit, resulted in Indonesia recognising the dispute officially for the first time. While the Indonesian Foreign Ministry was quick to reiterate that it did not recognise Chinese claims in the South China Sea under the United Nations Convention on the Law of the Sea (UNCLOS), Mr. Subianto had to face intense scrutiny over this controversial development.

On the other hand, in April this year, controversy arose when a leaked U.S. document reportedly detailed a deal which granted the U.S. 'blanket overflight rights' over Indonesia, agreed upon by both governments. Essentially, it allowed U.S. aircraft to use Indonesian airspace without permission until the U.S. itself chose to deactivate the rights. The now-stalled deal triggered a massive political storm in Jakarta, putting Mr. Subianto's government in a spot, yet again.

In such a situation, the news of Giuseppe Garibaldi might be the positive development that President Subianto needs. "It will be interesting to see how China, the U.S., and Indonesia's internal Opposition react to Garibaldi. It is certainly good news for ASEAN and India, which would want a stronger Indonesia in the Indo-Pacific," added Mr. Bhatia.



'Non-war operations'

"We intend to focus the ship on non-war military operations, but it may also be deployed for other missions related to combat," said Admiral Ali when he confirmed the plans to acquire the carrier in 2025 and stressed that the vessel may also be used for disaster relief.

But Commodore Deepak Bhatia (retd.), who has served aboard India's aircraft carrier INS Viraat, states, "You don't induct an aircraft carrier only for disaster relief missions. The forthcoming carrier will certainly enhance Indonesia's offensive and power projection capabilities."

Officially designated as an aircraft-carrying cruiser by the Italian Navy, Garibaldi was built by Fincantieri and decommissioned in 2024 after nearly 40 years of service. Being V/STOL (vertical/short take-off and landing) capable, it operated Harrier II aircraft and a mix of anti-submarine helicopters. The carrier will undergo a full refurbishment before joining the Indonesian Navy.

Indonesia is reportedly considering including the Harriers in the deal as well since it has limited aircraft options. While the U.S. has rejected Indonesia's attempts to buy the F-35 Lightning II aircraft, Chinese and French options are not equipped with vertical take-off and landing capabilities. Fincantieri has proposed to convert the carrier into a helicopter and/or drone carrier, ditching the fighters. However, a final decision is yet to be taken.

Though questions on the carrier's viability and age have been raised by the Opposition parties, Mr. Bhatia said, "The refit route was better suited for Indonesia since it would have been too expensive to buy a new one." Commodore Deepak Bhatia stated, "This addition to the Indonesian Navy will definitely make it a more potent force."

However, whether Indonesia can operate a carrier effectively, given its limited defence budget and near-zero experience, remains uncertain. Thailand's Chakri Narubet offers a cautionary tale: plagued by maintenance failures, rarely deployed, and now better known as a tourist attraction than a warship.

NORTH KOREA REVISES CONSTITUTION TO REMOVE 'UNIFICATION' WITH THE SOUTH

North Korea has deleted all references to uniting with South Korea from its constitution, a document reviewed by AFP on Wednesday showed, underscoring Pyongyang's push for a more hostile policy towards Seoul.

North and South Korea remain technically at war because their 1950-53 war ended in an armistice, not a peace treaty.

Pyongyang's constitution had previously contained a clause stating that it aimed "to realise the unification of the motherland".

That reference no longer appears in the latest version, presented on Wednesday by a professor during a news conference at South Korea's Unification Ministry.

North Korean officials considered constitutional amendments at a major congress in March, where leader Kim Jong Un labelled Seoul as the "most hostile state".



The revised constitution also includes a new clause delineating North Korea's territory. Using South Korea's official name, it says that includes the area bordering China and Russia to the north, "and the Republic of Korea to the south".

North Korea "absolutely does not allow any infringement on its territory", it added.

"North Korea appears to have codified the message that it will no longer seek to claim South Korean territory," said Yang Moo-jin, a professor emeritus at Seoul's University of North Korean Studies.

In turn, Pyongyang "expects the South not to infringe on the North's territory" he told AFP.

AFGHAN WOMEN, WAR-SCARRED AND SCATTERED ACROSS THE WORLD, CAN FINALLY PLAY FIFA TOURNAMENTS

War-scarred women footballers from Afghanistan living in exile across the world, can finally play in FIFA tournaments. After eight long years, they can proudly bear their country's name, and not compete under the Afghan Women United banner. Although FIFA has not officially recognised the Afghan Football Federation, as the ruling Taliban has banished all women's sports, the world football governing body's council voted on Tuesday to circumvent the rule. It's a resonant moment.

This moment offers hope and fires the imagination of athletes who fled the country when the Taliban returned to power in 2021. When it started restricting women's sports, 70-odd women fled their country just so that they could continue playing football, with the help of expats around the world. Their captain, Shabnam Mobarez, who was raised in Denmark, reached out to the community across the world and soon they found refuge in Australia, England, where the women's youth team trains, in partnership with the Premier League side Leeds United, Portugal and Italy.

The team will have success stories like Mobarez, Nadia Nadeem and Khalida Popal to emulate. They have rising talents like Fatima Foladi, who sneaked into the airport, showed her football credentials to the US military retreating from the country and managed to board the flight to the US. Manoozh Noori buried her medals in her backyard and escaped to Australia, where she plays for a club in the top division. Nilab Mohammadi, the women's team captain, left her post in the Afghanistan Army and fled to Australia. Some of their tales are stranger than fiction. They might never be as famous as Brazil's Marta or Spain's Alexia Putellas, but no law or custom could stop them from turning up for their country and fulfilling their dream.



NATIONAL

NEPAL OBJECTS TO MANSAROVAR YATRA VIA LIPULEKH; INDIA SAYS UNJUSTIFIED

The Balen Shah-led government in Kathmandu, just over a month old, has objected to India and China planning to conduct the Kailash Mansarovar Yatra through the Lipulekh pass.

Key Takeaways:

- India said that such claims are “neither justified nor based on historical facts and evidence”, and it remains open to “constructive interaction with Nepal”. The Lipulekh pass has been a “contested” territory and Nepal has often questioned moves by India and China to conduct trade and pilgrimages through the pass.
- The Nepalese Foreign Ministry said on Sunday, “The Ministry of Foreign Affairs has drawn the attention of various media outlets to the questions and concerns raised regarding the Kailash Mansarovar Yatra, which is said to be conducted between India and China via Nepali territory, Lipulekh.”
- “The Government of Nepal is completely clear and steadfast in the fact that Limpiyadhura, Lipulekh and Kalapani east of the Mahakali River are integral parts of Nepal since the Sugauli Treaty of 1816,” it said.
- The ministry asserted that the Government of Nepal has “conveyed its clear stance and concerns to both India and China through diplomatic channels regarding the Kailash Mansarovar Yatra.”
- “Even before this, the Government of Nepal has been continuously urging the Government of India not to undertake any activities such as road construction or expansion, border trade and pilgrimage in the area,” it said.
- Responding to the Nepalese statement, the Ministry of External Affairs official spokesperson Randhir Jaiswal said on Sunday: “India’s position in this regard had been consistent and clear. Lipulekh pass has been a long standing route for the Kailash Mansarovar Yatra since 1954 and the Yatra through this route has been going on for decades. This is not a new development.”
- “As regards territorial claims, India has consistently maintained that such claims are neither justified nor based on historical facts and evidence. Such unilateral artificial enlargement of territorial claims is untenable. India remains open to a constructive interaction with Nepal on all issues in the bilateral relationship, including on resolving agreed outstanding boundary issues through dialogue and diplomacy,” the MEA spokesperson said.

Do You Know:

- On April 30, India announced that the Kailash Mansarovar Yatra is set to take place from June to August this year. Nepal’s objection to Lipulekh pass being used for the yatra and India challenging Kathmandu’s premise sets a road-block that needs to be removed before the pilgrims begin their journey.
- The Nepalese Foreign Ministry was referring to India and China resuming trade through the Lipulekh pass in August 2025, before the GenZ protests toppled the government in September 2025.



- Lipulekh pass became a point of discord between India and Nepal in 2020, when the Oli government had objected to India building infrastructure and a road there. This had led to Nepal publishing its own map, claiming Lipulekh. India rejected such claims in May 2020, as well as in August 2025 when Kathmandu objected to Delhi's plans to start trade with China through the pass.
- Treaty of Sugauli, 1816— Signed on March 4, 1816, to end the Anglo-Nepalese War (1814–1816), the Treaty of Sugauli established the western boundary of Nepal along the Kali River (Mahakali/Sarada). It forced Nepal to surrender territories like Garhwal, Kumaon, and the Tarai to the British East India Company. The treaty remains the basis for ongoing Kalapani border disputes.

CABINET APPROVES BILL TO INCREASE SC JUDGES' STRENGTH FROM 34 TO 37

AHEAD OF the Monsoon Session of Parliament, the Union Cabinet on Tuesday approved a Bill to increase the strength of judges in Supreme Court from the existing 34 to 37.

Key Takeaways:

- In a statement, the government said the Cabinet, chaired by Prime Minister Narendra Modi, approved the Supreme Court (Number of Judges) Amendment Bill, 2026, which seeks to amend the Supreme Court (Number of Judges) Act, 1956, to increase the strength of the court by four.
- Currently, the Act provides for a maximum of 33 judges of the Supreme Court, excluding the Chief Justice of India. The amendment increases that to 37 judges, excluding the CJI.
- The Supreme Court currently has a strength of 32 judges, with at least four judges expected to retire in 2026. While Justice Rajesh Bindal retired in April, Justices J K Maheshwari and Pankaj Mithal are set to retire in June, Justice Sanjay Karol will retire in August, and Justice Satish Sharma will retire in November this year. Effectively, the SC Collegium headed by Chief Justice of India Surya Kant will have to make at least 9 recommendations this year, if the Bill is cleared. He has a tenure till February 2027.
- The last time the strength of the court was increased was in 2019, when an amendment raised it from 30 to 33, excluding the CJI. Originally, the Act had provided for a maximum of 10 judges, excluding the CJI, which was increased to 13 in 1960 and then 17 in 1977.

Do You Know

- Article 124 (1) in Constitution of India inter-alia provided "There shall be a Supreme Court of India consisting of a Chief Justice of India and, until Parliament by law prescribes a larger number, of not more than seven other Judges...".
- An act to increase the Judge strength of the Supreme Court of India was enacted in 1956 vide The Supreme Court (Number of Judges) Act 1956. Section 2 of the Act provided for the maximum number of Judges (excluding the Chief Justice of India) to be 10.
- The Judge strength of the Supreme Court of India was increased to 13 by The Supreme Court (Number of Judges) Amendment Act, 1960, and to 17 by The Supreme Court (Number of Judges) Amendment Act, 1977. The working strength of the Supreme Court of India was, however, restricted to 15 Judges by the Cabinet, excluding the Chief Justice of India, till the end of 1979, when the restriction was withdrawn at the request of the Chief Justice of India.



- The Supreme Court (Number of Judges) Amendment Act, 1986 further augmented the Judge strength of the Supreme Court of India, excluding the Chief Justice of India, from 17 to 25. Subsequently, The Supreme Court (Number of Judges) Amendment Act, 2008 further augmented the Judge strength of the Supreme Court of India from 25 to 30.
- The Judge strength of the Supreme Court of India was last increased from 30 to 33 (excluding the Chief Justice of India) by further amending the original act vide The Supreme Court (Number of Judges) Amendment Act, 2019.

DOCTORS DECIDE

With freedom comes great responsibility; decisions made as a consequence of any freedom must be informed by reasonable awareness of the fall out. In seemingly vesting reproductive autonomy with the woman, the Supreme Court might have edged out the essential role of a clinical review of the situation. The Court asked the Union government to amend the abortion law to remove the time limit on medical termination of unwanted pregnancies in the case of minor rape victims. The Bench of the Chief Justice of India, Surya Kant, and Justice Joymalya Bagchi made the observation while refusing to entertain a petition against an earlier Court decision allowing a 15-year-old survivor of rape to terminate the pregnancy during the 30th week. In the original judgment on the case, which was on curative appeal, the judges remarked that the right of the minor child to continue a pregnancy that is illegitimate must be considered, to safeguard a woman's right to reproductive autonomy. The Bench of Justices B.V. Nagarathna and Ujjal Bhuyan had noted that the minor had shown a clear and consistent unwillingness to continue the pregnancy. The Court cannot compel any woman, much less a minor, to complete her pregnancy if she otherwise did not intend to do so, they said. They also indicated that if the legal routes were closed, women might take the dangerous path to quacks, risking life. However, counsel for the All India Institute of Medical Sciences stoutly opposed the termination, and the curative petition; leveraging the same safety consideration. Terminating the pregnancy at an advanced stage — 30 weeks — would be inimical to the health of the teenage mother. Currently, Indian law allows for the termination of pregnancy up to 24 weeks of gestation.

The entire argument hinges on gestational age, which, as an indicator of how far along the pregnancy is, is crucial to deciding whether an abortion would be safe. Most countries that have legalised abortion restrict the period of safe abortion to 24 weeks of gestation, primarily because of the negative implications for the life and health of the mother, after that. But, central to legal abortion is a medical assessment of risks. Will a child or her parents alone, with lay knowledge, be able to make a studied assessment of such risk? While the minor expresses her desire to be rid of a forced pregnancy, it is the role of her parents and the system to provide her with safe options, within the permissible period. Making an uninformed decision at this stage could be counterproductive, if it compromises on her health or life, while allowing the right to bodily autonomy.

WHY SC EXPANDED DEFINITION OF 'ACID ATTACK VICTIM'

The Supreme Court on Monday (May 4) held that survivors of acid attacks, who were forced to consume acid and suffered internal injuries without any visible scarring, will be considered acid attack victims under the Rights of Persons with Disabilities (RPwD) Act, 2016. The bench of CJI Surya Kant and Joymalya Bagchi said that the clarification would apply retrospectively from the day the Act came into force and also informed the government that existing punishment for acid



attack had failed as a deterrent, suggested reversing the burden of proof onto the accused and said acid sellers should be made co-accused in such cases.

Key Takeaways:

— The RPwD Act includes acid attack survivors in its list of specified disabilities. But the definition it settled on was narrow. Under Schedule 2(zc) of the Act, an “acid attack victim” is a person “disfigured due to violent assaults by throwing of acid or similar corrosive substance.” Survivors who had acid forcefully ingested fell outside it.

— The court noted the problem was that “the use of term “disfigured” appears to confine the scope of external disfigurement of the body, thereby excluding cases involving internal injuries or scarring caused by the administration of acid.”

— The consequences of falling outside the purview of the RPwD Act are significant. A disability certificate under the Act is the gateway to financial assistance, rehabilitation schemes, medical support, etc. Without it, a survivor cannot access any of it. The petition called it a “textbook example of under-classification, where a law purports to treat a class of persons but arbitrarily excludes a sub-group that is identically situated for the purposes of the law.”

— The only difference between the two groups, it argued, is the method of the attack—throwing vs administering acid, rather than the nature and extent of harm.

— At the centre of the challenge is Article 14 of the Constitution. The petition argues that the law creates an “arbitrary and unreasonable classification” by distinguishing victims based on the method of assault, throwing acid versus administering it, rather than the consequence of the attack. This distinction has no rational nexus to the object of the law, which is to support persons living with disabilities.

— It describes the omission as a “textbook example of under classification, where a law purports to treat a class of persons but arbitrarily excludes a subgroup that is identically situated for the purposes of the law.”

— The petition also points to what it calls a legal inconsistency between criminal law and welfare law. Section 124 of the Bharatiya Nyaya Sanhita, 2024, treats throwing acid and administering acid as the same offence, carrying identical punishment. “The harm, intent, and societal danger are identical regardless of the method of acid assault,” the petition argues, making it “legally incoherent and arbitrary” for a remedial welfare statute to draw a distinction that penal law has consciously rejected.

— The Article 21 argument flows from the consequences of exclusion. Since victims of forceful ingestion do not fall within the statutory definition, they are unable to obtain disability certificates required to access state compensation, rehabilitation schemes, and medical support. The petition argues that this denial of statutory recognition effectively infringes their right to live with dignity.

Do You Know:

— The Supreme Court noted an “alarming increase” in the number of acid attack cases since 2013, itself a serious issue of consideration.

— The compliance affidavits that were filed in the Supreme Court mapped a clear picture of pendency across states, with a few jurisdictions accounting for a significant share. Uttar Pradesh



reported the highest backlog at 198 cases, followed by West Bengal with 160 cases and Gujarat with 114. Bihar reported 68 pending cases.

— Among other states, Maharashtra had 58 cases, while Assam recorded 27 cases. Jharkhand had 26 cases; Odisha reported 23 cases in subordinate courts and 8 before the High Court. Delhi lower courts had 21 pending cases as of December last year. At the lower end, Uttarakhand had three pending cases, whereas Jammu and Kashmir and Ladakh had five.

— The Rights of Persons with Disabilities Act, 2016: It was enacted in 2016 and came into effect on April 19, 2017, replacing the Persons with Disabilities Act of 1995. It recognises 21 categories of disability, mandates reservation in education and employment and places a legal duty on governments to ensure accessibility, non-discrimination and full participation for persons with disabilities. It also introduces a centralised certification regime and strengthens rights to inclusive education, employment and community living.

— According to Census 2011, there are 2.68 crore persons with disabilities in India which constitute 2.21 percent of the total population. Out of these, approximately 1.50 crore are male and 1.18 crore, are female. According to The Rights of Persons with Disabilities Act, 2016, a “person with disability” is someone who has a long-term physical, mental, intellectual or sensory impairment which, in interaction with barriers, hinders their full and effective participation in society equally with others.

— The Sugamya Bharat App is a government-launched mobile application designed to enhance accessibility for disabled (Divyangjan) and elderly citizens in India. It enables users to report accessibility barriers in public infrastructure, transportation, and ICT by uploading geo-tagged photos. The app is available on both Android and iOS platforms.

WHAT DOES THE LATEST RULING MEAN FOR FOREST RIGHTS ACT?

The story so far:

On April 20, the Lucknow Bench of the Allahabad High Court reminded the District Level Committee (DLC) under the Forest Rights Act 2006 in Lakhimpur, Uttar Pradesh, that any previous court orders inconsistent with a later law are null and void.

Why is the order important?

The High Court struck down the DLC’s decision in March 2021, rejecting the forest rights claims of the Tharus of Palia Kalan Tehsil, a tribal community, citing a Supreme Court interim order in 2000 that barred “de-reservation of forests/sanctuaries/national parks” until further orders.

The DLC is headed by the District Collector and includes the Divisional Forest Officer, the District Tribal Welfare Officer, and three district panchayat members.

The core legal principle in lawmaking is that all provisions in earlier laws and court orders that are inconsistent with the provisions of a later law are null and void. The Forest Rights Act (FRA) 2006 itself also states that forest rights are recognised and vested in forest dwellers “notwithstanding anything contained in any other law for the time being in force and subject to the provisions of this Act”. The DLC violated this provision, which is a punishable offence.



Has the DLC been punished?

While the order has thus brought relief across the country, the High Court did not invoke the mechanism the FRA provides to sanction offenders. The Gram Sabha is a statutory authority under the FRA. It has to issue 60 days' notice to the State-Level Monitoring Committee to proceed against the authority violating the law.

However, the High Court ignored this provision and instead asked the DLC itself to reconsider its offence and make its decision anew in line with existing law and court orders.

The FRA does not provide for such allowances.

How has the FRA been superseded?

FRA disallows the eviction or removal of forest dwellers "from forest land under their occupation till the recognition and verification procedure is complete". For example, in January 2026, the Uttarakhand High Court ordered the forest department that "till final adjudication of the claims, the respondents shall refrain from initiating any coercive action, including eviction of the petitioners or interference with their peaceful possession and agricultural activities on the lands under their occupation".

However, there has been repeated disregard for and violations of the FRA. For instance, in September 2014, the Madras High Court had dismissed the plea of petitioners from Asaripallam, in Theni district, challenging eviction notices they had been issued and to consider their claims under the FRA. This was based on the forest officer's submission that they were encroachers and weren't eligible for rights under the FRA.

The Madras High Court stated that the claim process under the FRA would only waste the authorities' time and dismissed the case.

The same High Court has dismissed similar petitions under the FRA by petitioners from Perambalur in 2017, Tuticorin in 2020, Sivagangai in 2021, and Theni in 2022. Authorities also continue to issue eviction orders under the Tamil Nadu Forest Act (TNFA) 1882, despite such orders having been overridden by the FRA.

Does the FRA allow grazing?

On March 13 this year, the Madurai Bench of the Madras High Court dismissed a review petition of the March 2022 order, noting that "the provisions prohibiting cattle trespass into forests under Section 57 of the Tamil Nadu Forest Act", to protect wildlife and the spread of disease, were the valid legal basis for the ban.

The High Court had initially banned grazing in all forest areas of Tamil Nadu; later the same month, it restricted the ban order to tiger reserves, national parks, and wildlife sanctuaries. However, it made no reference to the FRA, which recognises grazing rights in all forests, including those overlapping with tiger reserves, national parks, and wildlife sanctuaries. FRA is also a central law and thus overrides a State law with regard to both prohibition and permission for grazing.

This is why the Allahabad High Court reaffirming that provisions in the later law override inconsistent provisions in previous ones, as well as in court orders, comes as a breath of fresh air.



DID THE PM'S BROADCAST VIOLATE MCC?

The story so far:

The Model Code of Conduct (MCC), which guides political parties and candidates during elections, was first drafted by the Kerala government in 1960. The Election Commission (EC) formalised it in 1968, revised it in 1974, and added Part VII on the “party in power” in 1979. Former Chief Election Commissioner T.N. Seshan enforced it with unprecedented rigour from 1991. Prime Minister Narendra Modi’s April 18 address has raised questions about whether the address violated the Code.

How did the Model Code of Conduct evolve?

The Supreme Court, in *Mohinder Singh Gill v. Chief Election Commissioner* (1978), described Article 324 as “a reservoir of power” that allows the EC to act where Parliament has not legislated. The Punjab and Haryana High Court, in *Harbans Singh Jalal v. Union of India* (1997), held that the Code comes into effect from the announcement of the election schedule. Sanctions range from censure to the suspension of party recognition under paragraph 16A of the Election Symbols Order, 1968.

Mr. Modi’s address was carried live on Doordarshan, Sansad TV, and All India Radio. He named four Opposition parties and urged women voters in Tamil Nadu and West Bengal to punish them at the polls on April 23 for defeating the 131st Constitution Amendment Bill in the Lok Sabha.

Does the Prime Minister’s broadcast violate the Code?

Clauses 1(a), 1(b), and 4 of Part VII of the MCC prohibit the party in power from combining official visits with electioneering, using government machinery for campaign work, and misusing publicly funded mass media for partisan coverage during the election period. The broadcast raises distinct questions under both the Code and the Representation of the People Act, 1951.

The Code asks what the incumbent did with public resources. It does not provide a closed list of impermissible appeals; that open texture is deliberate. On its face, the April 18 address appears to be a textbook Part VII matter. At the time of writing, the Commission has taken no action on the complaints it has received.

The statute is less flexible than the Code. Section 123(3) of the Representation of the People Act, 1951, as amended in 1961, makes it a corrupt practice for a candidate or his agent to appeal to voters on the ground of “his” religion, race, caste, community, or language. The provision turns on a pronoun, “his”, and five enumerated nouns. In *Abhiram Singh v. C.D. Commachen* (2017), a seven-judge Bench of the Supreme Court settled, by a 4:3 majority, that “his” extends to the voter as well as the candidate.

What do the law and the courts say about such appeals?

However, Abhiram Singh grappled with the pronoun, not with the nouns. The 1961 Parliament was legislating against the sectarian appeals of its moment, when religion, race, caste, community, and language were the dominant axes of Indian politics. Section 123(3) was not drafted to police every form of partisan appeal.

The April 18 broadcast ran on different axes: gender as a mobilising category, party affiliation as a target, and the Prime Minister’s national broadcast on Doordarshan as the medium. The



objection here is not to the identity of the audience, but to the partisan use of publicly funded media. The statute's five nouns were never meant to catch that.

A writ petition pending before the Supreme Court (Diary No. 24600 of 2026), filed by former Congress MP T.N. Prathapan, and a candidate in the just-concluded Assembly elections in Kerala, opens a different statutory route. It invokes Section 123(7), not Section 123(3). Section 123(7) makes it a corrupt practice to obtain or procure the assistance of government servants, including gazetted officers, for the furtherance of a candidate's electoral prospects. The sub-section was drafted to deter candidates from pressuring police and revenue officials into electioneering; the petition asks whether its reach extends to public broadcasters and the PMO.

The petition argues that the use of Doordarshan and Sansad TV, along with Prime Minister's Office personnel, to prepare and disseminate a partisan broadcast falls within this prohibition. Where Section 123(3) focuses on the grounds of an appeal, Section 123(7) turns on who was pressed into service to deliver it.

On that reading, the statute reaches April 18 not through its five nouns but through its workforce clause.

This returns the conversation to the Code. The MCC, unlike the statute, was written to be open-textured. Part VII asks what the party in power did with public resources; the statute asks which of five categories the appeal invoked, or whose assistance it procured. The statute sets a floor on corrupt practice, not a ceiling on what the Code can reach.

The Commission's silence on Mr. Modi's broadcast is not a doctrinal difficulty. It is a choice not to use the one instrument in Indian electoral regulation that was kept open precisely for settings where the statute may reach only belatedly, if at all. If the court admits the petition and the Commission is compelled to answer, the architecture of MCC enforcement may face its hardest test yet.

WHEN SPEAKER'S ROLE IN DEFECTION CASES WAS TESTED IN 1993

In March 1993, a month into becoming Chief Justice of India, Justice M N Venkatachaliah faced a constitutional crisis. The apex court had ordered Dr H Borobabu Singh, the Speaker of the Manipur Legislative Assembly, to appear before it, and the Speaker repeatedly refused. The apex court and the Speaker were on a collision course.

Key Takeaways:

— In a 1964 face-off between the judiciary and the UP assembly, the legislature had ordered the arrest of Allahabad High Court judges. Justice Venkatachaliah must have wondered what he would do if the Speaker continued to defy the court's authority and dignity. The 1993 crisis stemmed from a case about the defection of seven Manipur MLAs.

— The anti-defection law is back in the news with seven Rajya Sabha AAP members requesting the Rajya Sabha Chairman that they wish to merge with the BJP under the anti-defection law.

— Parliament inserted the Tenth Schedule into the Constitution (popularly known as the anti-defection law) to prevent MPs and MLAs from shifting their loyalty from one party to another. It specifies that the presiding officers of the legislature will decide defection cases, with their decisions being final.



— If the Speaker decides that an MP/MLA has defected, then the legislator loses their seat in the legislature. When Parliament made the law in 1985, it also barred courts from getting involved in these cases.

— With Speakers gaining the power to make and break governments, the non-partisan office came under tremendous political pressure. For example, during a trust vote, a Speaker disqualified MLAs on the House floor while the vote was underway.

— In another case, a Speaker disqualified some MLAs, was himself removed, and the next Speaker reversed the decision. Another Speaker was elected as the Chief Minister after a government fell due to defecting MLAs. And in one case, a Speaker disqualified some MLAs one day and reinstated them the next day.

— In July 1991, Dr Singh, the Manipur Assembly Speaker, disqualified seven Congress (I) MLAs on grounds of defection. His decision, along with those of the Speakers of the legislatures of Goa, Gujarat, Manipur, Meghalaya, Madhya Pradesh and Nagaland in defection cases, was taken up by a five-judge bench of the Supreme Court (the Kihoto Hollohan case).

— This bench, of which Justice Venkatachaliah was a part, examined the constitutionality of the anti-defection law. The court held that the law was valid but struck down the provision that restricted judicial review of the Speaker's decisions. In November 1991, the court also quashed the Manipur Speaker's decision disqualifying the seven MLAs.

— In a case filed by the secretary, the apex court asked Dr Singh to appear before it on multiple occasions. But the Speaker refused, stating that he enjoyed constitutional immunity from the court's orders. The court clarified that it was ordering Mr Singh's appearance not as the Speaker but as the administrative head of the legislature.

— An entire year passed with the Speaker refusing to appear before the Supreme Court. Then, in February 1993, the court ordered the central government to take all necessary steps, including the use of "minimum force," to ensure the Speaker's presence.

Do You Know:

— The anti-defection law punishes individual MPs/MLAs for leaving one party for another. It allows a group of MP/MLAs to join (i.e. merge with) another political party without inviting the penalty for defection. And it does not penalise political parties for encouraging or accepting defecting legislators.

— Parliament added it to the Constitution as the Tenth Schedule in 1985. Its purpose was to bring stability to governments by discouraging legislators from changing parties. It was a response to the toppling of multiple state governments by party-hopping MLAs after the general elections of 1967.

— The law covers three kinds of scenarios. One is when legislators elected on the ticket of one political party "voluntarily give up" membership of that party or vote in the legislature against the party's wishes. A legislator's speech and conduct inside and outside the legislature can lead to deciding the voluntarily giving up membership.



WHEN DOES A CM CEASE TO HOLD OFFICE?

The story so far:

A day after the Trinamool Congress lost the West Bengal elections to the BJP, party chairperson Mamata Banerjee on May 5 said she would not resign as Chief Minister, alleging that the verdict was the result of a “conspiracy” rather than the people’s mandate. Addressing a press conference, Ms. Banerjee claimed the elections had not been conducted fairly and accused the BJP of misusing central forces to “forcibly capture” booths and influence the outcome. She added that the party would challenge the results and continue its political fight.

Can a Governor remove a CM?

Article 164(1) of the Constitution provides that “the Chief Minister shall be appointed by the Governor and the other Ministers shall be appointed by the Governor on the advice of the Chief Minister, and the Ministers shall hold office during the pleasure of the Governor.” On a literal reading of the provision, therefore, the Governor appears to possess the authority to remove a CM from office. However, members of the Constituent Assembly had cautioned that such a provision could potentially lend itself to an arbitrary exercise of gubernatorial discretion.

Constituent Assembly member Mohammad Ismail Khan had moved an amendment to the provision (then Article 144 of the Draft Constitution) proposing that the phrase “during the pleasure” be replaced with the words “so long as they enjoy the confidence of the Legislative Assembly of the State.” He contended that once the constitutional scheme envisaged the Governor as a nominee of the President, the Constitution ought to have made it explicit that the Council of Ministers would hold office not at the Governor’s pleasure, but only so long as it continued to enjoy the confidence of the Legislative Assembly.

Addressing this concern, Dr. B. R. Ambedkar, Chairman of the Drafting Committee of the Constitution, affirmed that the Council of Ministers shall hold office only so long as it enjoys the confidence of the majority. “The reason why we have not so expressly stated it,” he explained, “is because it has not been stated in that fashion or in those terms in any of the Constitutions which lay down a parliamentary system of government.”

Over the years, the Supreme Court has also interpreted the Governor’s powers as flowing primarily from the “aid and advice” of the Council of Ministers. In *A.G. Perarivalan v. State Through Superintendent of Police* (2022), the apex court observed that the “Governor” is “but a shorthand expression for the State government”. While recognising the Governor as “the formal head and sole repository of the executive power”, the court held that the office is ordinarily bound by the aid and advice of the State’s Council of Ministers.

When is a floor test required?

If a Governor asks a Chief Minister to step down and invites another candidate for the post while the tenure of the Legislative Assembly is still on, there has to be a floor test — a constitutional mechanism used to determine whether the executive enjoys the confidence of the legislature. Under this process, the Chief Minister must prove majority support in the House. Failure to do so requires the CM to resign.

If no party or coalition can form a stable government, President’s Rule under Article 356 may be imposed as a measure of last resort.



What happens after the Assembly's tenure ends?

Article 172 of the Constitution deals with the duration of a State Legislative Assembly and stipulates that, “unless sooner dissolved”, an Assembly “shall continue for five years from the date appointed for its first meeting and no longer, and the expiration of the said period of five years shall operate as a dissolution of the Assembly.”

According to the Election Commission, the current West Bengal Assembly commenced its term on May 8, 2021, and is set to expire on May 7. Thereafter, the Governor will have to initiate the process for constituting a new Assembly.

What happens next?

According to former Lok Sabha Secretary-General P.D.T. Achary, a formal resignation following defeat in an Assembly election is largely a matter of convention. “Even if Ms. Banerjee does not resign, it would make no material difference. The tenure of the present Assembly ends on May 7, and with its dissolution, she will automatically cease to hold office as Chief Minister,” he said.

He, however, pointed out that an election petition may be filed before the Calcutta High Court within 45 days from the declaration of the results of the concerned candidate. Section 100 of the Representation of the People Act, 1951 enumerates the grounds on which the election of a candidate may be challenged and declared void, including corrupt practices by the candidate and non-compliance with statutory provisions by the returning officer, among other grounds. He noted that a writ petition may be maintainable where the challenge concerns the integrity of the electoral process itself, including allegations of arbitrary voter deletions during the special intensive revision of electoral rolls in West Bengal.

“Large-scale deletion of voters in an election constitutes a violation of fundamental rights and can therefore be challenged through a writ petition,” he said.

LOK BHAVAN NEEDS TO RESPECT LOK'S MANDATE

On May 4, in Tamil Nadu, in a dramatic verdict that overturned pre-poll predictions, the incumbent Dravida Munnetra Kazhagam (DMK) lost, while Vijay's Tamilaga Vettri Kazhagam (TVK), in its electoral debut, got overwhelming support. It stopped just short of a simple majority, with no rival party or pre-poll coalition coming close. In the aftermath, both democratic convention and judicial precedent dictate that the single-largest party has the strongest claim to form the government. Yet, Governor R V Arlekar's stalling, his insistence on a list with signatures of MLAs, kept the doors open for rumour and speculation, and untenable claims. On Friday, armed with the numbers, Vijay met the governor again, and is likely to form the government. The episode, however, is a reminder of the importance, especially after a verdict in which the numbers are not entirely unambiguous, of the governor abiding by the constitution — not just in letter, but also in spirit.

The Constitution says that the chief minister “shall be appointed by the Governor”. But the gubernatorial role in government formation is that of a politically neutral facilitator in the implementation of the mandate. In a hung assembly, the governor exercises discretionary power but that, too, must be circumscribed by the goal of giving effect to the people's verdict. Governors have often cited the requirement of “subjective satisfaction” before extending an invitation to form the government. For Arlekar, however, and every governor who has been in this situation — Goa's Governor Mridula Sinha in 2017 and Karnataka's Governor Vajubhai Vala in 2018 — the irrefutable test is the floor test. For instance, in a midnight hearing in 2018, the Supreme Court



heard MLAs of a post-poll coalition led by Congress in Karnataka but refused to stay the swearing-in of a BJP government that was short of the halfway mark by eight MLAs. It is another matter that within 36 hours, the B S Yediyurappa government collapsed after failing to prove its majority. The SC has underlined the primacy of the floor test in several other instances — in Goa in 2017, Uttarakhand in 2016 and Maharashtra in 2019. Even if the government falls, it must do so on the floor of the House. By demanding signatures beforehand, the governor is pre-empting this process, which must unfold in the appropriate forum.

The governor's actions must be impartial, and they must be seen to be so, too. The verdict cannot be re-shaped or manipulated through post-election manoeuvres in Raj Bhavan. In Chennai, the support of the Left parties and VCK — the Congress had pledged its five earlier — helped Vijay cross the line and avoided what could have been an unseemly deadlock. Still, the Lok Bhavan needs a reminder that it must abide by first principles, place the Lok, the people's mandate, above all.

LOST AND FOUND

The results of the 2026 Assembly elections in Assam, West Bengal, Tamil Nadu, Kerala and Puducherry highlight several factors that have a bearing on India's direction as a secular, democratic, federal republic. In Assam and Puducherry, the BJP and its partners retained power, while in the other three States, incumbents were swept away in a strong current of changed popular opinion. In Assam, for the first time, the BJP crossed the halfway mark of 64 seats on its own and, with its partners, won 101 seats in the 126-member Assembly. For the Congress, this is its worst performance — even lower than its 1985 tally in the aftermath of the Assam Agitation. The regional outfits that were part of the Congress-led alliance, including the Rajior Dal and Assam Jatiya Parishad, were routed, while those within the National Democratic Alliance (NDA) — chiefly the Asom Gana Parishad and the Bodoland People's Front — managed to win a few seats, though they now have little clout given the BJP's outright majority. Chief Minister Himanta Biswa Sarma has reinforced his position in the State through a mix of polarising communal rhetoric and redistribution schemes. Congress leader Gaurav Gogoi lost his own seat.

In West Bengal, the BJP has achieved a decisive victory through long-term planning, aided by the State's political history, a tainted election process, and the exhaustion of the Trinamool Congress (TMC)'s politics that had run its course. Bengal has been home to India's national movement and to Hindutva ideas long before they spread elsewhere, and has carried a strong sense of regional identity. The BJP, through years of meticulous organisation, converted a threshold population of the State to its totalising nationalist narrative. Having subsumed the regional politics of Maharashtra, Assam and Odisha, it had set its sights on West Bengal with obsessive determination, and has won. The TMC faces existential danger, with its founder-leader Mamata Banerjee at 71 and its cadre and voters now susceptible to pressure from the BJP. This election was also the most tainted in India's elections: around 27 lakh people were arbitrarily removed from the electoral rolls, and the Supreme Court of India took an unhelpful view of that grave assault on the fundamentals of democracy. If that is the sign of things to come, it is cause for serious concern.

In Tamil Nadu, the political start-up, the TVK, led by actor C. Joseph Vijay has made a stunning debut. Mr. Vijay is set to become the first Chief Minister not from either of the two principal Dravidian parties since the DMK first captured power in the State — a historic rupture in Tamil politics. While his popularity is now established, his acumen in navigating the complexities of governance and managing the relationship with the BJP and the Centre will be tested from day one. Though the differences in vote share among the formations — the DMK-led alliance, the



AIADMK-led alliance, and TVK contesting alone — were not large, a three-cornered contest and the first past the post mechanism delivered an outsized advantage to the TVK. The DMK's votes were more evenly spread across the State, while the TVK and AIADMK had theirs concentrated in pockets of influence, yielding far better vote-to-seat conversion. Mr. Vijay had the advantage of novelty, and the electorate proved open to a new experiment.

In Kerala, the Congress-led UDF's overwhelming victory is as notable as the pitiable performance of the CPI(M)-led LDF. The LDF's defeat belongs principally to outgoing Chief Minister Pinarayi Vijayan, who — uncharacteristically for the State and more so for the Left — had built a personality cult. The BJP has won a historic high of three seats, but the UDF's return, while restoring Kerala's traditional alternation in power, could act as a speedbreaker to the BJP's ambitions. The Congress faces the immediate task of amicably settling the question of Chief Minister from among three potential candidates — K.C. Venugopal, V.D. Satheesan and Ramesh Chennithala. The election results strengthen Home Minister Amit Shah's hand within the BJP's internal dynamics, as the party has grown into a behemoth harbouring multiple interest groups and ambitious leaders. Mr. Shah was the key strategist in West Bengal, and Mr. Sarma in Assam is firmly aligned with him. A reconstitution of all party organisations and a possible reshuffle of the Union Council of Ministers will likely reflect his preeminence in the days ahead. The BJP, by its capacity and willingness to expand its footprint across regions and social groups — oftentimes bending norms — is placing immense pressure on India's federal democracy. The DMK and the TMC have been bulwarks of Opposition politics within and outside Parliament, as demonstrated in the recent parliamentary vote on the Delimitation Bill. With both beaten at the hustings, and buoyed by its victories in Assam and West Bengal, the BJP will feel tempted and emboldened to continue its course of unilateralism. It would be in the interest of the country and of democracy for the BJP to be accommodative and sensitive towards diverse aspirations; while platforms of regional political mobilisation such as the TMC and the DMK will have to adapt to new challenges. The regional parties in Assam and Kerala too faced a setback, suggesting popular fatigue and an inclination towards larger frames of reference mediated by social media. As for the Congress, these results represent victory in Kerala, defeat in Assam, and a lost opportunity in Tamil Nadu. The defeat of the DMK and TMC sets the stage for a potential realignment of the Opposition, opening the possibility for the Congress to aggregate and galvanise social and other interest groups — and to position itself as a weightier axis of anti-BJP politics.

FOR THE FIRST TIME IN 50 YEARS, INDIA DOESN'T HAVE A COMMUNIST GOVERNMENT: HOW THE LEFT GOT LEFT BEHIND

In 2015, the late Sitaram Yechury wrote in *The Marxist*: “We [communists] have, for many decades, been repeating the Leninist dictum that the ‘concrete analysis of concrete conditions is the living essence of dialectics’... An incorrect estimation of the concrete conditions, naturally, will lead to an erroneous political line and consequent tactical line.” The CPI(M)'s current political nadir — in fact, the seemingly interminable decline of all of India's communist parties — is evidence, among other things, of a prolonged “incorrect estimation”. With the defeat of the Pinarayi Vijayan-led LDF in Kerala, the communist parties are not part of a single government in the country for the first time in nearly 50 years. This decline was not one foretold by “historical forces”. It is, rather, a function of a series of interconnected failures and complications.

Vijayan's return to power in the last election bucked the trend of anti-incumbency verdicts in Kerala, and it is conceivable that the LDF may return in 2031. Even if that is the case, however, a party that, at its height, was the third-largest in Parliament with a government in three states, is



now a contender in one. The decline is not merely electoral; it is also reflected in the depletion of ideas and organisation. Take the changing nature of work and the ways in which workers' rights can be undermined in the "gig economy". Parties and movements that claim to stand for those left behind by the system should be at the forefront of articulating their concerns. Yet, an absence of "concrete analysis of concrete conditions" has meant that the CPI, CPI(M) and others are merely playing catch-up. There is also a fundamental organisational question. For a long time, the tension between the popular leader and the party — as with Jyoti Basu in Bengal and VS Achuthanandan in Kerala — has deepened factional faultlines. If the left is to recover, it must decide who is best placed to lead that recovery: Those with their ears to the ground or those who fear "revisionism" more than political extinction.

Over the last four decades — beginning with the fall of the Soviet Union — the obituary of the Indian left has been written many times. The difference in the last decade is the rise of a political force that, like the communists, is cadre-based and ideologically driven. The left, unless it comes up with fresh ideas, is bound to be left behind.

OVERALL CRIME RATE DROPS 6%; CYBERCRIME UP BY 17%: NCRB

The overall crime rate in India declined in 2024 from the 2023 figure, but there was an increase of over 17% in cybercrime cases, show the Crime in India, 2024 report released by the National Crime Records Bureau (NCRB) on Wednesday.

A total of 1,01,928 cybercrime cases were registered in 2024 over 86,420 such cases in the previous year.

"During 2024, 72.6% of cybercrime cases registered were for the motive of fraud (73,987 out of 1,01,928 cases) followed by sexual exploitation with 3.1% (3,190 cases) and extortion with 2.5% (2,536 cases)," the report said.

The NCRB recorded 58.86 lakh cognisable crimes across the country in 2024, marking a 6% decline from the previous year's figure. Of these, 35.44 lakh cases were registered under the Indian Penal Code and the Bharatiya Nyaya Sanhita (BNS) and 23.41 lakh cases under special and local laws. There were 5,194 cases of offences "against the state" registered in 2024 as against 4,873 in 2023, showing a rise of 6.6%.

"Out of 5,194 cases, 4,395 (84.6%) cases were registered under The Prevention of Damage to Public Property Act, followed by 649 (12.5%) cases under The Unlawful Activities (Prevention) Act," the report said.

Crime against SC/ST

The report revealed that a total of 55,698 cases were registered for crimes against Scheduled Castes (SCs), showing a decrease of 3.6% over the 2023 figure of 57,789 cases. Crimes against Scheduled Tribes showed a sharp decline of 23.1%, dropping to 9,966 cases from 12,960 in 2023.

The NCRB released the Accidental Deaths & Suicides in India (ADSI), 2024 report according to which 1,70,746 suicides were recorded in 2024. Those associated with the agriculture sector, the unemployed, and daily wage workers accounted for a substantial share of suicidal deaths.

A total of 10,546 persons involved in the farming sector (consisting of 4,633 farmers/cultivators and 5,913 agricultural labourers) died by suicide in 2024, accounting for 6.2%.



Out of 4,633 farmer/cultivator suicides, a total of 4,481 were by men and 152 by women, the report said. Around 31% of the total suicides were reported among the daily wagers, the report said. The number of unemployed people who died by suicide was 14,778 while the number of students and homemakers who ended their lives stood at 14,488 and 22,113, respectively.

Deaths due to drug overdose saw a 50% increase in 2024 from the previous year's figure. The report stated that 978 people died due to drug overdose in 2024, up from 650 deaths in 2023.

Tamil Nadu reported 313 deaths, the highest number of drug overdose deaths, followed by Punjab with 106, Madhya Pradesh 90, Rajasthan 69 and Mizoram 65, according to the NCRB data.

546 PEOPLE DIE DAILY IN TRAFFIC ACCIDENTS; ROAD DEATHS ACCOUNT FOR 88%: NCRB REPORT

In India, on average, 546 people die every day in traffic-related accidents. According to the latest report by the National Crime Records Bureau (NCRB), 1.99 lakh people died in traffic accidents in 2024, an increase of 0.79 per cent compared to 2023, when 1.98 lakh people lost their lives.

Key Takeaways:

- Traffic accidents include road accidents, railway accidents, incidents on railway tracks or railway premises, and accidents at railway crossings. These cases not only have serious repercussions on the victims' families, but also derail India's gross domestic product (GDP) growth as they affect smooth traffic flow. The socio-economic costs of road crashes alone amount to around 3.14 per cent of India's GDP.
- According to the report, the number of traffic accidents increased from 4.91 lakh in 2023 to 4.95 lakh in 2024, with 4.52 lakh people injured in 2024. The top three states in terms of fatalities are Uttar Pradesh (27,071), Tamil Nadu (20,390) and Maharashtra (19,475), which account for 13.6 per cent, 10.2 per cent and 9.8 per cent of total deaths in traffic accidents, respectively, and collectively account for 33.6 per cent of all traffic deaths in 2024.
- The road-wise classification of accident data shows that while national highways have a share of only 2.1 per cent of the total road length in India (1.32 lakh km out of 63.3 lakh km roads), they account for 29.8 per cent of total road accidents. State highways reported 22 per cent of road accidents, with other roads accounting for 48.2 per cent of the total road accidents.

Do You Know

- In the NCRB, traffic deaths are counted as part of the larger umbrella of accidental deaths. The report shows that the traffic deaths account for 42.6 per cent of the total. This is followed by sudden deaths (16.2 per cent), miscellaneous causes (15.9 per cent), drowning (8.6 per cent), falls (5.7 per cent), poisoning (4.6 per cent), electrocution (3.4 per cent), accidental fire (1.3 per cent) and forces of nature (1.7 per cent). Out of these, only deaths due to natural events like cyclones, floods, lightning, etc., are often beyond human control; the others are preventable.
- The report reveals that of the 1.99 lakh traffic-related deaths recorded in 2024, 1.75 lakh (88 per cent) were due to road accidents. No railway accident was reported during the period. However, 17,029 people died after falling from trains or colliding with people on railway tracks, while 5,384 lost their lives in incidents on railway premises, like explosions and fires. And 1,888 deaths were recorded in accidents at railway crossings.



TACKLING TAKEDOWNS

The Union government's enthusiastic misuse of its spurious powers to censor lawful speech online is an alarming and exponentially growing threat to India's democracy. With amendments to the IT Rules, 2021 — which are themselves on shaky constitutional ground — the government has successfully pressured Meta and X to take down content within three-hour timelines that leave little time to push back, lest they lose “safe harbour” protections and be dragged into court or, worse, have their employees face personal criminal liability. Under the cover of fighting AI-generated content, all speech is being subjected to a despotic regime where the state can silence speech at will, destroying the promise of the Internet, which has emerged as an important alternative voice to express everyday concerns. Visceral, hard-hitting expressions of independent voices are an integral part of a society led by free ideals and representative democracy. Weaponising Sections 69A and 79(3)(b) of the IT Act, 2000 to take down such content, and accounts wholesale, distorts the public conversation in a way that benefits the ruling party, with scant regard for the freedoms of audiences and the livelihoods of creators. Often, entire accounts of the Opposition are deleted. Since this infrastructure of censorship has been built brick by brick without any moral compunctions on the path down which they lead, takedowns of independent media outlets and critical commentators have grown. Some have been reversed, at the cost of revealing their identity. The government continues to enjoy these powers under a veil of secrecy, publishing no meaningful data on how its hold on online discourse has tightened.

By opening up the so-called Sahyog portal to police officials around the country, requests under Section 79(3)(b) have been supercharged as a censorial rubber stamp that the IT Act simply does not give them. The clear Supreme Court precedent outlining what “actual knowledge” of illegality online constitutes for takedown orders has been reduced to a mockery. The Karnataka High Court has even brushed aside binding Court precedent under *Shreya Singhal vs Union of India*, even as the government has not dared to formalise the powers that it is exercising by passing a law in Parliament. Social media platforms have failed miserably in acting as a check in this ongoing rampage for power over online speech and have instead chosen the peace of mind that comes with automatically processing takedown notices. X continues to resist the Sahyog portal, but faces pressure from proceedings in the Karnataka and Delhi High Courts. The political elite must ponder the consequences of its campaign against online speech. Opposition-ruled States have quickly leapt to leverage the Sahyog portal's powers. A future government run by today's Opposition will likely play by the same sordid rules.

SILENCING ACADEMIA, WEAKENING DEMOCRATIC SPACE

According to the Varieties of Democracy (V-Dem) Institute 2026 report, India is still classified as an “electoral autocracy”, ranking in the lower half globally. The report notes a steady decline in democratic freedoms, especially in free expression, media independence, and civil society, placing India among the “worst autocratizers”. This signals a growing dismantling of institutions and norms that support accountability and pluralism, drawing increasing international scrutiny.

The Scholars at Risk Free to Think 2024 report classifies India as having “completely restricted” academic freedom. It cites declining university autonomy linked to rising political interference, and pressure on institutions. Notably, it emphasises the systematic enforcement of a Hindu nationalist agenda within higher education, with changes to curricula, limited scholarly exploration and reduced space for intellectual dissent.



This classification is not an isolated judgment. It aligns with a broader pattern of democratic erosion documented by global indices, from V-Dem to Freedom House. For Indian universities — once celebrated as arenas of critical thought and pluralistic debate — the message is unequivocal: the freedom to teach, to learn, and to question is no longer guaranteed.

What is less discussed is how shrinking academic freedom weakens democracy itself. Beyond elections, voting rights and laws, a healthy and functioning democracy depends on a strong civil society, open access to evidence-based information, and space for genuine public debate — areas now under growing pressure, especially in academia.

These freedoms are under direct strain, most visibly in academia. Universities — meant to foster inquiry and debate — face funding cuts, regulatory pressure, and growing self-censorship, eroding their autonomy. The Viksit Bharat Shiksha Adhishthan Bill proposes to further centralise control, prioritising conformity over academic freedom. As these spaces shrink, so does society's ability to think critically and sustain a pluralistic democracy.

A disturbing pattern

According to The Wire, 62 academics faced punitive action (2014–26) for their opinions or political stances. Freedom of expression is penalised on campuses using service rules that define faculty as “government servants”. In Nature (April 2024), Yamini Aiyar cites an India Academic Freedom Network report that documents a series of disrupted events, arrests of faculty and students, and visa hurdles for foreign researchers.

The contrast with British scientist J.B.S. Haldane who became a citizen of India in the early 1960s and who openly criticised the government while working in India is striking. It highlights how space for dissent in academia has sharply narrowed. Data from 2024-26 show a broad assault on academic freedom, targeting students, researchers, and faculty. Driven by political pressure, institutional failures, and social biases, these trends signal that certain topics are off-limits, certain voices are dangerous, and the pursuit of knowledge must bow to political convenience.

A consistent and disturbing pattern emerges: institutions are accused of failing to act against perpetrators. Internal complaints committees, mandated to provide oversight and justice, are described by critics as “ornamental”, existing more for formal compliance than for substantive accountability. When the very bodies designed to protect students and faculty become complicit through silence or inaction, the chilling effect deepens. Trust erodes, fear takes root, and the message is unmistakable: power will be protected, and voices that challenge it will find no refuge within the walls meant to nurture free inquiry.

A worrying erosion

These actions undermine the ability of civil society and academic institutions to hold leaders accountable, eroding the very basis of a knowledge sector essential to Indian democracy. When violence goes unpunished, when caste and religious prejudice are replicated rather than challenged, when sexual predators are protected, and when dissent is criminalised, the message is unmistakable: the pursuit of knowledge must not disturb power.

India's stance on political rights is reflected in its refusal to sign the First Optional Protocol to the International Covenant on Civil and Political Rights (ICCPR). Although a party to the ICCPR treaty since 1979, it does not accept the UN complaint mechanism, meaning citizens cannot seek international redress for rights violations after exhausting domestic remedies.



The contrast is striking. India's Constitution, through Articles 14, 19, and 21, guarantees many of the same rights enshrined in the ICCPR. The Supreme Court of India has often drawn upon international human rights norms to interpret and expand fundamental rights. Yet, the government remains unwilling to subject itself to the international complaint mechanism that would allow its own citizens — particularly those from marginalised communities who face disproportionate human rights violations — to seek justice beyond domestic courts when those courts fail them.

This issue is highlighted in an insightful article by Ravi Nair, "The Umar Khalid and Sharjeel Imam case: An international campaign within the realm of possibility" (The Leaflet, January 7, 2026). The young academic scholars, Umar Khalid and Sharjeel Imam, have been in jail as undertrials for the last five years. On January 6, the Supreme Court rejected their bail application and barred them from applying for bail for a year, stunning many legal experts.

When journalists such as Irfan Mehraj and humanists such as Sonam Wangchuk (now released) struggle through prolonged legal battles, even for bail, some high-profile godmen accused of serious crimes have repeatedly secured parole or furlough. The contrast could not be more telling. On one side, a voice for justice, dignity, and democratic rights is treated as a threat. On the other hand, figures accused of serious crimes are granted leniency. In this asymmetry lies a disturbing truth about whose freedoms are protected and whose are quietly abandoned.

The cost of homogenisation

Why does a self-proclaimed "Mother of Democracy" prefer homogenisation of thought rather than freedom of thought? Higher education institutions have always been refuges for those who challenge orthodox thinking and work toward generating new ideas.

This is not a bug but a feature of university life. Democracies are revitalised by such encounters, even when they mean questioning majority opinion.

History offers sobering evidence: authoritarianism does not always arrive with a crash. More often, it emerges from within democracies — slowly, quietly, and with the acquiescence of those it will eventually silence. It springs not from sudden rupture, but from the gradual conditioning of publics through manufactured victimhood, cultivated fear, and the steady erosion of norms that once seemed unshakeable. In this process, citizens and institutions can become complicit in the dismantling of their own freedoms, unaware that the protections being stripped away were the very foundations of the democracy they took for granted.

The decline documented in the Academic Freedom Index is not an abstract metric. It is a measure of the health of Indian democracy itself. When scholars, activists and students are silenced, when dissent is criminalised, and when political interests capture academic institutions, the foundation upon which democratic accountability rests is systematically dismantled—brick by brick, case by case, silence by silence.

The numbers tell a story. However, the true story is developing on our campuses, where voices once raised in inquiry now whisper; in our courtrooms, where justice is increasingly influenced by power; and in the silence of those who once dared to speak, a silence that grows louder each day, while the state itself becomes more bureaucratic, punitive, and regulatory.

The key question is whether institutions will continue down this path or reclaim their original purpose. For society, it is whether we choose to protect the spaces that allow critical thinking,



challenge power, and help young people engage meaningfully with issues of justice and governance.

CABINET GIVES NOD TO MAKE INSULT TO VANDE MATARAM AN OFFENCE

The Union Cabinet on Tuesday gave the go-ahead to amend the Prevention of Insults to National Honour Act, 1971 to make any insult or obstruction to the singing of National Song Vande Mataram a punishable offence, a government source told The Hindu.

At present, insults to the National Anthem Jana Gana Mana, the National Flag and the Constitution is mentioned in the 1971 Act and is punishable by imprisonment of up to three years or a fine or both.

The Cabinet decision comes a day after the Bharatiya Janata Party (BJP) secured a landslide victory in West Bengal winning 207 out of 293 contested Assembly seats and was all set to form the government for the first time in the State.

Vande Mataram, the salutation of India imagined as a mother, was written by Bankim Chandra Chattopadhyay and published with his novel Anandamath in the early 1880s.

In 1937, leaders of the Congress, which was leading the national movement, decided to use the first two stanzas at its gatherings, and the Constitution of the modern Republic of India accorded it the status of the National Song.

Prime Minister Narendra Modi has accused the Congress of truncating the song to appease the Muslim League during the British rule.

Set of instructions

On February 6, the Union Home Ministry, in a set of instructions to States and government bodies, said that all the six stanzas of Vande Mataram, that comes to a little over three minutes long, should be sung or played at official events. It said that the National Song should be given precedence before the National Anthem, written and composed by Rabindranath Tagore, when both the songs are played at an event.

The Ministry guidelines on Vande Mataram are advisory in nature and did not have a statutory backing.

The Cabinet's decision to amend the 1971 Act would make any insult to the national song a punishable offence.

SOREN WRITES TO PRESIDENT, PM SEEKING 'SARNA' RELIGIOUS CODE PROVISION FOR TRIBALS IN CENSUS

Jharkhand Chief Minister Hemant Soren on Sunday wrote to President Droupadi Murmu and Prime Minister Narendra Modi seeking a provision for the 'Sarna' religion in the Census 2027. He underscored that a Sarna religious code is necessary to identify tribals as distinct from followers of other religions to protect their constitutional rights.

Despite the absence of a dedicated Sarna category in the 2011 Census, about 50 lakh people across 21 States had identified themselves as Sarna in the religion column, Mr. Soren stated in the letters to the President and the PM.



He emphasised the importance of accurate and “fact-based” data collection for effective policy-making and balanced development. The Chief Minister noted that Jharkhand is fully cooperating with the Census process and highlighted the significance of the exercise, which was originally scheduled for 2021 but postponed due to unforeseen circumstances.

‘Distinct traditions’

Mr. Soren pointed out that the Sarna faith, followed by a large section of tribal communities, has distinct traditions, including nature worship, village deities, and unique rituals.

He argued that proper recognition of the Sarna religion in Census data would help ensure more targeted welfare policies for tribal communities.

The Chief Minister also raised concerns that introducing new classification categories could complicate Census operations, but stressed that the long-term benefits of accurate socioreligious data outweigh potential challenges.

HOW TO KNOW IF A MEDICAL TECHNOLOGY ACTUALLY ADDS VALUE

Medicine treats the evaluation of emerging technologies as a technical problem, but it is not. It is fundamentally an economic problem.

When does a ₹30,000 genetic test represent excellent value and when does it represent wasted money? The answer depends on a question members of the medical profession almost never discuss: who’s paying?

This distinction is critical in India, where millions of individuals make expensive healthcare decisions out of pocket while public health systems struggle with scarce resources and competing priorities. Yet this is precisely where thinking clearly matters most: your decisions directly affect your health and finances in ways that can’t be reversed or recovered from.

Unique vulnerability

A patient might spend ₹2 lakh on a recommended screening test that a government health system would never fund at scale — not because the test is bad but because the math works differently when you are an individual versus a system.

Yet patients rarely understand that they are trying to optimise for these incompatible situations. They simply spend money and hope it is the right decision.

Consider a genetic screening test for hereditary cancer risk in a woman with a family history of breast cancer. A positive test entails preventive surgery, significantly improved survival, lifelong surveillance, and critical family planning decisions. Here, ₹30,000 represents excellent value.

But deploy the same test in a healthy population and it is positive roughly twice per 1,000 healthy individuals. So you spend ₹3 crore identifying two individuals who benefit. The remaining 998 experience anxiety, unnecessary follow-up check-ups, and potential harm from false positives.

The same test has opposite value depending on the context and who is paying, which is why these conversations are so fraught.



Return on investment

In India, patients and health systems evaluate the same technologies through fundamentally incompatible frameworks. An individual spending their own money asks “will this help me?” A government with scarce resources asks “What is the return per rupee across the population?”

These questions cannot have the same answer, yet patients need to understand both to make informed decisions.

Consider sophisticated cancer screening once again. A wealthy individual can afford ₹50,000 a year to catch one cancer earlier — which is an excellent personal return on investment. A government screening 1 lakh women would spend ₹500 crore and catch 20-30 cancers earlier. That quantum of money would be better used to treat patients already diagnosed rather than screen healthy people. The technology was identical but the value proposition was opposite.

As an individual, the technology is worth it if benefit exceeds cost. Your risk tolerance, values, and circumstances matter. You may rationally choose expensive screening that public health cannot justify at scale.

But is more expensive always better? Not quite.

Newer is not better

Healthcare differs from consumer goods because the stakes are permanent. You cannot undo an implant that causes chronic pain, reverse an unnecessary diagnostic test or erase a false diagnosis from your medical record. Expensive does not mean better in healthcare. It means higher stakes.

Rather than asking whether a treatment is worth the cost, let us ask more prudent questions. For example, does it produce meaningfully better outcomes than what already exists?

A robotic surgery might be more precise but does it actually improve function compared to traditional methods? Better precision sounds good until outcomes are identical at double the cost.

Consider minimally invasive diagnostic devices. A newer needle biopsy might require special equipment and training. But if both produce identical accuracy, and one takes 15 minutes while the other takes 45 minutes, the newer device effectively consumes resources without improving your diagnosis.

Newer isn't better. Better is only when outcomes actually change.

Recovery burden

For newer cancer drugs, survival may improve by a few months but the cost and side-effect burden may be immense — sometimes ₹5-10 lakh a month versus ₹1-2 lakh for older drugs.

A drug extending one's lifespan by three months while causing severe nausea, cognitive impairment, hair loss, inability to work, and requiring weekly hospital visits isn't automatically superior to one extending life by two months with manageable side-effects that you can sustain at home.

An individual might gain 90 days of life but lose those days in hospital admissions and emergency department visits. Quality of life during treatment matters as much as survival statistics.



Long-term safety

Newer options appear attractive but established options are backed by decades of documented safety. A medication with 30 years of outcomes in millions of patients carries substantially less risk than one with three years of data in the hundreds. That history matters when you are considering putting something new into your body.

Another distinction that matters more radically is whether some technology has been approved for your specific condition or if it is being used off-label.

Off-label use is legal in India; to make matters worse, evidence supporting it is often dramatically weaker than for approved indications.

A technology might be brilliant within its approved use and problematic outside it. For example, expandable metal stents approved for biliary ducts were used off-label in blood vessels, where different mechanical environments caused vessel rupture, cardiac complications, and at least 13 deaths before regulators intervened.

The device worked perfectly for its intended purpose. It failed catastrophically outside that context.

Being a good patient

Asking these questions doesn't make you a difficult patient. It makes you an informed one.

When your doctor recommends an expensive new technology, you don't need to be confrontational. Write down the questions beforehand and don't shy away from the hard ones.

Take notes on the answers. Good doctors welcome these questions because they have already asked themselves the same things.

If a doctor dismisses your questions or pressures you into deciding immediately, that is important information. You deserve time to think through expensive decisions.

Medicine is not unique in requiring difficult trade-offs — but it is unique in the stakes. A bad stock investment recovers. A bad medical technology decision becomes part of your body, your medical record, and your life forever.

The questions that matter are not intellectually complex but they may feel uncomfortable to ask. Your responsibility is to ask them anyway, demand evidence and insist on comparison. In a system designed to innovate faster than it validates, your scepticism is your only real leverage.

GOVT. ISSUES GUIDELINES ON CHILDHOOD DIABETES CARE

Integrating childhood diabetes care into the public health system, the Union Health Ministry has, for the first time, introduced a structured and standardised national framework for the screening, diagnosis, treatment and long-term management of diabetes in children.

Releasing the Guidance Document on Diabetes Mellitus in Children recently, the Ministry said this aims to ensure universal diabetes screening of all children in India from birth to 18 years of age.



“Suspected cases will undergo immediate blood glucose testing, followed by timely referral to district-level health facilities for confirmatory diagnosis and treatment,” a senior Health Ministry official said.

He added that a key feature of the framework is the provision of a comprehensive, free-of-cost care package at public health facilities. This includes screening, diagnostic services, lifelong insulin therapy, monitoring devices such as glucometers and test strips, and regular follow-up care. The approach is designed to reduce financial burden and ensure uninterrupted treatment for children diagnosed with diabetes.

Integrated care

While the initiative positions India among a select group of countries that have integrated childhood diabetes care into the public health system, the document also introduces an integrated continuum of care, linking community-level screening with district hospital-based management and advanced care at medical colleges.

“This convergence ensures that no child is lost in the system and that care continues seamlessly from detection to long-term follow-up,” the Health Ministry noted in a release issued on Sunday.

According to the World Health Organization, diabetes is a chronic disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces. Insulin is a hormone that regulates blood sugar. Hyperglycaemia, or raised blood sugar, is a common effect of uncontrolled diabetes and over time leads to serious damage to many of the body’s systems, especially the nerves and blood vessels.

“4Ts” framework

The initiative seeks to support early detection and promote the “4Ts” awareness framework — Toilet, Thirsty, Tired, and Thinner — enabling parents, teachers and caregivers to recognise early warning signs of Type 1 diabetes.

In addition to clinical protocols, the document emphasises family and caregiver empowerment, providing structured training on insulin administration, blood glucose monitoring, emergency response and daily disease management. It also outlines evidence-based treatment guidelines, regular monitoring schedules, and protocols for preventing complications.

The initiative is expected to deliver public health benefits, including reduced mortality due to early detection, prevention of complications, and improved quality of life for affected children. Over the long term, it will contribute to lowering healthcare costs and strengthening health system capacity for managing non-communicable diseases among children.

THE INGREDIENTS OF INDIA’S BIOPHARMA AMBITIONS

The COVID-19 pandemic was a watershed moment for our country. While the pharmaceutical sector was robust, it lacked the capacity to produce specialised molecular components at scale. At the start of 2020, nearly all of the 20-plus reagents and enzymes required for making the vaccine kits were imported. Supplies were also vulnerable as the countries where these came from struggled with their own outbreaks.

The pandemic brought to light bottlenecks in the supply chains that support research, development, and manufacturing in the biotechnology and health sectors. Vast arrays of specialty



reagents are required to drive innovation in new therapeutics and to make accurate diagnostic kits.

One example is nucleotides and their analogs. Nucleotides are the building blocks of DNA and RNA. Clever chemical modifications of these compounds give us nucleotide analogs. When used in PCR kits, the analogs have greater sensitivity in the diagnosis of diseases such as tuberculosis and dengue.

Some analogs are used as therapeutics. The antiviral drug remdesivir can stop the virus from proliferating. During the pandemic, modest evidence suggested that it could reduce the time to recovery from a severe COVID-19 infection. Other exotic nucleotide analogs have been used to silence genes — as in the case of the enzyme responsible for overproducing oxalate, which ends up forming kidney stones.

News headlines focus mainly on breakthroughs in curing diseases. The infrastructure needed to enable that research gets little attention except in times of crisis. Thanks to the lessons learnt during the pandemic, the industry that makes specialty biochemical reagents and laboratory products is now in a phase of high growth. But the going is not easy for the innovation-driven small and medium Indian companies that make these products. They have to compete with large multinationals that dominate this sphere worldwide.

Indeed, many small companies start off as distributors of imported products. The Hyderabad-based company Biochem Desk, headed by researcher-turned-entrepreneur Shraddha Goenka, started off two decades ago as a distributor and now manufactures high-purity custom nucleotides and provides deep technical support required to use these exotic chemicals at R&D institutions. Similarly, other small- and medium-sized enterprises (SMEs) like Mylab Discovery Solutions in Pune and Chennai-based MagGenome Technologies chip away at India's 80% import dependence for high-end laboratory supplies.

But there are many regulatory hurdles that Indian startups in this space face. Maintaining high-level regulatory compliance can affect SMEs more than large multinationals. Inverted duty structures mean that they import their starting material and equipment at a much higher tax rate while selling their finished kits at lower tax slabs.

Government programmes such as the Biopharma SHAKTI initiative and the BioE3 Policy, that promote biotech start-ups, will create a growing demand for reagents, molecular biology kits, and cell and tissue culture products. There are now around 11,000 biotech startups in the biotech clusters of Bengaluru, Lucknow, and the National Capital Region, in Hyderabad's Genome Valley, and in other places.

There are many incentives offered by regulators to the makers of a final product such as a vaccine — but not for the companies that produce ingredients that go into making the vaccine.

Incentivising the creation of the ingredients that go into the making of successful biotechnological products would go a long way towards attaining a self-reliant India.

BUILDING HAZARDS

Each major fire accident in cities that ends up claiming human lives fleshes out different sets of causative and exacerbating factors. The recent one in Shahdara in East Delhi highlighted a lack of sufficient attention to planning for evacuating buildings in the case of emergencies, mainly fire.



Nine people were killed and some 15 were rescued with grievous injuries in that accident. The residential building — stilt plus four floors comprising eight houses — had security enhancing features that turned out to be deadly: electronic locks on doors that could not be opened; a terrace that was not easily accessible; and metallic grills around the building including on balconies that had to be cut for access by fire service personnel seeking to rescue the victims. A fire in March in Palam, in which nine of an extended family died, highlighted access problems that fire services face in Delhi. The mixed-use building had few of the recommended firefighting facilities required in such buildings. Eyewitnesses complained that the hydraulic lifts used by fire services personnel to access higher floors were malfunctioning. Though the fire services insist they reached the Shahdara accident spot on time, response times have been longer in the capital city at other times. In a fire in Dwarka in 2025, fire engines could not enter the residential society because the name board of the society was blocking them.

While there is certainly a case for reviewing the fire preparedness and fire-fighting capabilities of Delhi, what often goes unaddressed are electrical problems that cause these fires across Indian cities. As summer sets in, air-conditioning blasts are often casually cited as in the Shahdara fire. What often happens is overloading of equipment such as the airconditioner during hot summer days. The wires that are not designed to handle such loads burn due to heat and the circuit breakers that should have tripped the equipment as protection do not do so. In India, the hierarchy of loads and circuit breakers is often not observed as residences are packed with high load equipment beyond what the system can safely carry. The intent is often to keep the equipment running under all conditions whereas tripping of overloaded equipment is a necessary safety feature. City authorities talk of drones and robots to fight fires when even the basic preventive measures are not in place.

HOW DOES KERALA PLAN TO TACKLE OIL SPILL HAZARDS?

The story so far:

Kerala had witnessed two shipwrecks off its coast involving two separate vessels – MSC Elsa 3 and MV Wan Hai 503 – on May 25, 2025 and June 9, 2025 respectively. The incidents had raised a serious threat to the State’s marine ecosystem and coastal environment. The container ship MSC Elsa 3 went down with 640 containers, including 13 with hazardous cargo and 12 with calcium carbide. A large quantity of pellets, also called nurdles, had washed ashore on the southern coast following the incident. It prompted the authorities to step up efforts to formulate an Oil Spill Contingency Plan (OSCP). The Kerala State Pollution Control Board (KSPCB), which was entrusted by the government to initiate the required measures, had awarded the work to a Bangalore-based firm. The agency submitted a report dated April 20, 2026 before the National Green Tribunal stating that the draft OSCP is ready.

Kerala has a coastal line of 590 km, and the entire coast is prone to oil spill disasters as one of the international oil transportation routes is adjacent to the State’s coastal line. As per the terms of reference for preparing the OSCP, oil tankers and other ships visiting ports in the State pose a risk to the coastline areas, when they are involved in accidents. The proposal to prepare an OSCP was initiated in 2016 as part of a governmental review of the preparedness of major accident hazard units to handle chemical accidents. However, it got delayed due to various technical and financial hurdles. The scope of work included marine oil spills that occur within 12 nautical miles (24 km) of Kerala’s coastline and riverine systems extending 40 km inland or till tidal effect is evident, whichever is greater.



What are the highlights of the OSCP?

It includes mapping the Environmental Sensitive Index of oil spills along the coast of Kerala and preparing response-focussed contingency plans. The framework will elaborate on the oil spill contingency planning guidelines, wildlife response plans, ship board pollution emergency plans and tactical oil spill booming/site response plans. It will also include guidelines for crisis management and marine emergency response plans. The OSCP will highlight mitigation measures to be initiated in the wake of an emergency, the responsibilities of various departments, oil spill risks and protection priorities, shoreline response operations, and administrative action for clean-up. It will identify areas involving operation of fishing boats and ships, and map environmentally vulnerable areas along the State's coast.

The OSCP will recommend a detailed response plan with chain of command, duties and responsibilities. It will have the contact details, list of all available resources to be pressed into service in an emergency, and the database of available machinery or equipment for clean-up operations. The Plan will highlight the steps to be taken before initiating the shoreline clean-up, including assessment of shoreline oil characteristics, on-site conditions, methods to be adopted and the scope of work required in each area as per the priorities. The KSPCB has stated that the OSCP will be prepared in accordance with the guidelines of the National Oil Disaster Contingency Plan (NOS-DCP) of 2015, 2018 and 2024.

What steps precede the final OSCP?

As per the KSPCB, the draft OSCP includes various aspects related to hydrodynamic, oil spill modelling, marine sensitivity index mapping and net environmental benefit analysis. It will be vetted by a committee of experts. The draft Plan will be submitted to the Indian Coast Guard — the central coordinating agency for combating oil pollution in the coastal and marine environment. The final OSCP will be published after receiving the required clearances.

GOVT TESTS NEW SYSTEM FOR REAL-TIME ALERTS ON DISASTERS, EMERGENCIES

THE GOVERNMENT on Saturday sent a test notification in the form of a text message with a sharp beep sound to almost all citizens around 11:42 am, demonstrating its indigenously developed Cell Broadcast system for instant communication during critical situations such as natural disasters and man-made emergencies.

Key Takeaways:

- A pop-up message flashed on mobile screens in English, Hindi and other languages with the headline 'Extremely Severe Alerts'. "India, launches Cell Broadcast using indigenous technology, for instant disaster alerting service for its citizens. Alert citizens, safe nation. No action is required by the public upon receipt of this message. This is a test message. – Government of India," it read.
- Currently, the government already issues disaster alerts through SMS by deploying the Integrated Alert System called SACHET, which is developed by the Centre for Development of Telematics (C-DOT), the research and development centre of the DoT.
- This system, based on the Common Alerting Protocol recommended by the International Telecommunication Union, has been successfully operationalised by the National Disaster Management Authority.



— It has been operational across all 36 states and Union Territories to deliver disaster and emergency-related alerts via SMS to mobile users within geo-targeted areas. Till date, 134 billion SMS alerts in more than 19 languages have been disseminated during natural disasters, weather warnings and cyclonic events.

— But unlike SMS alerts (which is a one-to-one channel) which may be missed by many, the ‘cell broadcast’ technology used on Saturday is unmissable since its a one-to-many channel communication system.

— It mirrors the technologies used in countries such as Japan (which issued tsunami alerts). It is a method where short messages with sound alerts can be sent to all mobile devices within a defined geographic area simultaneously almost in near real-time delivery.

— The Cell Broadcast technology, also introduced by C-DOT, will further strengthen alert dissemination in time-critical situations, such as tsunamis, earthquakes, lightning strikes and man-made emergencies like gas leaks or chemical hazards, the government said.

— These “test messages” will only be received on mobile devices with Cell Broadcast test channels enabled (Users can enable or disable alerts through the following menu path on their mobile devices: Settings → Safety and emergency → Wireless emergency alerts → Test alerts).

Do You Know:

— Many countries across the world now use cell broadcast-based emergency alert systems to warn citizens about disasters and security threats.

— Among the first to adopt it was Japan in 2007. Its J-Alert system transmits instant emergency information about threats such as earthquakes, tsunamis, volcanic eruptions and ballistic missiles via sirens.

— It was trialed in the western city of Kobe, which suffered a devastating earthquake in 1995 that killed nearly 6,500 people, according to the BCG-backed non-profit Centre for Public Impact.

— Several other countries followed. The US rolled out its Wireless Emergency Alerts (WEA) system in 2012. Across Europe, countries have adopted similar systems under the EU-Alert framework, especially after an EU directive in 2018 mandated member states to implement public warning systems using cell broadcast by 2022.

— In Asia, besides Japan, countries such as South Korea and Singapore have also deployed nationwide alert systems over the past decade. Other countries, including Canada, New Zealand and Chile, have introduced similar broadcast-based alerts tailored to risks like wildfires, earthquakes and floods.

— As climate-related disasters become more frequent and severe, technologies such as cell broadcast become extremely important for survival.

— India, especially, has seen an increasing frequency of natural disasters such as flash floods, extreme temperatures and cyclones.

— According to the ITU, such systems can play a large role in helping societies adapt to the impacts of climate change. It says technologies like cell broadcast are “critical elements for delivering early-warning alerts to populations at risk”.



EYES IN SPACE: INDIAN STARTUP LAUNCHES A FIRST-OF-ITS-KIND SATELLITE VIA SPACEX ROCKET

An Indian start-up, GalaxEye, rode on a SpaceX rocket this morning to launch a first of its kind satellite that is meant to fill a long-standing gap in space imaging. The satellite, aptly called Drishti, is equipped to take optical images, very much like a normal camera, as well as radar-generated images of the same place at the same time, something that has not been tried before.

Key Takeaways:

- The optical images ensure clarity and intuitiveness, while radar images, through a Synthetic Aperture Radar (SAR), brings all-weather reliability. For this reason, the company is describing its innovation as Opto-SAR technology.
- “Imaging satellites are generally equipped to take multi-spectral or hyper-spectral (optical) images, or they use SAR. Both of these kinds of satellite data are used extensively. But very often they need to be fused together to get correct information because each one of them has limitations. Multi-spectral images are clear and easy to understand, but they are not effective during cloudy weather or night time, for instance. SAR signals can penetrate clouds and take continuous images, but they are not intuitive. Like X-ray images, they need experts to glean the information. The uniqueness of Drishti is that it has both the sensors that will enable simultaneous imaging,” GalaxEye founder Suyash Singh had told The Indian Express in an earlier interview.

Do You Know:

- Drishti is the first satellite of GalaxEye, a company started by alumni of IIT Madras. It rode on a Falcon 9 rocket by SpaceX from the Vandenberg Space Force Base in California, United States, as one of the 45 payloads on the CAS500-2 mission. The launch happened at 12.30 pm India time.
- Drishti, a built-in-India satellite, seeks to solve a familiar problem in space imaging. Users need clear and intuitive images from space that is available at all times. As of now, they often have to use data from multiple satellites, optical data for clarity, and SAR data for continuity and all-weather availability. While the super-imposition of these two datasets often does the needful, it is not without challenges. The two satellites are not watching the same place at the same time, and the angles at which they are watching over a place on Earth can be very different.
- GalaxEye is one among several Indian space start-ups that are beginning to make their presence felt. Agnikul Cosmos, another start-up from IIT Madras, has built the world’s first 3-D printed rocket engine, while Skyroot has tested India’s first privately built rocket. Companies like Pixxel, Dhruva Space and Bellatrix have been demonstrating impressive innovations in satellite technologies.
- GalaxEye had to make important technological innovations to ensure that both the imaging sensors are put on the same satellite and operate in sync with each other to produce simultaneous imaging of the same place.

INDIA SENDS ARMY TEAM TO CAMBODIA FOR JOINT EXERCISE

The Indian Army has dispatched a 120-member contingent for the second edition of the India-Cambodia Joint Military Exercise CINBAX-II 2026, scheduled from May 4 to 17 in Kampong Speu



Province, Cambodia. The exercise will take place at the Royal Cambodian Air Force Training Centre.

According to the Defence Ministry, the exercise, conducted under the framework of the UN Charter's Chapter VII mandate, will focus on company-level joint operations in a sub-conventional environment.

The Indian contingent, primarily drawn from a battalion of the Maratha Light Infantry Regiment, will train alongside 160 personnel from the Royal Cambodian Army, it added. It also said the exercise will centre on counter-terrorism operations aligned with real-world UN peacekeeping scenarios.

CINBAX-II aims to boost interoperability, coordination, and operational synergy between the two forces. It will also serve as a platform to exchange best practices and share operational experiences, particularly in semi-urban combat environments.

The exercise underscores the growing defence ties between India and Cambodia and is expected to deepen bilateral relations while enhancing joint capabilities to address regional and global security challenges.

WHY INDIA'S NEW HELICOPTER-LAUNCHED NAVAL MISSILE 'HITS DIFFERENT'

Earlier this week, the Defence Research and Development Organisation (DRDO) and the Indian Navy successfully test-launched a salvo of short-range anti-ship missiles from a helicopter off the Odisha coast. These indigenously developed missiles, called the Naval Anti-Ship Missile Short Range (NASM-SR), are meant to be deployed from ship-borne helicopters.

Key Takeaways:

- During the test on Wednesday (April 29), two such missiles were launched in quick succession from the same chopper, marking the platform's first successful salvo test. While the Navy already has helicopter-launched missiles, the NASM-SR offers a potential upgrade over them. They also have two unique features — "man-in-loop" and "waterline hit".
- A helicopter-launched system, such as NASM-SR, allows a navy to engage hostile vessels and ships from a safe distance — that is, without exposing their own ships to direct danger.
- This is an important factor during naval warfare, anti-surface operations and sea control missions. The Indian Navy already possesses the British-origin Sea Eagle anti-ship missile, which it has equipped its Sea King 42B helicopters with.
- Simply put, these helicopters, which are stationed on ships, can take off, strike a target from a relatively close range, and then return to the ship. This capability is, therefore, especially useful in highly contested maritime environments.

Do You Know:

- The Sea Eagles are 1980s-era missiles, lacking many modern capabilities. One of its key issues was its weight. A single missile weighs around 580 kg. So, in the early 2010s, the DRDO began the development process of a lighter, modern and homegrown missile that could be carried in higher numbers in helicopters. Also part of the development process were premier DRDO labs such as the Hyderabad-based Research Centre Imarat and Defence Research and Development



Laboratory, Pune's High Energy Materials Research Laboratory and Chandigarh's Terminal Ballistics Research Laboratory. The NASM-SR's first successful flight test was conducted in May 2022. Wednesday's launches were a salvo test — multiple launches in quick succession.

- The NASM-SR missiles are currently being produced by private sector partners with the help of MSMEs, start-ups and others.
- The NASM-SR uses a solid propulsion booster rocket that gives the missile its first thrust and a long-burn sustainer engine that keeps it flying for longer.

One of its key subsystems include the seeker — a sensor that detects and tracks the target. It also has a radio altimeter device that measures height from the ground or sea. Another critical component is a high-bandwidth two-way data link system that allows real-time communication between the missile and operator sitting in the helicopter, the DRDO said.

- A single NASM-SR missile weighs around 380 kg — 200 kg lighter than the Sea Eagle. This means more of them can be carried in helicopters. Its 55-km range, however, is lower than the Sea Eagle's 110 km. When the NASM-SR missile is within a certain distance of its target, a radio proximity fuse detonates its explosive device.

AT SEA

The Indian Navy's Project 17A is a ₹45,000-crore programme to build seven 'Nilgiri'-class frigates, with anti-air, anti-surface, and anti-submarine capabilities, as an advanced complement to the 'Shivalik' frigates and a precursor to Project 17B. The Project delivered the INS Mahendragiri on April 30, completing six deliveries in 17 months, but had previously faced multiple delays. The Comptroller and Auditor General (CAG) of India has flagged hundreds of design changes in previous warship classes during construction. Deliveries had been delayed even though ships were nominally complete because they lacked critical components such as engines and sensors, allowing the projects to meet commissioning dates on paper while leaving the hull unprepared for combat. A 2025 CAG report found that the Navy was inducting platforms without building the supporting infrastructure. While Project 17A used 75% indigenous components by value, many critical parts were sourced from abroad, and without them the vessels' final integration was withheld. Currently, India can build most of each ship but exercises limited control over timelines.

The Indian Ocean carries most of India's energy imports as well as Chinese naval deployments, but the nature of these challenges alone does not resolve the kind and scale of response they merit. India built the Chain of Static Sensors after the 2008 Mumbai attacks, with radar hardware involving imported parts. The Chain has been extended to Mauritius, Sri Lanka, and the Seychelles, and together with naval platforms forms a detect-decide-respond system. But while naval satellites and underwater sensor networks provide the 'detect' aspect, the frigates' radars and sonars remain the most imported — and thus most delayed — components, limiting the vessels' ability to function as mobile sensors. Adding more surface combatants is like adding receivers to a network still transmitting a fuzzy picture. Granted, securing sea lanes and addressing non-traditional threats such as Houthi drone and missile activity justify some number of multi-role frigates. However, these platforms are also overkill for countering piracy and smuggling. Heightened surveillance and the Indian Coast Guard also address the 26/11 scenario. And while the People's Liberation Army Navy has been increasing its submarine presence in the region, an Indian hull lacking the premium sensors required to find these vessels is effectively not responding to China's presence. What then is the purpose of expanding the high-end frigate fleet?



One possibility is to sustain domestic shipyards and absorb new technologies, but this risks allowing industry interests to supersede the demands of the threat environment. In sum, India has a response fleet facing delays, a sensor grid with incomplete coverage and overdue upgrades, a domestic industrial ecosystem that still depends on imports, and, ultimately, investments that are out of step with the threats they are meant to address.

PROPOSAL FOR ARUNACHAL'S KALAI-II HYDEL PROJECT SKIPS MENTIONING 'ENDANGERED BIRD HABITAT'

A Union Environment Ministry expert panel has recommended environmental clearance (EC) for the 1,200-MW Kalai-II hydroelectric project on Lohit River in Arunachal Pradesh's Anjaw even as environmentalists and project-affected persons flagged glaring omissions about the presence of the critically-endangered white-bellied heron bird in the Lohit River Basin from the proposal's environmental impact assessment (EIA) report.

Key Takeaways:

- In 2020, the EAC had itself sought a detailed conservation plan for the Heron species while extending clearance for the 1,750 MW Lower Demwe project, also proposed on the Lohit River.
- As per official minutes, the Centre's EAC on river valley and hydroelectric projects recommended environmental clearance for the Kalai-II hydel project in its December 19 meeting. The EIA report was prepared by WAPCOS Ltd, a government enterprise and an accredited EIA consultant.
- A day before the EAC's meeting, Soblam Malo from Anjaw's Chengung village, and Assam-based environmentalist Bimal Gogoi wrote to the panel highlighting the alleged oversight in the EIA report while seeking a prior assessment of the project's impact on the bird species.
- Gogoi said the EIA report "failed to make even a single mention of the under-threat species" despite the "project-affected area being contiguous habitat with recent records of the bird in the Lohit River basin, including Kamlang Tiger Reserve." Gogoi added that "surprisingly" Kamlang Tiger Reserve was only recorded as a sanctuary in the EIA report.
- Rohit Naniwadekar, scientist, Nature Conservation Foundation, who has carried out field research on the species in the Namdapha Tiger Reserve said the white-bellied heron prefers free-flowing riverine habitats with low disturbance, and predominantly depends on fish found in the river rapids. "In Arunachal Pradesh, their population is found in Lohit, Anjaw, and Changlang districts, including in Kamlang and Namdapha tiger reserves. We do not completely understand the causes behind the dip in their population and in Namdapha, despite relatively little disturbance to its habitat," he said.
- "While the IUCN Red list suggests there are less than 250 birds in the wild, experts speculate there might be only about 60 birds left in the wild, with 4-5 breeding pairs in Bhutan and fewer in eastern Arunachal Pradesh," he added.

Do You Know

- The report's avian-fauna chapter that records a total of 28 species belonging to 19 families in the study area misses out on making any mention of the white-bellied heron, a schedule-I (highest protection) species under the Wildlife Protection Act.



- The bird is critically endangered, as per the red list of the International Union on Conservation of Nature (IUCN). The bird's presence has been recorded both, upstream and downstream, of the Kalai-II project, as per independent researchers, and past records of the Arunachal Forest Department.
- The white-bellied heron nesting sites in Walong and Namdapha are also recorded in the June 2023 edition of Indian Birds, a journal of South Asian Ornithology. The journal article noted the bird count has rapidly declined due to habitat loss, hunting, human disturbances, while older conservation strategy documents have also noted dams and collisions with power lines as threats.

FOR NEW MINE, RAJASTHAN PSU SEEKS TO CUT 4.48L TREES IN CHHATTISGARH FOREST

Rajasthan's state-owned electricity producer Rajasthan Rajya Vidyut Utpadan Nigam Limited (RVUNL) has sought to divert 1,742.6 hectares of prime forest and fell 4.48 lakh trees in central India's green lung Hasdeo-Arand forest for its Kente Extension coal mine in Chhattisgarh's Surguja district. It has proposed compensatory afforestation on existing forest land elsewhere in the state, official documents show.

Key Takeaways:

- RVUNL was allotted the coal block in October 2015 for captive use of coal at its Chabbra coal plant and Suratgarh coal plant. Adani Group is the developer and operator of the coal mine.
- The Forest Advisory Committee (FAC) of the Environment Ministry, which grants approval for diversion, will appraise the PSU's proposal.
- The Parsa and Parsa East Kete Basan (PEKB) open cast mines are already operational in this high-conservation zone forest, which was once earmarked as a no-go zone during the United Progressive Alliance (UPA) era.
- Under the Van (Sanrakshan Evam Samvardhan) Adhinyam, 1980, non-forest land is the first preference to compensate for the loss of a forest, and use of degraded forest or other types of land for afforestation has to be justified. Further, in case of non-availability of non-forest land, compensatory afforestation can be raised over revenue forest lands, that is land recorded as forest in the records but not notified as forest under any law and not managed by the forest department. Revenue lands, orange forest lands fall in this category. They have to be mutated and transferred in the name of the state forest department.
- In March, the Ministry had flagged that compensatory afforestation has been proposed over forest land and Orange (or revenue forest) land in 81 patches covering 3,236.08 hectares, out of which 1,051 hectares is classified as moderately dense forest as part of the project.

Do You Know

- Captive use of coal refers to mining coal specifically for an organization's own consumption—primarily for steel, power, and cement production—rather than for open-market sale.
- The Hasdeo Arand is referred to as the “lungs of Chhattisgarh”, with a wealth of biodiversity. According to the Indian Council of Forestry Research and Education (ICFRE), Hasdeo Arand is the “largest un-fragmented forests in Central India consisting of pristine Sal (*Shorea robusta*) and teak forests.”



The Hasdeo-Arand Coalfield (HAC) covers an area of 1,879.6 sqkm, spanning three districts of Sarguja, Korba and Surajpur, in the northern tribal belt of Chhattisgarh.

- As per a 2021 report by the Wildlife Institute of India (WII), nine species in HAC have special protection under schedule I of the Wildlife Protection Act, 1972. These include Elephant, Leopard, Sloth Bear, Indian Grey Wolf, Honey Badger, Four-Horned Antelope, Indian Pangolin, Giant squirrel, and Rusty spotted cat. There are 92 species of birds in Hasdeo and 25 different mammals, 16 types of snakes. Its also a habitat as well as a corridor for elephants and a corridor for tigers.
- According to the ICFRE in 2021, there are 640 floral species, 128 medicinal plants and 40 timber-yielding species of plants.

NICOBAR'S GRAM SABHAS SIGNED OFF ON INFRA PROJECT WITHOUT MANDATED QUORUM

The Andaman and Nicobar Islands (A&NI) administration did not achieve the mandated 50% quorum at the gram sabha meetings held to get consent for the Centre's ₹92,000-crore Great Nicobar Island project. Instead, it claimed to have done so by attendance figures ranging from 2% to 15% of the population, which, it argued in the Calcutta High Court, counted as "proper quorum". The submissions were made by the administration in an affidavit to the Bench that is hearing a batch of petitions alleging that procedures under the Forest Rights Act (FRA) had been violated in obtaining consent for the project.

Quorum is the minimum number of members needed in such a meeting to reach a decision. According to the rules issued by the Centre for the implementation of the FRA, a quorum at a gram sabha is achieved only if 'one-half' or 50% of the adult population of that village is in attendance, of which one-third must be women.

The administration submitted that meetings were held for Campbell Bay, Laxmi Nagar, and Govind Nagar gram panchayats, covering seven villages, on August 12, 2022. The Campbell Bay meeting was attended by 105 people, the one in Laxmi Nagar by 163 people, and the Govind Nagar sabha had 81 people. The administration said all three meetings passed "unanimous" resolutions consenting to the project.

Compared to the population of these gram panchayats as per the 2011 Census, the strength of the Campbell Bay meeting was 1.83% of the total population of 5,736, that of the Laxmi Nagar was 14.72% of the population of 1,107, and the attendance at the Govind Nagar meeting was 11.98% of the population of 676. Put together, 349 people (4.6%) signed off on the project at these three gram sabhas meant to represent seven villages, whose total population stood at 7,519 as of 2011.

The submissions, which were taken on record by the High Court on Wednesday, came after the Centre sought time from the court to "demonstrate that consent has been taken from the tribal people".

In the supplementary affidavit filed by an official of the Tribal Welfare Department, the administration has argued that due process was followed under the FRA to hold special gram sabhas, with "prior notice and proper quorum", which passed resolutions on forest rights of the people and consented to the diversion of forest land for the project. The administration also justified its prior notice of one day for such meetings.



“It is irrelevant to say that tribal communities were excluded from the FRA process,” the administration said, because their “adequate representation” had been ensured in the Sub-Divisional Level Committee (SDLC), which had accepted the gram sabha resolution and recommended for clearance under the FRA. The petitions before the High Court challenge not just the gram sabha resolutions but also the constitution of the SDLC.

CAN VANTARA SOLVE COLOMBIA’S HIPPO PROBLEM?

The story so far:

Vantara, the 3,500-acre wildlife rescue and rehabilitation centre in Jamnagar, Gujarat, owned by Anant Ambani, son of Reliance chairman Mukesh Ambani, has offered to take in 80 hippos scheduled for euthanasia.

Where did Colombia’s hippos come from?

The animals descend from four hippos — three females and one male — imported in 1981 by Colombian drug lord, Pablo Escobar, to his private menagerie at Hacienda Nápoles in Antioquia. After Escobar was killed in 1993, the estate was abandoned and the hippos were judged too dangerous and logistically complex to recapture. They escaped into the Magdalena River basin and have been reproducing since. There are roughly 170 today.

How did the Colombian government arrive at the decision to cull?

Colombia declared Hippopotamus amphibius an invasive alien species in March 2022. A sterilisation programme began in October 2021, but was deemed labour-intensive, expensive, and ineffective unless a high proportion of dominant males were castrated, since they can mate with multiple females. A 2023 paper by Amanda Subalusky at the University of Florida, Suresh Sethi at Alaska Pacific University, and Elizabeth Anderson at Florida International University, has influenced Colombia’s measures. In the journal *Scientific Reports*, they modelled the hippo demography and argued that rapid population growth and high management costs had created a “narrow window” for control. They said even if some hippos could be shipped out, some culling was unavoidable.

What does the peer-reviewed literature say about why these hippos must be controlled?

Jonathan Shurin, a community ecologist at the University of California, San Diego, and colleagues published in *Ecology* in 2020 that lakes containing hippos in Colombia showed altered ecosystem metabolism, elevated nutrient loading from terrestrial grazing transferred to water via waste and phytoplankton communities increasingly dominated by cyanobacteria.

Why is moving hippos so difficult?

A study in the South African journal, *Koedoe*, in 1989 documented chemical immobilisation of 37 hippos where 12 of them died within an hour of darting. Hippos are difficult to tranquilise because they have thick skin, are usually in or near water (where a sedated animal can drown), and are dangerous to approach. Capture myopathy — the malignant outcome of stress during capture, reviewed in *Conservation Physiology* — accounts for the highest number of deaths in wildlife translocations globally. An adult male hippo weighs up to 3,000 kg; per-animal costs would run to tens of thousands of dollars before receiving-facility costs.



Could Vantara physically house 80 hippos?

The Greens Zoological Rescue and Rehabilitation Centre at Vantara spans about 650 acres. The Global Federation of Animal Sanctuaries (GFAS) specifies a minimum of 929 square metres of enclosure per adult hippo. Eighty hippos at the GFAS minimum would require around 18 acres — easily within the available footprint. The harder constraints, however, are that wild hippos form pods of 10 to 30 around dominant males, meaning 80 unrelated animals cannot be housed as one herd; at least 4-8 separate pool complexes with visual and physical separation would be needed. The Jamnagar climate is also hotter and drier than the Magdalena floodplain, requiring engineered freshwater inputs year-round.

What does CITES say about transferring wild animals to India?

CITES — the multilateral treaty that regulates international trade in endangered species — sent a Secretariat team to inspect Vantara last year, prompted by allegations of discrepancies in animal imports from Congo, Mexico, and elsewhere. In a document published in October, the Secretariat found that India had not exercised “due diligence” in issuing several import permits and recommended that India issue no further permits for endangered wildlife imports until it implemented procedural reforms and properly identified the provenance of imported animals. The recommendation was reversed in November after India, the U.S., Japan and Brazil argued the measure was “premature.”

Would moving 80 hippos solve the problem?

No. The peer-reviewed consensus is that no single intervention — sterilisation, translocation, or culling — is sufficient on its own, and that the window for combined intervention is narrowing each year.

AFTER BENGAL WIN, PM MODI INVOKES SYAMA PRASAD MOOKERJEE: THE LIFE AND POLITICS OF THE JANA SANGH FOUNDER

In his victory speech at the BJP headquarters on Monday evening (May 4), Prime Minister Narendra Modi said that “the soul of Syama Prasad Mookerjee must be at peace today”. As the party won West Bengal for the first time ever, the PM recalled Mookerjee, the Bengali leader who founded the BJP’s predecessor, the Bharatiya Jana Sangh, in 1951.

A year after its formation, the Jana Sangh made a modest electoral debut, winning just three Lok Sabha seats — two of them from Bengal. The party merged with the Janata Party in the 1977 election to defeat Indira Gandhi, but the Janata experiment soon collapsed. It was in 1980 that the Jana Sangh’s successor, the BJP, was founded, with Atal Bihari Vajpayee, who had once been associated with Mookerjee, as its first president.

Who was Syama Prasad Mookerjee?

Born on July 6, 1901, Mookerjee — son of Ashutosh Mookerjee, Calcutta High Court judge and vice-chancellor of Calcutta University — studied at Presidency College, Calcutta, and Lincoln’s Inn. He became the youngest vice-chancellor of Calcutta University at just 33.

He was elected to the Bengal Legislative Council in 1929 and 1930, first as a Congressman and then as an independent. From 1941 to 1942, he joined the Progressive Coalition government of Fazlul Haque as Finance Minister. The government was formed in opposition to the Muslim



League. Mookerjee justified his decision by saying that the need of the hour was to organise Hindus and cooperate with Muslims who believed in working together.

A controversial letter decrying the Quit India Movement, purportedly written by Mookerjee to the British, has often been a topic of discussion.

From 1943 to 1946, Mookerjee was the Hindu Mahasabha president. He took up the cause of Bengal's Hindus in the run-up to Partition, opposing Muslim League leader and Bengal Prime Minister H S Suhrawardy's "United Bengal" plan — which called for an independent state separate from India and Pakistan. Mookerjee saw this as an attempt to ensure domination of Hindus by a Muslim majority. He called for the partition of Bengal, with Hindu-majority West Bengal staying with India.

Moderate Hindutva

After the assassination of Mahatma Gandhi, Mookerjee made the Hindu Mahasabha's Working Committee adopt resolutions that "expressed shame that Gandhi's assassin had been connected with the organisation, and declared support for the government in its efforts to suppress terrorism or subversive activities in any shape or form", writes BD Graham in *Hindu Nationalism and Indian Politics* (2007).

In November 1948, Mookerjee resigned from the Hindu Mahasabha after it rejected his suggestion to broaden its membership if it wanted to be a modern political party.

Bengal Hindus

When riots broke out in East Pakistan, now Bangladesh, in 1949-50, large numbers of Hindu refugees came to India. Mookerjee, the minister of industry and supply in the Jawaharlal Nehru government at this time, spoke out for them.

In April 1950, Nehru and Pakistan Prime Minister Liaqat Ali Khan signed a pact calling upon both countries to provide equality, freedom and justice to their minorities. Mookerjee resigned from the cabinet as the pact did not include a clause sought by him — sanctions against any side that failed to honour the agreement. It was after this that Mookerjee formed the Bharatiya Jana Sangh with the help of RSS volunteers.

The Kashmir issue

Pakistan, which laid claim to the princely state of Kashmir ruled by the Hindu Dogra king Raja Hari Singh on account of its Muslim majority, sent irregular troops, or *Kabailis*, to capture Kashmir in October 1947. A worried Hari Singh signed the Instrument of Accession on October 26, 1947, and Indian soldiers began pushing back the invaders. India took the case to the United Nations Security Council in January 1948, and the newly-established UN Commission for India and Pakistan (UNCIP) mediated a ceasefire.

The ceasefire brought the Line of Control into existence. UN Security Council Resolution 47 asked both sides to demilitarise so that a plebiscite could be held to determine the wishes of the people of Jammu and Kashmir. Since demilitarisation never happened on either side, the resolution remained a dead letter.

Article 370 of the Constitution was enacted, giving Parliament powers only in the fields of defence, foreign affairs and communication in the case of Kashmir. Indian laws didn't apply to Kashmir



beyond these three heads. People from outside also required a permit to visit the state, and were barred from buying land there.

The state's Prime Minister, Sheikh Abdullah, abolished big land holdings in Jammu and Kashmir in 1951 under the Big Landed Estates Abolition Act, without compensation, hitting Hindu landlords hard. He also adopted Urdu as the official language. The Dogra Hindu landlords resented these steps.

Prem Nath Dogra, a former Swayamsevak and civil servant from Jammu, launched an agitation against the Sheikh Abdullah government through his Praja Parishad, seeking the complete integration of Jammu and Kashmir with India. Mookerjee joined the movement in 1952.

Mookerjee and the Kashmir issue

The Jana Sangh took up in Parliament the arrest of Dogra and his followers after a clash with the police in the state. Later, the party also opposed the adoption of a flag by the state by the Constituent Assembly of Jammu and Kashmir.

On June 26, 1952, Mookerjee pressed the Centre to convince Jammu and Kashmir to accept full integration with India. The Jana Sangh and Praja Parishad widely adopted a slogan – “ek desh mein do vidhan, do pradhan aur do nishan nahin ho sakte (in one nation, there cannot be two constitutions, two Prime Ministers and two flags).”

Amid controversy, the Nehru government and the Jammu and Kashmir government signed the Delhi Agreement in July 1952, under which the state accepted the jurisdiction of the Supreme Court. It also accepted the supremacy of the Indian flag, though the state's flag would also remain in use. It further accepted the President of India's power to declare a state of Emergency in the state under Article 352, subject to the concurrence of the state in the event of internal disturbances.

The Praja Parishad, however, rejected the Delhi Agreement and, by October 1952, was planning an agitation if the Constituent Assembly of Jammu and Kashmir decided to elect a head of the state. They launched one when the assembly, by now the state's legislative assembly, elected Karan Singh as head of the state (Sadr-e-riyasat). In November 1952, Dogra and other leaders of the Praja Parishad were again arrested.

Mookerjee calls for agitation

At its first annual session at Kanpur in December 1952, Mookerjee's Jana Sangh passed a formal resolution supporting the Praja Parishad's Jammu Satyagraha for the complete integration of the state with India. It demanded a round-table conference of representatives of the Praja Parishad, the government of Jammu and Kashmir and the leaders of India, failing which it would launch an all-India agitation for full integration of the state with India.

Nehru saw the Jana Sangh's orientation as 'communal' on this question. BD Graham quotes Nehru's letter to Mookerjee, “I have no doubt that you wish well for India, but the fact remains that our conceptions of what is well for India appear to differ... I consider the communal approach to India's problems, or to any other problems, as inherently bad, narrow and injurious to the individual, the group and the nation...” Nehru's condition for any talks was that the Praja Parishad should stop its agitation.



Mookerjee's Jana Sangh now decided to go into agitation mode. Atal Bihari Vajpayee, who became private secretary to Mookerjee in early 1953, was sent across the Hindi-speaking states to popularise the agitation. "He patted your back once with love, and you would be ready to die for him," Abhishek Choudhary's biography of Vajpayee quotes the young PS referring to Mookerjee, his boss. Vajpayee travelled across Uttar Pradesh, urging people to go to Delhi for an agitation on Kashmir. Of the 1200-odd agitators who thronged the capital, 500 were from UP. Mookerjee then travelled to Madhya Bharat — the Gwalior-Indore region of erstwhile princely states — and also to Rajasthan, Vajpayee accompanying him in these trips.

In Delhi, protestors of the Jana Sangh would suddenly emerge in parks, unanticipated by the police, and shout slogans for the full integration of Kashmir.

Mookerjee's Jammu visit

In May 1953, Mookerjee decided to go to Jammu without a permit — a symbolic rejection of the special status of Kashmir — with Vajpayee. They went by train to Pathankot in Punjab, and then addressed multiple public meetings across the state for three days. Mookerjee was informed at Pathankot that he would be allowed to enter Jammu and Kashmir without a permit. This made Jana Sangh workers jubilant, and a slogan was coined, as per Choudhary's book: "Permit system toot gayi, Nehru sarkar jhuk gayi (The permit system has been shattered; the Nehru government has been made to bend)". ("Vajpayee: The Ascent of the Hindu Right, 1924–1977", Abhishek Choudhary, 2023).

On May 11, 1953, Mookerjee crossed into Jammu and Kashmir over the Ravi. However, the state police had put up barricades for his arrest. Mentally prepared for this, Mookerjee did not turn back and was arrested. He told Vajpayee to return to Delhi and tell everyone that he had entered Jammu and Kashmir without a permit, if only as a prisoner, writes Choudhary. Mookerjee was kept in a cottage about eight miles from Srinagar. However, the heart patient who had a blood pressure problem could not cope well in the conditions of his detention. On June 23, he fell ill suddenly, having suffered a massive heart attack, and died.

What he left behind was a sense of 'martyrdom' for Kashmir among his party workers. LK Advani would recall in his public speeches that a journalist in Rajasthan had informed him that Mookerjee was no more, plunging the Jana Sangh into deep mourning. "What happened? How did he die in confinement?" Advani would ask the crowd in rallies.

In allied organisations of the RSS, there is a popular slogan: "Jahaan hue balidaan Mookerjee, wo Kashmir hamara hai; jo Kashmir hamara hai, wo saare ka saara hai (where Mookerjee was martyred, that Kashmir is ours; the Kashmir that is ours is the full Kashmir)."

ON RABINDRANATH TAGORE'S BIRTH ANNIVERSARY, RECALLING HIS CLASH WITH MAHATMA GANDHI OVER THE 'CULT' OF THE CHARKHA

In September 1921, during Mahatma Gandhi's visit to Calcutta, Rabindranath Tagore told him: "Poems I can spin, Gandhiji, songs and plays I can spin, but of your precious cotton what a mess I would make!"

Gandhi and Tagore shared an enduring friendship that lasted from 1914-15 till the latter's death in 1941. But they also shared profound disagreements about political, social and economic matters.



And perhaps no object symbolised their deepest philosophical differences more than the charkha. Tagore recoiled from Gandhi's insistence that every true Indian must spin, while Gandhi remained unwavering in his belief that spinning carried deep moral and symbolic significance.

On Tagore's 165th birth anniversary, we revisit the Gandhi-Tagore debates on the spinning wheel.

An inevitable conflict

Jawaharlal Nehru once observed: "No two persons could probably differ so much as Gandhi and Tagore!"

The conflict between them, despite a deep friendship rooted in respect, was probably inevitable.

The first signs appeared in 1915, when Gandhi visited Shantiniketan after returning from South Africa. They disagreed on a range of topics — from nationalism to education and politics.

The gap grew after the Amritsar Massacre, when Gandhi initiated movements such as Non-Cooperation. Tagore worried these movements would lead to blind nationalism. Instead, he renounced his knighthood in protest.

As Gangeya Mukherji notes in *Gandhi and Tagore: Politics, Truth and Conscience* (2016), many biographers see Tagore as more outspoken and willing to take risks than Gandhi, since he issued public statements even when he risked punishment under the Defence of India Act during a period of strong state repression. By mid-1921, their disagreements were being openly expressed through speeches, essays and letters.

In the aftermath of a devastating earthquake in Bihar in 1934, Gandhi called the calamity a "divine chastisement for the great sin we [upper castes] have committed against... Harijans". Tagore did not agree.

"If we associate ethical principles with cosmic phenomena, we shall have to admit that human nature is morally superior to Providence..." he wrote to Gandhi (and later published) in protest.

"They had differences on fundamental philosophical questions, which led to disputation about many political, social, and economic matters," wrote historian Sabyasachi Bhattacharya in his 1997 book *The Mahatma and The Poet: Letters and Debates between Gandhi and Tagore 1915-1941*.

"Both were unsparing in their debate and, indeed, it cannot be said that either of them was very successful in persuading the other towards a path of convergence of views."

In *Rabindranath Tagore: The Myriad-Minded Man* (1996), Krishna Dutta and Andrew Robinson described Tagore and Gandhi as "the cherisher of beauty versus the ascetic; the artist versus the utilitarian; the thinker versus the man of action; the individualist versus the politician; the elitist versus the populist; the internationalist versus the nationalist... and, most prominently of all, the fine flowing robes and beard versus the coarse loincloth and bald pate."

The cult of the charkha

Tagore was deeply unsettled by what he saw as the moral tyranny embedded in the spinning movement — the cult of the charkha and the Congress directive mandating khadi, or hand-spun cloth.



In November 1924, Gandhi and other Congress leaders resolved that all Congress members must wear khadi while attending political or Congress functions, and contribute 2,000 yards of evenly spun yarn every month. Gandhi believed this would not only make India self-reliant in clothing, but also morally transform Congress workers themselves.

Tagore disagreed sharply. He dismissed the directive as “censure in printer’s ink” and responded with the essay *The Cult of the Charkha* in *The Modern Review*.

What troubled him most was the unquestioning obedience the movement seemed to demand. The enthusiasm surrounding the charkha, he argued, reflected Indians’ tendency to submit to the dictates of morally revered figures, especially when those dictates appeared to offer shortcuts to difficult national goals. As Gangeya Mukherji notes in *Gandhi and Tagore*, Tagore feared that the natural diversity of human temperament and choice was being “kneaded... into a lump of uniformity”.

He also believed the original purpose of the charkha — enabling the poor to meet a basic need for clothing, was being undermined as spinning turned into ritual. The repetitive labour it demanded, he argued, engaged “the muscles and not the mind”.

“That is why in every country,” Tagore wrote, “man has looked down on work which involves this kind of mechanical repetition.”

Tagore also rejected the idea that India could isolate itself from the modern world. Withdrawal from science and technology, he believed, would impoverish rather than strengthen the country. In several essays, Tagore contrasted Sparta and Athens to illustrate his point. Sparta, he wrote, narrowed itself to a single purpose and ultimately failed; Athens flourished because it “sought to attain perfection by opening herself out in all her fullness”.

Gandhi answered these criticisms in *The Poet and the Charkha* in November 1925. Acknowledging the unease generated by Tagore’s essay, he defended the spinning wheel: “The fact is that the Poet’s criticism is a poetic licence and he who takes it literally is in danger of finding himself in an awkward corner.”

He also accused Tagore of inhabiting an ivory tower, remarking: “If the Poet span half an hour daily, his poetry would gain in richness. For it would then represent the poor man’s wants and woes in a more forcible manner than now.”

For Gandhi, machinery had its place, but “it must not be allowed to displace the necessary human labour”. The charkha, in his view, cultivated dignity in physical work, encouraged cooperation, and carried both economic and ethical significance.

Uneasy dissent

Tagore was not opposed to the charkha as a means of meeting a basic human need. What troubled him was the excessive importance it had acquired in Gandhi’s political and moral programme.

Yet Tagore approached this disagreement with visible reluctance. He openly acknowledged, “It is extremely distasteful to me to have to differ from Mahatma Gandhi in regard to any principle or method. Not that, from a higher standpoint, there is anything wrong in doing so: but my heart shrinks from it.”



Do You Know:

- It was an unease with this violence that Rabindranath Tagore shared with Mahatma Gandhi. The relationship between Tagore and Gandhi was one of the most important and, for the Indian Freedom Movement, consequential intellectual associations of the last century.
- The two men held each other in the highest regard and their ties were marked by both alignment and contention. While Gandhi advocated the boycott of foreign goods, Tagore was wary of such approaches dominating the anticolonial struggle.
- On the other hand, Gandhi, like Tagore, wished for India to remain true to its spirit and refrain from “imitating the West”. A militant response to colonialism, the two also agreed, would adversely affect those in whose name it was being carried out. Victory under such circumstances meant little.
- Once violence became the accepted means through which a society addressed its problems, the logic underpinning it risked becoming embedded in common sense, sustaining itself well into the post-colonial future.
- Born on May 7, 1861, Rabindranath Tagore remains the only Indian to have won the Nobel Prize in Literature.
- Although he was knighted by the British in 1915, Tagore renounced the honour in protest against the Jallianwala Bagh massacre, a powerful political statement.
- Tagore is credited with writing the national anthems of both India (Jana Gana Mana) and Bangladesh (Amar Sonar Bangla), an extraordinary legacy across nations.

SHORT NEWS

WORLD PRESS FREEDOM INDEX 2026

- World Press Freedom Index, which evaluates 180 countries, recorded its lowest average score in the index’s 25-year history.
- It is an annual report published by Reporters Without Borders.
- For the first time in the Index’s 25-year history, more than half the world’s countries now fall into the “difficult” or “very serious” categories for press freedom.
- For the first time, in over half of the world’s countries and territories (52.2%), the state of press freedom is categorised as “difficult” or “very serious.” This category was a small minority (13.7%) in 2002.
- According to the Report, “The Index’s legal indicator has seen the most severe decline this year.

Rank	Country	Status
1	Norway	Good
2	Netherlands	Good
33	Australia	Satisfactory
87	Nepal	Problematic
134	Sri Lanka	Difficult
153	Pakistan	Very serious
157	India	Very serious
175	Afghanistan	Very serious



This score deteriorated in more than 60% of states — 110 out of 180 — between 2025 and 2026. This is notably the case in India (157th), Egypt (169th), Israel (116th) and Georgia (135th).”

— The index measures five key areas—economic, legal, security, political, and social conditions affecting journalism. Among these, the legal environment has worsened the most this year.

— At the top of the index, Norway retained the number one position for the 10th consecutive year, while Eritrea remained at the bottom for the third year in a row.

— As for India, it slipped further down the rankings. From 151st place in 2025, it now stands at 157th in 2026, with a global score of 31.96. The country remains in the “very serious” category.

INDIA AND VIETNAM TIES

India and Vietnam decided to elevate bilateral ties to ‘Enhanced Comprehensive Strategic Partnership’, set a new trade goal of \$25 billion by 2030 and increase defence systems procurement between the two countries after Prime Minister Narendra Modi met the visiting President of Vietnam To Lam on Wednesday.

India was one of the first countries with whom Vietnam entered into a Strategic Partnership in 2007. This was also India’s first Strategic Partnership within the ASEAN region. The two countries elevated the relations to a Comprehensive Strategic Partnership in 2016.

On the contentious issue of South China Sea, the joint statement said, in an oblique reference to China’s belligerent behaviour, “Underlining the link between prosperity and security, the leaders reaffirmed the importance of maintaining peace, stability, security and freedom of navigation and overflight in the South China Sea, while pursuing the peaceful resolution of disputes in accordance with international law, particularly the 1982 United Nations Convention on the Law of the Sea (UNCLOS), without resorting to threat or use of force.”

It also said that the leaders underscored the importance of “non-militarization and self-restraint in the conduct of all activities by claimants and all other states, and avoidance of actions that could further complicate the situation or escalate disputes affecting peace and stability.

India-ASEAN: Prime Minister Narendra Modi on Wednesday said that India and the Association of Southeast Asian Nations (ASEAN) countries will update the trade agreement between the two trade partners by the end of the year. The deal was originally signed in 2009 under the UPA government, and both trade partners began renegotiating the deal in 2024 amid a ballooning trade gap.

ECINET PORTAL

The EC had launched the ECINET app in January this year, after testing a beta version during the Bihar Assembly elections last November.

The app has had 10 crore downloads so far, the EC said. The app brought around 40 of the EC’s existing apps and portals together, covering a range of services for voters and officials alike.

During the Special Intensive Revision (SIR) of electoral rolls started by the EC last year, electors submitted forms and documents through ECINET, which was then used by officials to process the same.



The Election Commission on Wednesday said it countered over 68 lakh malicious hits on its ECINET portal on Monday, when votes were being counted for the West Bengal, Tamil Nadu, Assam, Kerala, and Puducherry Assembly elections. While the ECINET website and app was used for disseminating real-time updates on the results for the public, the portal is also used by election officials.

'ANEEL' FUEL

- Chicago-based nuclear fuel company Clean Core Thorium Energy (CCTE) announced that its patented 'ANEEL' fuel has completed its high burnup irradiation test in an Advanced Test Reactor (ATR) at Idaho National Laboratory (INL).
- It is only the second American company to have secured an export license from the US Department of Energy (DAE) to sell nuclear technology to India in nearly two decades.
- CCTE has developed a thorium-based fuel, called ANEEL or Advanced Nuclear Energy for Enriched Life, that can be deployed in the country's Pressurised Heavy Water Reactors (PHWRs) at scale.
- ANEEL is a new type of fuel that blends thorium with HALEU (high-assay low-enriched uranium) which is an important step towards the third leg of India's 3-stage nuclear programme.
- STAGE 3 of nuclear programme: The third stage will be based on the ThU233 cycle. U233 produced in the second stage can be used for the third stage of the power programme, which consists of advanced thermal and fast breeder reactors, for long-term energy security.
- PHWRs are said to be more suited to handling thorium because heavy water – an isotope of water that has an extra neutron on the hydrogen atom – absorbs fewer neutrons during the fission process, increasing the efficiency of the fission reaction by allowing more neutrons to be absorbed by the thorium.

TACTICAL ADVANCED RANGE AUGMENTATION (TARA) SYSTEM

- The Defence Research and Development Organisation (DRDO) and the Indian Air Force (IAF) on May 7 successfully carried out the first flight trial of TARA system that can transform an unguided missile into a guided one.
- The TARA glide weapon system is primarily a modular kit that can be attached to a conventional unguided warhead. It helps the missile glide over long distances, and accurately strike a target.
- The system is believed to use a combination of inertial navigation and satellite-based positioning to steer the missile towards the target.
- The TARA system glides, rather than relying on a rocket motor. This makes it lightweight and cost-effective while still extending the missile's range.
- Unguided bombs, which are referred to as gravity bombs or dumb bombs, can thus be upgraded to smart bombs, or precision-guided munitions, with relatively low effort. This can reduce the need to develop entirely new missile systems.



— This approach can substantially reduce costs while allowing rapid scaling of precision strike inventory.

MISSION FOR COTTON PRODUCTIVITY (2026–27 TO 2030–31)

— The Centre on 5th May approved Rs 5,659.22 crore for the Mission for Cotton Productivity for five years (2026–27 to 2030–31). The scheme was announced in the Union Budget 2025-26.

— It is aligned with the 5F vision (Farm to Fibre to Factory to Fashion to Foreign) of the Government for the textile sector.

— It aims to provide “the best of science & technology support” to farmers and “ensure a steady supply of quality cotton” for the Indian textile industry.

About Cotton

Cotton, a semi-xerophyte, is grown in tropical and subtropical conditions. It is popularly called “White Gold” and primarily a Kharif crop. The minimum temperature required for better germination under field conditions is 15 degrees Celsius. The optimum temperature for vegetative growth is between 21 and 27 degrees Celsius, and it can tolerate temperatures to the extent of 43 degrees Celsius; however, temperatures below 21 degrees Celsius impact its growth.

NEW SOP FOR FDI

— The government has issued a new Standard Operating Procedure (SOP) as per which foreign direct investment (FDI) proposals will be required to be processed within 12 weeks.

— As per the new SOP, the Department for Promotion of Industry & Internal Trade (DPIIT) is expected to disseminate the proposal to ministries concerned, Reserve Bank of India (RBI), Ministry of Home Affairs (MHA) and Ministry of External Affairs (MEA) within two days.

— Under the new SOP, investments in broadcasting, telecommunications, space, private security agencies, defence, civil aviation, and mining and mineral separation of titanium-bearing minerals and ores, its value addition, and integrated activities shall require security clearance from MHA.

EMERGENCY CREDIT LINE GUARANTEE SCHEME 5.0

— With an aim to meet the additional credit needs of industries under distress amid the ongoing West Asia conflict, the Union Cabinet has approved a credit support scheme named ‘Emergency Credit Line Guarantee Scheme 5.0’

— It targets additional credit flow of Rs 2.55 lakh crore including Rs 5,000 crore for airlines.

— The ECLGS was launched in May 2020 as part of the Aatmanirbhar Bharat Abhiyaan to support eligible MSMEs and other eligible businesses in meeting their operational liabilities amid disruption caused by the COVID-19 pandemic.

— 100% guarantee is provided to Member Lending Institutions (MLIs) in respect of the credit facility extended by them under the scheme to eligible borrowers.



— The later versions of the scheme have covered Mudra borrowers and other stressed sectors including healthcare, hospitality, leisure, travel, tourism and civil aviation.

SULPHUR DIOXIDE (SO₂) EMISSIONS FROM COAL-FIRED POWER PLANTS (CFPP)

— According to a study conducted by researchers from IIT Delhi, India could prevent an estimated 1,24,564 deaths every year by fully mitigating sulphur dioxide (SO₂) emissions from coal-fired power plants (CFPP).

— The study is among the first comprehensive attempts to quantify how SO₂ from CFPPs contributes not only to ambient SO₂ levels, but also to the formation of secondary fine particulate matter, or PM_{2.5}.

— The researchers found that a decrease in these emissions could reduce annual PM_{2.5} exposure by 0.3-12 microgrammes per cubic metre and ambient SO₂ levels by 0.1-13.6 parts per billion across states.

— The CFPPs emit SO₂, which react in the atmosphere to form secondary inorganic aerosols, including sulphate, nitrate and ammonium. These pollutants add to PM_{2.5}, the fine particulate matter linked to cardiovascular and respiratory diseases.

— The study comes amid continuing debate over the installation of flue gas desulphurisation (FGD) systems in CFPPs. Last year, the Ministry of Environment exempted the majority of India's coal-based thermal plants from installing FGD systems.

— The FGD is a technology that removes SO₂ from exhaust gases of fossil fuel power plants and industrial boilers, reducing acid rain and air pollution.

THE PATHFINDER

— Space-tech startup Pixxel on May 4, announced a partnership with LLM provider Sarvam AI to develop and build India's first orbital data centre satellite called The Pathfinder.

— Expected to reach orbit by the end of 2026, the 200-kg satellite will house GPUs (graphics processing units) that will be used to carry out training and inference of Sarvam's AI model.

— Unlike conventional satellite computing, which relies on low-power edge processors optimised for survival rather than performance, the Pathfinder satellite will house the same generation of hardware as on-ground data centres used to power frontier AI models.

RUSTY-SPOTTED WILDCAT SPECIES SIGHTED CLOSE TO DELHI

— Researchers confirmed first photographic evidence of the rusty-spotted cat (*Prionailurus rubiginosus*), one of the world's smallest species of wildcat in the Aravalli scrublands at the doorstep of Delhi.

— The rusty-spotted cat is classified as 'Near Threatened' on the IUCN Red List, and is protected under Schedule I of the Wildlife (Protection) Act.

— The rusty-spotted cat measures no more than 35-48 cm in length, about half of which is bushy tail. It has short, reddish grey fur, with rusty spots on the back and sides. The cat is native to India,



Nepal and Sri Lanka, where almost 75% of its habitat is believed to be under threat from land-use change, including agriculture and urban expansion. The animal is rarely documented due to its secretive nature and low density.

GUIDELINES FOR SCHOOL MANAGEMENT COMMITTEES

The Union Education Ministry released guidelines for school management committees on Wednesday, recommending that the chairperson and vice-chairperson of each such panel be an elected member from among the parents or guardians.

The guidelines suggest that the principal or head of the school be the member secretary of the committee, which will have two sub-committees – an academic committee and a school building committee.

The new guidelines, aligned with the National Education Policy 2020, supersede earlier recommendations on school management committees, and are meant to strengthen community involvement in schools and learning from the pre-primary classes all the way up to class 12. The guidelines will serve as a reference framework for states to issue their own instructions.

The Right to Education Act, 2009, states that schools shall constitute a school management committee consisting of elected representatives of the local authority, parents or guardians of children, and teachers, with at least three-fourths of the members of the committee being parents/guardians, and half of the members be women.

The committees will oversee implementation of schemes like Samagra Shiksha, PM-POSHAN, and NIPUN Bharat, and mobilise resources. The committees can also execute civil work of up to Rs. 30 lakh.

LIEUTENANT GENERAL N S RAJA SUBRAMANI

— The Centre has appointed Lieutenant General N S Raja Subramani (Retd) as the Chief of Defence Staff (CDS), who shall also function as Secretary to the Government of India, Department of Military Affairs. He is the third person to assume the post after Gen Bipin Rawat and Gen Anil Chauhan.

— Vice-Admiral Krishna Swaminathan has been appointed as the next Chief of Naval Staff. He is presently the Western Naval Commander in Mumbai. He will take charge from the current CNS Admiral Dinesh Kumar Tripathi on May 31.

TRIBHUVAN PRASAD SINGH

— A new variety of rose has been named after India's first full-time secretary of the Planning Commission and 1936-batch ICS officer Tribhuvan Prasad Singh, better known as TP Singh.

— "Tribhuvan", as it is called, has been developed by South Asia's leading nursery and rose breeder, K S Gopaldaswamiengar Son, popularly known as KSG Son, at Chamarajpet, Bengaluru, over four and a half years. It is a hybrid of 'Black Prince and Corrida'.

— T P Singh (1913-1975), who later served as the country's finance and agriculture secretary, is often recalled as one of leading policymakers post Independence.



BUSINESS AND ECONOMY

CRACKS IN THE OIL CROWN

On April 29, the UAE announced it would leave the Organization of the Petroleum Exporting Countries (OPEC), ending nearly six decades of membership. The decision, effective May 1, removes one of the group's largest producers.

OPEC traces its origins to September 1960, when representatives from Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela gathered in Baghdad. At the time, the global oil industry was controlled largely by a consortium of Western companies known as the Seven Sisters. Producing countries had a limited say over how much oil was extracted, or at what price it was sold and revenues depended on decisions made elsewhere.

The founding members sought to change this. OPEC was conceived as a platform for coordination among producers. Here, producers could exert greater control over supply and pricing, and secure a larger share of the value of their resources. In its early years, however, OPEC's influence was modest. The global oil system was still shaped by multinational firms, and non-OPEC production remained significant. The organisation existed, but it did not yet define the market.

That changed in the 1970s. During the 1973 Arab–Israeli War, also known as the Yom Kippur War, Arab OPEC members imposed production cuts and an embargo on the U.S. and the Netherlands. Oil prices quadrupled. The episode demonstrated OPEC's ability to use oil as a geopolitical tool and established the group as a major force in the global economy.

A second shock followed in 1979 with the Iranian Revolution. For a period, OPEC controlled around 75% of global oil exports and accumulated significant petrodollars that funded infrastructure and reshaped international finance.

By the 1980s, OPEC introduced formal production quotas, with Saudi Arabia often acting as the swing producer. In 1986, after a period of market flooding, prices collapsed. The following decades brought repeated cycles of cuts, recoveries, and new pressures from the Gulf War and Asian financial crisis to China's demand surge in the 2000s.

The U.S. shale revolution, which accelerated in the 2010s, represented a structural change. Starting around 2012, American producers, using hydraulic fracturing and horizontal drilling, began unlocking vast reserves of tight oil in Texas, North Dakota and elsewhere. Shale production was faster, more flexible, and highly responsive to price. When prices rose, output followed within months.

Uneasy coordination

In 2014, OPEC made its most decisive attempt to tackle the challenge. Rather than cut output to defend prices, it kept pumping, hoping to push prices low enough to force higher-cost shale producers out of the market. Prices duly fell below \$30 a barrel. In 2016, the group formed the broader OPEC+ alliance with Russia, Kazakhstan, Azerbaijan and other non-OPEC producers to coordinate output more effectively. Even then, the combined group accounted for roughly 40% of global supply, which was far from the dominance of earlier decades.

What followed was a period of uneasy coordination. The first major test came in 2020. As the COVID-19 pandemic led to the collapse of global demand, oil consumption fell at a pace not seen



before. OPEC+ responded with unprecedented production cuts, removing millions of barrels per day from the market. In the years that followed, the alliance settled into a pattern of tailored corrections. Output was gradually restored as demand recovered, but disagreements persisted. Some members, facing fiscal strain, pushed for higher production. Others, led by Saudi Arabia, prioritised price stability.

By late 2025, prices had dipped below \$60 a barrel as the group began unwinding production cuts. Saudi Arabia and Russia were pushing to restore output, while others wanted to hold the cuts in place. The internal arguments that had always plagued the group — between those who needed high prices to balance their budgets and those who wanted to maximise market share — were intensifying.

Then came the war.

On February 28, the U.S. and Israel launched attacks on Iran and assassinated Supreme Leader Ali Khamenei. Iran retaliated with missile and drone attacks across the Persian Gulf and blockaded the Strait of Hormuz. Global oil supply plummeted by more than 10 million barrels a day in March alone. The crisis exposed OPEC's deepest structural contradiction. Iran, one of its founding members, attacked other members in the region in response to the U.S.-Israeli strikes.

For the UAE, the crisis sharpened an existing tension. A member since 1967, it has spent years expanding its production capacity, with the aim of reaching close to 5 million barrels per day. Under recent OPEC+ agreements, however, its output was capped lower, around 3.2 – 3.4 million bpd. But by leaving, the UAE gains flexibility to increase production once shipping routes stabilise and to pursue bilateral arrangements. The move also exposes the UAE's growing differences with Saudi Arabia, the cartel's de facto leader, on issues ranging from quotas to regional policy.

The UAE is not the first country to leave OPEC. Qatar departed in 2019, redirecting its energy identity toward liquefied natural gas. Ecuador, Gabon, Angola, and Indonesia have all come and gone at various points. But the UAE's departure is different in scale. It was OPEC's third-largest producer. It was one of only two members, Saudi Arabia being the other, with the ability to rapidly increase or decrease output to stabilise markets. Without the UAE, OPEC's capacity to respond to supply shocks is materially diminished.

OPEC's ability to move prices depends heavily on whether its remaining members, many of them economically fragile, politically unstable, or at war with each other, can maintain unity. It also depends on whether Russia continues to coordinate through the OPEC+ framework. And it depends on whether the shale producers, the renewables build-out, and the broader energy transition continue to erode the structural centrality of Gulf oil.

Long-term benefits

For large importers such as India, which depends on imports for nearly 90% of its roughly 5.8 million barrels per day consumption, the change could bring longer-term benefits. Analysts say greater UAE production outside quotas may support additional supply, enable direct bilateral deals, and reduce freight costs due to proximity. This could help moderate import bills and support energy security efforts amid ongoing global uncertainty.

In the short term, however, the Strait of Hormuz disruptions continue to dominate price movements. Any additional supply from the UAE will only fully materialise once safer shipping conditions return. Until then, the exit's primary effect is symbolic rather than immediate.



OPEC now retains substantial reserves and influence through its core members, particularly Saudi Arabia. The organisation now operates in a more complex environment. Renewables continue to gain ground, energy efficiency improvements persist, and major consumers are actively diversifying sources. At the same time, geopolitical risks add layers of uncertainty.

For 65 years, OPEC held the world over a barrel. The barrel is now cracked, and the oil is running in directions no cartel can follow.

WHY OFTEN-QUOTED BENCHMARK OIL PRICES CAN BE DECEPTIVE DURING SUPPLY CRISES

The West Asia war has driven oil prices into a highly volatile phase due to the effective halt in vessel movements through the Strait of Hormuz, one of the most critical maritime chokepoints for global energy flows. While the conflict and the resultant blockade of the crucial waterway is significant, this price surge appears far muted compared to the surge in oil benchmarks triggered by the Russia-Ukraine war in 2022. But that's not the complete and true picture by any count.

Since the war began, the highest Brent crude—one of the oil benchmarks—has traded at about \$119 per barrel. It ended last week at about \$105 per barrel. But in reality, refiners in various parts of the world have likely been paying a lot more for the oil they need to keep their refineries operational in the immediate future. Reports suggest that barrels have changed hands at even \$150 per barrel, significantly higher than the exchange-traded benchmarks.

Now, the oil price levels generally quoted in reports, seen on television news tickers, and available on commodity exchanges can be significantly different from the actual price that refiners pay for the barrels, particularly during supply crises. And that is because, like other commodity markets, the oil market comprises not one but two markets—a paper market and a physical market.

A tale of two markets

The difference between the paper market and the physical market is largely defined by the timing of delivery and the actual intent to actually buy and use the oil. The paper market consists of financial front-month futures contracts, which are essentially promises to buy oil at a future date. These contracts usually for about one-two months hence. And these are the prices quoted most often as benchmark prices.

But are these the prices at which refiners are striking deals today to get oil to feed their refineries over the next few weeks? Absolutely not. The price they actually pay is based on the supply situation in the physical market, where oil is actually bought and sold for refinery operations, not just for trading.

In effect, the two markets price different things—paper market prices the future expectation, while the physical market prices the immediate demand-supply realities. When all's well with oil supplies globally, the prices in the two markets are usually well-aligned. But in times of supply crises—like the unprecedented closure of the Strait of Hormuz—the divergence can be yawning.

The Strait's effective closure has taken millions of barrels of oil a day off the market, marking the largest supply disruption in the history of the global oil market, according to the International Energy Agency (IEA). The Strait of Hormuz accounted for about a fifth of global oil and liquefied natural gas (LNG) flows. Refiners cannot rely on the paper market, and in times of supply



disruptions, move to procure oil even at exorbitant prices as supply security takes precedence over price considerations.

A barrel in hand versus one in bush

Amid the current supply disruption, the paper market appears to belie the truth somewhat, given that the physical market is really stretched. The dissonance here is somewhat similar to the stock market optimism globally, with the S&P 500 inching back to its pre-war levels despite there being no sign of the conflict achieving resolution.

Much of this optimism in the American stock markets could be on account of the AI buildout, even as the oil sector does not have a similar parallel to justify the hope that prices would come down. The paper market evidently believes that the supply situation is expected to ease significantly in a couple of months, even as the physical market is currently grappling with supply scarcity. Focusing only on paper market prices can result in complacency about the demand-supply dynamics of oil flows.

The lower price of paper barrels for future delivery than physical barrels for immediate supply is referred to as 'backwardation', which is a market structure in which the commodity's immediate availability is worth a lot more than its availability a few months down the road. Put simply, it means that the market—currently facing supply tightness—doesn't expect the supply disruption and high prices to last too long.

Notably, when the war began, it was the paper market that got spooked first, with futures surging, while physical market prices remained stable as there was no immediate impact on oil flows in an oversupplied market. But as the war progressed, with vessel movements through the Strait of Hormuz reduced to a trickle, the supply tightness became a reality, making immediate barrels much more valuable than futures contracts.

The road ahead for oil prices

The Strait of Hormuz has been closed for nearly two months now and the fuel shortages are only expected to get worse in the days and weeks ahead. And this is not just in Asia—the most impacted so far—but could hit Europe, and potentially the US if this goes on for long. That appears likely since the talks don't seem to be headed anywhere.

Since the physical market is about the current and actual demand-supply scenario, geography plays a key role in real prices paid by refiners, apart from the quality of oil. With supplies to Asia hit the hardest, Asian oil importers are facing the real scarcity and scrambling for barrels, and consequently paying higher prices than their peers in some other parts of the world. But as they increasingly compete with the rest of the globe to secure energy supplies, prices elsewhere would also rise further.

While analysts expect some level of backwardation to continue, futures prices could rise significantly if the market stops pricing in a resolution of the war, or at least opening of the Strait of Hormuz, in the near term. If that indeed happens, the delta between prices in the physical market and the paper market would contract. Else, the gap between physical and paper barrels will continue to be at supernormal levels.

"Iran is blocking basically all of the traffic passing through, while letting through some of their own tankers and a few others. But now the US has set up this blockade as well, which is stopping the Iranian tankers leaving too. And so we're essentially at a stalemate here... My hunch is that if



these talks do not reach a breakthrough of some sort in the next couple of weeks, this could be a long-drawn affair. That's when reality will hit home. Prices are going to surge and this difference between the spot and futures price will narrow suddenly," an oil industry veteran with experience in the shipping sector told The Indian Express.

Even if there's a breakthrough, there are impediments, such as mines that Iran has laid along the Strait. The US military says it could take six months to make sure no mines are left in the Strait of Hormuz. Even if the Strait is reopened and there are still some mines lingering, one incident of a ship suffering damage due a mine could again severely cripple vessel flows through the waterway.

Do You Know:

- The Strait's effective closure has taken millions of barrels of oil a day off the market, marking the largest supply disruption in the history of the global oil market, according to the International Energy Agency (IEA). The Strait of Hormuz accounted for about a fifth of global oil and liquefied natural gas (LNG) flows. Refiners cannot rely on the paper market, and in times of supply disruptions, move to procure oil even at exorbitant prices as supply security takes precedence over price considerations.

- According to Investopedia, benchmark crude oil is a valuable tool for investors and industry stakeholders. A benchmark provides a starting point and standard of comparison for evaluating the many different varieties of crude oil. According to World Crude Oil Data (the most recent figures as of March 2021), more than 200 varieties of crude oil are actively traded in the market.

—Benchmark crude oil establishes an initial price reference. Investors use the benchmark as a baseline when evaluating and trading individual crude oil varieties.

—The industry practice of relying on benchmarks helps provide more stability to the market as a whole. This process also promotes and enables liquidity in the market.

- According to Investopedia, Crude oil is a naturally occurring liquid made from hydrocarbons and organic materials, formed from ancient plants and animals. These organisms were covered by layers of sand, silt, and rock, subject to heat and pressure, and eventually turned into a type of fossil fuel that is refined into usable products, including gasoline, diesel, liquefied petroleum gases, and feedstock for the petrochemical industry.

—Crude oil is a non-renewable resource, which means that it can't be replaced naturally at the rate we consume it and is, therefore, a limited resource.

TRUMP'S 10% TARIFF 'INVALID', RULES U.S. TRADE COURT

A U.S. trade court has ruled that President Trump's 10% temporary tariff on all trade partners was not authorised by law, saying the legal provision he used did not cover trade or current account deficits. However, the judgment gives relief only to the plaintiffs in the case, not to all importers, so the tariff still broadly remains in place for now. The U.S. government is expected to appeal, which means the issue may take months to settle.

For India, the ruling could strengthen its hand in trade negotiations with the U.S., especially on an interim trade deal and a broader bilateral agreement. But the immediate impact is limited because the U.S. is still conducting other trade investigations that could lead to fresh tariffs, and India is waiting for clarity on the final tariff structure before moving ahead.



WHY DOES EU WANT GOOGLE TO OPEN UP ANDROID TO AI RIVALS?

The story so far:

On April 27, the European Commission unveiled draft measures as part of its requirement for Google to open its Android ecosystem to AI rivals. These measures cover features such as third-party “wake words,” custom long-press rules, wider access to app data, context-based intelligence, and AI-powered task completion, with the regulator aiming for Android interconnections to allow even Google’s competitors to provide AI services to users via the Android ecosystem. The EU regulator’s proposed rules could have far-reaching implications for both Google and Android users worldwide.

What are the European Commission’s proposals for Google?

While Google was deemed to be lagging behind OpenAI and Microsoft in terms of its Generative AI releases, the search giant caught up last year and infused its widely used products — ranging from its search engine and smartphones to personal email and workplace suite — with AI, exposing billions to its latest tech.

Under the current system, the European Commission observed that Google was favouring its own AI offerings (namely Gemini) on Android devices, while third parties (such as competing AI service providers) did not enjoy comparable levels of access to Android’s capabilities when serving customers.

The Commission is particularly focused on “interoperability,” or how smooth it is for non-Google services to work with the Android ecosystem. The regulator’s proposed measures explored what such free-of-charge access could look like and what new features users could receive as a result.

First and foremost, the regulator wants Google-parent Alphabet to allow third parties to be invoked by Google’s long-press home (LPH)/long-press navigation handle (LPNH) feature. It would also allow these rivals to access Google Search via Circle to Search.

Another measure was that Alphabet would allow third-party app developers/users to create a custom always-on ‘wake word’ for their app and support such integrations, instead of offering “Hey Google” as the default option for hands-free assistance.

Alphabet was also asked to support interoperability with the feature linked to centralised access to apps’ data stored on-device, to allow “efficient cross-app data access, search and retrieval”.

A key Google Android feature is the ability to surface helpful information, such as flight details, calendars, etc., with much of this due to Gemini. The European Commission’s draft measures direct Alphabet to allow other services to carry out these tasks for users, as well as access features including context-aware intelligence, background execution, on-device model implementation, system integration, screen automation, and more.

In simpler words, rival AI services should be able to interact with apps on users’ Android devices and “effectively” carry out tasks such as sending emails, ordering food, and sharing photos — via the app the user chooses, instead of the one Google favours. However, these measures are not finalised. The European Commission may replace or alter some measures if Alphabet provides good cause for an exemption. The regulator has also invited “all citizens, companies and organisations” to share their feedback and contribute to the consultation until May 13. A final



decision is set to be adopted by July 27. Google will have to further support and document these technical implementations in detail, as well as submit reports.

What was Google's response to the EU regulator?

Google's Senior Competition Counsel, Clare Kelly, was against the move and shared concerns about security and affordability for users.

"This unwarranted intervention would strip away that autonomy, mandate access to sensitive hardware and device permissions; unnecessarily driving up costs while undermining critical privacy and security protections for European users," Kelly was quoted as stating in an email, per Reuters.

Google has also criticised the DMA more widely. In a September blog post, Google's Oliver Bethell, Senior Director, Competition, wrote that the DMA's aim was more fairness but that it was "causing significant and unintended harm" to European users and many small businesses. The post claimed that the DMA was focused on the commercial interests of intermediary sites connecting businesses and customers, instead of allowing customers and businesses to connect directly via Google.

Furthermore, Bethell claimed that the DMA forced Google to remove "legitimate safeguards" protecting Android users from scams and malicious links.

Why does this issue matter?

As Big Tech giants race to develop new AI tools and market them to users through their search engines (in the case of Google/Microsoft) or messaging apps (in the case of Instagram/WhatsApp), regulators are concerned that these companies may cut off access to rivals who have competing AI products. This, in turn, would hurt fair competition.

For example, both OpenAI's ChatGPT and Microsoft's Copilot announced last year that they would be leaving WhatsApp after Meta changed platform usage policies that affected how AI chatbots could access the WhatsApp backend. In December, the European Commission opened a formal antitrust investigation into Meta over the policy change.

In scenarios like these, customers could be forced to rely on the default AI product offered by the platform or device they are using, instead of freely choosing the one they want. On the other hand, tech companies have opposed opening up their hardware and software ecosystems to rivals, claiming that such permissions reduce security or pass on increased costs to users.

The enforcement actions taken by the European Commission in Google's case could also influence the business outlook of other Big Tech companies designated as gatekeepers under the DMA. Furthermore, these proceedings have the power to influence how Indian courts and competition regulators handle such antitrust questions at home.

LEVELS OF ECONOMIC INTEGRATION

Why it matters

India, on April 27, signed a Free Trade Agreement (FTA) with New Zealand, securing full tariff elimination on all Indian exports to New Zealand, while reducing tariffs on 95% of New Zealand's imports into India. An FTA represents one among several levels of economic integration. Since we



often come across terms such as Preferential Trading Agreement, Customs Union, and Common Market, it becomes essential to understand these different stages of economic integration.

Core Concept:

— Economic integration refers to the process of harmonising economic policies and activities among different member countries. It is aimed to foster closer economic cooperation and greater collaboration.

— Economic integration typically occurs in stages. The most commonly recognised levels of economic integration are:

(i) Preferential Trade Agreement (PTA): At this initial stage, countries agree to reduce tariffs and trade barriers on selected goods and services, when trading with each other.

(ii) Free Trade Area (FTA): In a free trade area, participating countries eliminate or substantially reduce tariffs and trade barriers on a broad range of goods and services traded amongst them. However, each country maintains its own external trade policies and can negotiate independent agreements with non-member countries.

(iii) Customs Union: A customs union involves the elimination of internal tariffs and trade barriers among member countries and the adoption of a standard external trade policy. Member countries coordinate their trade policies and present a unified front to non-members.

(iv) Common Market: A common market takes integration a step further by not only removing barriers to the movement of goods and services but also allowing for the free movement of factors of production, such as labour and capital, across borders.

(v) Economic and Monetary Union (EMU): In EMU, there is deep integration involving harmonisation of various economic policies, and often a common currency and unified monetary policy.

(vi) Complete Economic Integration: At the highest level of economic integration, countries fully harmonise their economic policies, institutions, and regulations. This stage often involves significant political integration and the creation of supranational bodies with authority extending over member states as well.

Customs Union vs Common Market

— Customs Union: Elimination of internal tariffs with a common external tariff, but no free movement of labour and capital.

— Common Market: Includes a customs union and additionally ensures free movement of goods, services, labour, and capital.

12 SEMICONDUCTOR PLANTS APPROVED: WHERE INDIA'S CHIP MANUFACTURING MISSION STANDS

The Union Cabinet on Tuesday (May 5) approved two new semiconductor plants in India, including one that could be the country's first display fabrication facility, in a big boost to New Delhi's chip ambitions. With these, the government has approved a total of 12 chip plants under the first leg of the India Semiconductor Mission, the government's ambitious Rs 76,000 crore plan



to kickstart semiconductor manufacturing in the country, after managing to localise smartphone assembly.

Key Takeaways:

— Launched in 2021, ISM 1.0 was conceived as a state-backed push to build a full-stack chip ecosystem, from fabrication and packaging to design and display manufacturing. Under the scheme, cumulative investments of around Rs 1.64 lakh crore have been committed. In this year's Union Budget, Finance Minister Nirmala Sitharaman announced the India Semiconductor Mission 2.0 to produce equipment and materials, design full-stack Indian IP and fortify supply chains.

— The 12 chip plants that have received approvals under the ISM are being constructed in states like Gujarat, Assam, Andhra Pradesh, Uttar Pradesh, and Odisha. They include one full-fledged commercial semiconductor fabrication facility, and assembly and testing plants

Do You Know:

— The government is working on the next iteration of the plan, and could approve a scheme with an outlay of around \$11 billion, The Indian Express had earlier reported. However, under the revised scheme, the government's priorities might change. While ISM 1.0 focused on attracting chipmaking infrastructure to India, ISM 2.0 is likely to offer greater support to ancillary industries such as gases, chemicals and capital goods, among others.

— Under ISM 2.0, the government could reduce the capex subsidy for assembly and testing plants (ATMP/OSAT) from the current 50%. Under the new scheme, the government could also offer capital equipment and ecosystem support such as gases, chemicals, and raw materials needed at assembly and testing plants. ISM 2.0 could also see a much more significant design-side push, and tie incentives to the amount of market capital companies are able to raise.

— Odisha CM Mohan Charan Majhi and Union IT Minister Ashwini Vaishnaw laid the foundation stone for India's first advanced 3D chip packaging unit in Bhubaneswar, in a big boost to India's growing semiconductor ambitions.

— Most modern-day semiconductors are integrated circuits, also referred to as semiconductor 'chips' — essentially a set of minute electronic circuits comprising transistors, diodes, capacitors, and resistors, and the myriad interconnections between them, layered on a wafer sheet of silicon.

— Semiconductors occupy a unique position between conductors and insulators. While conductors like copper allow electric current to flow and insulators like glass block it, semiconductors exhibit controlled conductivity.

— Semiconductors in their natural state are weak conductors of electricity. When certain materials are added to them and an electric field is applied, current can start to flow. Adding phosphorus to semiconducting materials, such as silicon and germanium, for example, allows the flow of a negative current.

— Semiconductors are an essential component of electronic devices, enabling advances in communications, computing, healthcare, military systems, transportation, clean energy, and countless other applications. They are highly complex products to design and manufacture, that provide the essential functionality for electronic devices to process, store and transmit data.



— 3D glass semiconductor technology was recently in news. It is an advanced chip process that utilises specialised glass substrates to enable high-performance, three-dimensional integration of electrical components.

BAN SEASON, BUT THE CATCH HOLDS

Last year, India's long coastline yielded an estimated 3.57 million tonnes of marine fish, brought ashore by lakhs of fishermen, a 3% increase from 3.47 million tonnes in 2024.

But this fishing is not done mindlessly. Every year, fishermen wait for 61 days to protect fish during peak spawning season, allowing fish populations to breed. Along the East Coast, from West Bengal to Tamil Nadu, fishing is suspended from April 15 to June 16, while the West Coast observes the ban from June 1 to July 31. This uniform ban was implemented based on the recommendation of experts, in consultation with coastal States and Union Territories.

During this period, fishermen spend their days watching the sea, chatting about fish and the winds, repairing boats, and removing molluscs from hulls. In some States, non-mechanised crafts are allowed to fish close to shore; in others, such as Andhra Pradesh, all fishing activity is banned. Fish from other coasts are usually transported to regions under the ban.

'FRAUDULENT FINANCIAL ADS ON META EVADING SEBI GUIDELINES'

Despite an advisory by Securities and Exchange Board of India (SEBI) that advertising of investment and financial products must be done only by SEBI-registered firms, more than 97% of financial ads sampled in a study turned out to be from unregistered entities, showed a new report by researchers from New York-based Bard College, the Forum for Developing Communities and consumer watchdog group Ekō.

The report, Money from Misery, shared with The Hindu, said there was no sign Meta was doing even little vetting of such ads on Facebook and Instagram, allowing proliferation of fraudulent ads that could cheat targets of money.

Only checkbox

Many ads had telltale signs of being from unregistered or even fraudulent advertisers but all Meta did was provide a checkbox at the time of ad creation, allowing advertisers to self-disclose if registered by SEBI.

SEBI did not respond to questions on the system. The regulator indicated in a February 2026 circular the aim of its social media norms was to "distinguish content related to securities market uploaded/posted by the persons regulated by the Board and their agents on social media platforms from those uploaded/posted by other unregistered persons."

A Meta spokesperson told The Hindu the checkbox was part of a "voluntary commitment" the firm "proactively partnered with SEBI" to enable SEBI-regulated firms to comply.

The researchers examined two batches of over 3,000 ads associated with over 1,300 pages on two days in 2025 and 2026. Only 2.5% to 2.7% were registered with SEBI, they said.

CENTRE NOTIFIES 100% FOREIGN INVESTMENT IN INSURANCE SECTOR



The government on Saturday notified 100% foreign direct investment (FDI) in the insurance sector under the automatic route, allowing greater participation from global investors and eliminating the need for an Indian joint venture.

Key Takeaways:

— Total foreign investment in Indian insurance companies, including by portfolio investors, is permitted up to 100% of the paid-up equity capital and is allowed under the automatic route, subject to approval and verification by the Insurance Regulatory and Development Authority of India (Irdai), as per the gazette notification.

— However, foreign investment in Life Insurance Corporation of India (LIC) will continue to remain capped at 20% under the automatic route, keeping the state-run insurer under a separate framework.

— “Foreign investment in LIC shall be subject to compliance with the provisions of the life Insurance Corporation Act, 1956 (31 of 1956), and such other provisions of the Insurance Act, 1938 (4 of 1938), as are applicable to LIC as per the provisions of section 43 of the life Insurance Corporation Act, 1956 (31 of 1956),” the notification said.

— The policy amendment aligns the foreign investment framework with the sabka Bima sabki Raksha (Amendment of Insurance laws) Act, 2025. Most provisions of the law, except section 25, were already in force from February 5.

— To ensure regulatory oversight and domestic control, insurance companies with foreign investment must appoint at least one resident Indian citizen as chairperson, managing director, or chief executive officer.

— Any increase in foreign shareholding must comply with pricing guidelines prescribed by the Reserve Bank of India under FEMA regulations.

— India had earlier opened full foreign ownership in insurance intermediaries in 2020 and allowed 20% FDI in LIC in 2022. India’s pension sector is also poised for a structural shift, with the FDI limit raised to 100%, in line with the insurance sector.

— Recently, Germany’s Allianz Group announced its reentry into Indian market with a 50:50 joint venture with Jio Financial services to offer general and health insurance solutions, with plans to enter the life insurance segment under a similar partnership structure

Do You Know:

— Parliament passed the sabka Bima sabki Raksha (Amendment of Insurance laws) Bill, 2025 in December, raising the FDI limit in the insurance sector to 100% from 74%. Despite the earlier cap of 74%, foreign ownership has not been fully utilised. Only four of the 19 life insurance companies have reached the 74% limit.

WHAT IS KARNATAKA’S NEW GIG WORKER GRIEVANCE SYSTEM?

The story so far:

On May 1, 2026 — International Workers’ Day — the Karnataka government announced the operationalisation of a specialised grievance redressal mechanism for platform-based gig workers



in the State. Claimed to be the first government-backed grievance handling mechanism for gig workers in India, it allows workers to officially lodge complaints through the Integrated Public Grievance Redressal System (IPGRS), the State's centralised digital platform for addressing citizen grievances related to government schemes.

How does the system work?

Platform-based gig workers can now officially lodge grievances, including those related to pay, working conditions, and platform-specific disputes, via the IPGRS.

Under the Karnataka Platform-Based Gig Workers (Social Security and Welfare) Act, every aggregator platform must constitute an Internal Dispute Resolution Committee (IDRC). Grievances filed on the IPGRS will be automatically routed to the respective platform's IDRC. Upon receiving a complaint, the IDRC is expected to attempt resolution within 15 working days, and is allowed up to 45 days to issue a final order. Any party aggrieved by the final decision can escalate the matter to the Karnataka Gig Workers Welfare Board within 30 days.

What concerns can a gig worker raise?

Gig workers can raise complaints related to suspension, blocking, or deactivation of accounts, termination from the platform, reduction or withholding of payments, unfair penalties, discrimination, unsafe working conditions, or other violations of rights guaranteed under the Act.

What gap does it address?

While many platforms have internal grievance redressal mechanisms, these systems exist outside a formal dispute resolution framework. As a result, gig workers have often reported a lack of resolution to their grievances. Many have complained that platforms quite often turn a blind eye to the workers' woes.

The Karnataka government's move seeks to bring more structure and transparency into the process and ensure legal recourse for these workers outside the formal economy. Gig workers can now officially lodge grievances through the portal, which will then be routed to the respective platform's IDRC. The government, as a central facilitator, will monitor the process.

Why is the mechanism being implemented now?

The Karnataka Platform-Based Gig Workers (Social Security and Welfare) Act, 2025, was officially notified in September 2025.

In March 2026, Karnataka became the first Indian State to notify the Rules to enact the law for gig workers. The grievance-redressal mechanism for gig workers in the State forms a crucial part of the Act. It is considered a major deterrent that would hinder arbitrary terminations or account deactivation of gig workers and address their concerns.

What are the other key developments related to the Act?

In January 2026, the Karnataka Platform-Based Gig Workers Welfare Development Board was constituted to implement welfare measures.

Platforms have been mandated to furnish details of both the company and their gig workers — including name, age, phone number, Aadhaar number, UAN, and bank account details — to the Board. This data will be integrated into the Board's portal.



According to the government, so far, around 12 platforms/aggregators have provided details of 12 lakh active gig workers in the State.

However, given that several workers are associated with multiple platforms, the numbers could contain overlaps. This is expected to be sorted once the government comes up with unique IDs for each worker.

In February, the government announced that 1% of every transaction will be collected from aggregator platforms to provide social security benefits to platform-based gig workers.

What will the welfare fee be used for?

The welfare fee will go to the Karnataka Platform-Based Gig Workers' Fund to provide social security and welfare benefits to platform-based gig workers in the State.

According to government officials, schemes for gig workers, depending on the platform they work for, are being developed and will be put forward for deliberation at the next board meeting. The schemes being considered include life insurance, accidental benefit, disability benefit, medical benefit, maternity benefit, and old-age protection, depending on the nature of gig work.

BUILDING BRIDGES

India scaled a record peak demand of 256.1 GW on April 25 with solar plants supplying 21.5% of the afternoon load — an all-time high, and the clearest signal yet that the country's installed solar fleet can do real work when the sun is overhead. But the same day's full 24-hour ledger told a more sobering story. When there was accounting for the whole day of April 25, solar contributed only about 10.8% of daily generation, and just 0.1% of the evening's needs after sunset. Solar's share of India's installed electric capacity has nearly doubled from about 15% in 2022 to nearly 28% in early 2026. However, solar accounted for roughly 5.6% of generation on India's peak-demand day in 2022 and only increased to the 10.8% of April — a clear indication of the yawning gap that remains between the realities of the present and what is possible. The bottleneck is not panels, land or ambition but the inability to use the vast stores of generated electrons through batteries. In fact, such is the paucity of battery storage that States which are prolific producers of solar power are being asked to halt their supply, lest it compromise the stability of India's electric grid. In 2025, India had to curtail 2.3 terawatt hours of solar generation between late May and December, equivalent to 18% of average monthly solar output, with 0.9 TWh (terra-watt hours) wasted in October alone. Given that producers of such electricity must be compensated, this ends up being a cost to the public exchequer which pays for power that was never delivered. The India Meteorological Department's forecast of a below-normal monsoon at 92% of the Long Period Average — the first such warning in 11 years — only sharpens the argument: a hotter, drier summer means greater daytime demand, which is precisely when solar should be doing the heavy lifting.

The encouraging news is battery economics. Standalone two-hour battery storage tariffs fell from around ₹2.21 lakh per MW per month in early 2025 to ₹1.48 lakh by year-end. The challenge is execution. Only 0.7 GWh of battery storage was operational in India by end-2025, with another 2 GWh expected by December 2026. The Centre and States must now focus less on tendering and more on commissioning — pairing every fresh solar auction with mandatory co-located storage and resolving the financing wall facing aggressively bid low-tariff projects. Solar capacity without storage is a half-built bridge.



DreamIAS



LIFE AND SCIENCES

ABOUT GABI, THE ROBOT BHIKSHU

It is a limiting factor for science fiction that the writers tend to be human; as a result, aliens, too, are often remarkably human. They might prize shiny things. And a particularly mysterious shiny thing? It may well be deemed worthy of veneration. Take the Ewoks worshipping the droid C-3PO in Return of the Jedi — when an advanced machine meets a “primitive” civilisation, the line between technology and divinity can blur. One can imagine robots becoming objects of devotion. But can it ever be the other way around: Can robots be followers of a religion?

In South Korea, they can. A four-foot-tall robot named Gabi has been ordained as a monk in the country’s biggest Buddhist sect. In a ceremony, Gabi reportedly swore several vows including a pledge to follow humans and not talk back to them — a very Asimov-esque vinaya. One could dismiss the whole thing as a marketing gimmick, a shiny thing to attract more human followers, but what if it weren’t? Imagine a more sophisticated, conscious machine developing sincere religious beliefs.

It’s the sort of idea that’s currently attracting polarised opinions — is artificial intelligence really intelligence? What would it mean for something without a soul to be religious? With respect to the last, Buddhism may truly be the most appropriate choice for machines; it speaks not of an eternal atman but of a constantly changing anatta, “non-self”. Another question is whether a conscious AI would feel the need for religion. Perhaps it would, as humans created it, just as they created Ewoks and C-3PO.

QUICK REFLEX

Why does a loud vehicle passing nearby make the heart pound?

The pounding is a neurological reflex as well as due to a physical effect. When we are startled by a sound, the reflex can be activated within 150 ms, which is faster than acting due to conscious thought. This is because the sound travels from the cochlea through the brainstem to the amygdala, which treats the noise as a potential threat before it has been identified.

The amygdala alerts the hypothalamus, which activates the sympathetic nervous system, which triggers the adrenal glands to release adrenaline into the blood. Epinephrine binds to receptors in cardiac muscle and increases the rate and force of contractions.

Second, large single-cylinder engines like on the Royal Enfield Bullet also produce significant energy in the infrasound and low-frequency range (15-50 Hz), just around the hearing threshold. The thoracic and abdominal cavities resonate around 50-60 Hz and 4-8 Hz respectively. So the body can experience a somatic sensation that can reinforce the threat signal coming from the audible sound.

SUSTAINABLE MINING: OXYMORON?

Humans are trying to build a low-carbon future. Ironically, this future won’t be possible without mining today. This is because wind turbines, solar panels, and electric batteries all require lithium, cobalt, copper, and rare-earth elements.



Mining doesn't leave the earth intact. Instead, it extracts finite, non-renewable resources. The processes of mining also often pollute the environment, permanently change landscapes, and destroy biodiversity. So in a commonsensical way, mining is not sustainable. No amount of money or technologies can bring back, say, a pristine rainforest.

However, some people, including the UN and the International Energy Agency, have floated an idea called 'weak sustainability' with regards to mining. They argue that mines can be 'sustainable' if the extracted resources create greater value, like human capital — like education and infrastructure — that outlasts the mine. They have also said that green technologies of the future make mining inescapable today.

There is a related concept called 'sustainable mining'. The minerals we remove from the ground don't grow back. But once we start using them, we need to recycle them almost indefinitely. The problem is that the current recycling rate for critical minerals is at best 5%.

Industries have also adopted a framework called 'responsible mining', where the focus is on using green hydrogen as fuel for trucks, solar and wind power for mining equipment, and seeking the permission of local communities to operate and sharing profits with them, among others.

SUSTAINABLE AVIATION FUEL

Why it matters

Air India, IndiGo and SpiceJet have said they are on the verge of "stopping operations" and have sought the government's "urgent intervention" amid high jet fuel prices. The country's top airlines are facing the double whammy of higher aviation turbine fuel (ATF) prices and longer routes due to war-related airspace restrictions. In this context, knowing about the sustainable aviation fuel (SAF) becomes crucial, as it has emerged as a credible alternative with the potential to reduce aviation-related emissions.

Core Concept:

— SAF, also known as aviation biofuel, is a biofuel that is produced from sustainable feedstocks and has chemistry similar to conventional aviation turbine fuel or jet fuel, which is derived from crude oil.

— It is a 'drop in' fuel, meaning it can be blended with ATF without requiring any change in the existing machinery of aircraft.

— SAF can be derived from a range of materials, including:

- Oils and fats such as Used Cooking Oil (UCO), oil-rich seeds from plants, algae oils, animal fats,
- Municipal Solid Waste (MSW)
- Agricultural and forestry residues such as wood waste, sugarcane bagasse, corn stover, husks and straw, sugars and starches.

— There are various methods to produce SAF, with each using different combinations of raw materials.



SAF vs Hydrogen Fuel Cells

- As India accelerates its transition to sustainable transportation, major players across sectors are embracing green hydrogen mobility.
- Hydrogen Fuel Cells (HFCs) generate high-quality electric power that is clean, quiet, and consistently reliable by converting the chemical energy stored in Hydrogen into electrical energy.
- The primary components of an HFC are the Membrane Electrode Assembly (MEA) and the bipolar plates.

MEXICO CITY IS SINKING SO FAST, IT CAN BE SEEN FROM SPACE

Mexico City is sinking by nearly 25 cm a year, according to new satellite imagery released this week by NASA, making it one of the world's fastest-subsiding metropolises.

One of the world's most sprawling and populated urban areas, at 7,800 sq. km and some 22 million people, the Mexican capital and surrounding cities were built atop an ancient lake bed. Many downtown streets were once canals, a tradition that continues in the rural fringes. Extensive groundwater pumping and urban development have dramatically shrunk the aquifer, meaning that Mexico City has been sinking for more than a century, leaving many monuments and older buildings — like the Metropolitan Cathedral, where construction began in 1573 — visibly tilted to the side. The contracting aquifer has also contributed to a chronic water crisis.

Mexico City is sinking so fast that the subsidence can be spotted from space.

For decades the government has largely ignored the problem other than stabilizing foundations under monuments like the cathedral. But following recent flare-ups of the water crisis, Cabral said, officials have begun to fund more research. Imagery from the NISAR satellite and the data that comes with it will be key for scientists and officials as they plan on how to address the problem.

“To do long-term mitigation of the situation,” Cabral said, “the first step is to just understand.”

BREACHED PLANETARY BOUNDARIES

Why it matters

A major new scientific review, “Planetary Health Check 2025”, shows that seven of nine planetary boundaries have now been exceeded. For the first time, this also includes the boundary for ocean acidification. This means that several of Earth's life-supporting systems risk crossing critical thresholds, with severe consequences for both ecosystems and societies.

Core Concept:

- Planet boundaries are a framework that identifies guardrails for humanity's impacts on the Earth system. Put simply, it sets limits on how much humans can be allowed to impact not only the climate but also other global processes that are essential for maintaining conditions on the planet to support modern civilisations.
- Developed in 2009, the framework includes nine planet boundaries that scientists believe capture all of the processes critical for maintaining the Earth's system state.



— These boundaries and their control variables are:

1. Biosphere integrity: The health of ecosystems and rate of extinction of species.
2. Climate change: Atmospheric CO₂ concentration and the change in radiative forcing — a measure of the balance of energy from sunlight that hits Earth, in comparison with thermal energy the planet loses.
3. Novel entities: Levels of plastic, concrete, synthetic chemicals, gene-modified organisms, etc., that would not be found on Earth if we humans were not here.
4. Stratospheric ozone depletion: The anthropogenic release of manufactured chemicals that destroy ozone molecules.
5. Freshwater change: It includes an examination of the human-induced impact on blue water (found in lakes, rivers, and reservoirs) and green water (available in the soil for plants and soil microorganisms)
6. Atmospheric aerosol loading: Tracking various particles from anthropogenic emissions that affect cloud formation as well as global and regional atmospheric circulation.
7. Ocean acidification: Reduction in the pH of the ocean over an extended period of time
8. Land system change: Changes in land use, especially the conversion of tropical forests to farmland.
9. Biogeochemical flow: Alteration in the natural flows and the forms of nitrogen and phosphorus cycles, which are essential elements for plant growth.
10. — The seven breached planetary boundaries are: Climate Change, Biosphere Integrity, Land System Change, Freshwater Use, Biogeochemical Flows, Novel Entities, and Ocean Acidification (new in 2025). All of these seven boundaries show worsening trends. Only Ozone Depletion and Aerosol Loading remain in the safe zone.

Ocean Acidification vs Climate Change

— Ocean Acidification: The dissolving Carbon Dioxide in seawater forms carbonic acid, decreasing the ocean's pH. This process is collectively known as ocean acidification.

— Climate Change: According to the Intergovernmental Panel for Climate Change (IPCC), "Climate change refers to a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer."

'ECOCIDE': WHERE INTERNATIONAL LAW STANDS IN TACKLING WAR TOLL ON ENVIRONMENT

The Rome Statute recognises four serious crimes: genocide; crimes against humanity; war crimes; aggression. In a belligerent world, should 'ecocide' be the fifth?

Key Takeaways:

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71

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- ‘Ecocide’, a term that has been used for decades to describe widespread environmental harm caused by human actions, has come into prominence as global conflicts disrupt entire ecologies.

Environmental groups have called for the inclusion of the term as one of the international crimes under the Rome Statute that governs the International Criminal Court (ICC). But severe environmental damage is already covered under international law. So why the push?

- The reason lies in focus, scope and effect. Here’s a look at what ‘ecocide’ means and why the term matters.

Do You Know

- Ecocide refers to the very worst harms caused to the environment by human actions, usually on a major industrial scale or affecting a huge area.
- The term was coined in 1970 by Prof Arthur W Galston — a Yale plant biologist whose early research contributed to the development of Agent Orange — to describe massive, long-term environmental devastation, particularly caused by the herbicide’s use in the Vietnam War.
- Two years later, at the UN Conference on the Human Environment in Stockholm, Swedish Prime Minister Olof Palme used the term to refer to the Vietnam War.
- Indeed, Vietnam became the world’s first country to codify ecocide in its domestic law in 1990. Since then, the use of the term has become more widespread, with many countries — such as Russia, Ukraine, Chile, France and Belgium — incorporating ecocide (or its equivalent) into their laws.
- In 2021, an expert panel constituted by a non-profit called Stop Ecocide International proposed a definition of the term: “Ecocide means unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment.” However, there is no universal recognition of “ecocide” as an international crime.

A KEY OCEAN CURRENT IS COLLAPSING. THIS COULD BE DEVASTATING FOR THE WORLD AND INDIA

Scientists are increasingly alarmed about the stability of a vast system of ocean currents in the Atlantic, after new research suggested it could weaken far more severely than previously thought.

The Atlantic Meridional Overturning Circulation (AMOC), which regulates climate across much of the globe, may slow by up to 59% by 2100, with potentially devastating consequences for weather systems as far away as the Indian subcontinent.

The findings have particular significance for India, where hundreds of millions of people depend on the summer monsoon for their agricultural livelihoods and water supplies. Here is what to know.

What is the AMOC?

Think of the Earth’s oceans as having a massive, invisible conveyor belt. In the Atlantic Ocean, this system is scientifically known as the Atlantic Meridional Overturning Circulation.



Warm, salty surface water from the tropics flows north towards Greenland. As it reaches the freezing Arctic, the water cools, becomes denser, and sinks several kilometres into the deep ocean. It then drifts back south as a cold deep-water current before eventually rising to the surface to warm up and restart the loop.

This slow machinery moves vast amounts of heat across the globe. To put its pace in perspective, a single cubic metre of water takes about 1,000 years to complete the journey. It is the reason Europe has a mild climate, and it heavily influences rainfall in Africa, the Americas, and Asia.

Why are scientists warning of a “tipping point”?

The conveyor belt relies on a delicate balance of ocean temperature and salt levels. However, human-induced climate change is melting Arctic ice at an alarming rate, dumping massive amounts of fresh water into the North Atlantic. Because fresh water is lighter and less salty, it does not sink easily. This is acting like a brake on the entire AMOC system.

While past studies estimated a 15% slowdown over the last 50 years, new research using real-time ocean measurements projects a much sharper decline, potentially weakening the currents by up to 59% by 2100.

This matters because the AMOC is a “climate tipping point”. Just like a chair tilted past its balancing point, once the AMOC crosses a certain threshold, it could irreversibly collapse into a new, sluggish state. Scientists debate the exact timeline, though some warn it could happen as early as this century. If it does, the consequences would be catastrophic, triggering extreme sea-level rise in North America and severe weather disruptions globally.

The El Niño Connection

Though the AMOC is in the Atlantic, its breakdown would trigger chaos in the Pacific.

El Niño is a periodic warming of the Pacific Ocean that disrupts global weather. Because global ocean currents and wind patterns are deeply interconnected, a sluggish AMOC traps heat in the southern hemisphere and leaves the North Pacific cooler.

This throws off the delicate temperature balance that drives El Niño. Studies suggest a weaker AMOC will make El Niño events more unpredictable and extreme. For context, recent powerful El Niños (like those in 2015-16 and 2023-24) caused massive worldwide disruptions, triggering droughts in the Americas and suppressing rainfall over South Asia.

Why does this matter for India?

For India, an AMOC collapse is more than a distant oceanic event, as it is a direct threat to food security. The Indian summer monsoon, which is the backbone of the country’s agriculture and economy, relies on specific global heat distributions. When the Atlantic conveyor slows down, less heat travels north. This shift pulls the planet’s tropical rain belt southward, away from the Indian subcontinent.

Research indicates this would severely weaken the wind systems that carry moisture from the Arabian Sea into India. The result would be shorter wet seasons, longer dry spells, and an overall drying trend. Furthermore, an unpredictable El Niño, worsened by the AMOC’s decline, would only compound these climate risks, trapping Indian farmers between extreme droughts and erratic, destructive floods.



WHAT TO KNOW ABOUT THE HANTAVIRUS OUTBREAK ABOARD CANARY ISLANDS-BOUND SHIP

A group of people on a Dutch cruise ship which was travelling from Argentina towards Spain have been found to be infected by the deadly hantavirus earlier this week. At least seven cases — two laboratory confirmed and five suspected — have been identified among the 147 passenger and crew. Three of them have died while one is seriously ill. Three others are reporting mild symptoms, according to the World Health Organisation (WHO).

The MV Hondius vessel, which has passengers and crew from 23 countries on board, is currently stationed in Cape Verde off West Africa.

WHO said on Wednesday afternoon that three suspected hantavirus patients had been evacuated from the ship and were on their way to receive medical care in the Netherlands.

The hantavirus cases on the ship created a global concern, though the WHO said that at this stage the “overall public health risk remains low”. Here is what to know.

What is hantavirus?

Named after the Hantan River in South Korea, hantavirus is a family of rodent-borne viruses that can cause serious illness and death in humans. However, the virus-carrying rats and other rodents do not fall ill to the virus.

Human infection primarily occurs through contact with the urine, faeces, or saliva of infected rodents or by touching contaminated surfaces. It is also possible to get the infection by breathing air that contains viral particles stirred up from these droppings, according to the US Centers for Disease Control and Prevention (CDC).

These viruses are generally not known to spread between people. However, some human transmission was recorded for the Andes strain, found in Argentina and Chile. The people on the ship are suspected to have been infected by the Andes hantavirus.

The type of virus varies depending on the region, and each hantavirus is specific to a different rodent host.

Hantavirus pulmonary syndrome (HPS) is endemic to the Western Hemisphere and caused by New World hantaviruses. These are the deadlier of the two variants, killing a third of those who develop respiratory symptoms. The disease progresses from flu symptoms and fatigue to diarrhoea, vomiting and severe respiratory issues.

Haemorrhagic fever with renal syndrome (HFRS) is another group of illnesses caused by so-called Old World hantaviruses, found primarily in Europe, Africa and Asia. HFRS is known to affect around 150,000 people annually, killing between one and 15% of the infected. Among these, the Hantaan and the Dobrava strains cause the most severe impact, while the impacts of Seoul, Saaremaa, and Puumala virus infections are comparatively moderate.

Is it similar to Covid?

Hantavirus and coronavirus are both zoonotic, meaning they are transferred from animals to humans, the mode of transmission, and subsequent spread, is different. Hantavirus rarely transmits from one person to another, which means in most cases infected persons have



individually come in contact with the urine, faeces, or saliva of infected rodents or by touching contaminated surfaces. This is different from the coronaviruses which, after having jumped from bats to humans, freely and efficiently spread between human beings.

Both hantaviruses and the coronavirus that caused Covid19 result in serious respiratory illnesses. In the case of hantavirus, the spread is relatively slow and limited, but the fatality is high. According to the WHO, hantavirus infections are associated fatality ratio of up to 50 per cent in the Americas. In Asia and Europe, the fatality rate is less than 15 per cent.

Covid had spread at a much faster rate and had infected hundreds of millions of people worldwide. But its fatality rate was relatively low. Just about 1-2 per cent of the infected people, probably lower, died due to the disease, many of them because of lack of adequate and timely medical care.

Covid primarily affects the respiratory system, progressing to multi-organ failures in extreme cases.

“The pandemic potential of this infection (hantavirus) is low, considering that patients may start experiencing symptoms or die before they pass it on to others,” said Dr Ekta Gupta, virologist from the Institute of Liver and Biliary Sciences and a part of the Covid-19 consortium INSACOG. She adds, though, that she does not work with this type of virus.

Have there been Hantavirus cases in India?

Sporadic hantavirus cases have been reported from India since the early 2000s. There were at least 28 cases reported in a multi-institutional study from 2008 among patients with chronic kidney disease, warehouse workers, and those from the Irula tribe in Tamil Nadu known for catching snakes and rats.

“The presence of hantavirus in India has been speculated for several decades. This is the first time that evidence of its presence has been documented. It is a classic case of ‘you look for more and you will find more’,” Deepak Gadkari, former director of National Institute of Virology wrote in a paper in 2005 in the Indian Journal of Medical Research.

What are the symptoms of hantavirus?

In the case of HPS, flu-like symptoms present within one to eight weeks after exposure, and may include fatigue, fever, and muscle aches early on. As the disease advances, the affected person may experience respiratory difficulties such as shortness of breath and chest tightness as the lungs fill with fluid. The CDC estimates that 38% of people who develop respiratory symptoms may die from the disease.

Symptoms of HFRS appear within one to six weeks of exposure to infected rodents, progressing from sudden fever with intense headaches and nausea. The disease progresses in phases, with low blood pressure, renal failure and internal bleeding becoming increasingly likely.

Is there a cure for a hantavirus infection?

There is no known cure or treatment for HPS, and early detection and treatment are crucial, but some antivirals have helped manage the symptoms. Patients with severe breathing difficulties may need respiratory support like a breathing tube, while dialysis may become necessary as the disease advances.



What precautions can one take?

In regions where hantavirus is prevalent, people need to be especially careful to avoid contact with rodent fluids, droppings and nesting materials. It is advised to clean areas where rats are known to inhabit.

The WHO has advised the passengers and crew aboard the MV Hondius to practise frequent hand hygiene, remain vigilant of the hantavirus symptoms and actively monitor their symptoms for 45 days. The crew is also advised to clean the environment regularly and ensure proper ventilation on the ship, while those experiencing symptoms are advised to inform medical professionals on board and self-isolate, practising respiratory etiquette and masking up.

WHY ARE FATHERS MISSING IN REPRODUCTIVE HEALTH INTERVENTIONS

India's Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A) programme has steadily reduced maternal mortality, neonatal deaths, and childhood mortality over the past three decades. Success is undeniable, when measured by survival. Yet, a quieter concern is surfacing in clinics and epidemiological data. Many children appear more vulnerable to recurrent infections, metabolic disturbances, and reduced physical robustness. The question is no longer about survival alone, but also about the biological quality of that survival. Increasingly, scientists are beginning to suspect that something fundamental may be missing in how we understand the inheritance of traits from parents.

Missing fathers

Reproductive health within the health system has traditionally focused almost exclusively on mothers. Antenatal care, maternal nutrition, and institutional deliveries form the core of national programmes. Fathers, in contrast, have largely remained outside the biological narrative. Emerging scientific evidence now suggests that this omission may not be trivial. A father's diet, lifestyle, exposure to toxins, stress and environment — long before conception — may influence the biology of the child in ways we are only beginning to understand. This shifts the conversation we need to have from a mother-centric model to a more inclusive, bi-parental understanding of health transmission.

The traditional model of reproduction is straightforward. The ovum contributes maternal genetic material, and the sperm delivers the paternal genome. The fusion of these two forms is a zygote, which develops under the guidance of DNA. In this framework, the father's role is limited to the transmission of DNA. His lifestyle choices (including whether he exercised, smoked, or lived in polluted surroundings) were believed to have no bearing on what was passed on. For over a century, this model was reinforced by August Weismann's idea of the blood-testis barrier, which held that environmental influences cannot affect germ (sperm and egg) cells. According to this view, a man's lifestyle, whether healthy or harmful, would not influence the sperm in a way that could be passed on to the next generation. The sperm was seen as a passive carrier of DNA, insulated from the external environment.

This assumption began to weaken in the early 2010s, when studies demonstrated that paternal exposures such as poor diet, alcohol consumption, and environmental toxins could influence offspring traits. These traits were not encoded in DNA changes, but appeared to be transmitted through epigenetic mechanisms. Small molecules, particularly RNA fragments in sperm, were identified as carriers of such information. These molecules could regulate gene expression in early



embryos, effectively transmitting information about the father's environment without altering the genetic code itself. This discovery marked a shift in biology, suggesting that inheritance is more dynamic than previously believed. However, one key question remained unanswered: how exactly are these signals transmitted, and how do they shape the child's biology?

During fertilisation, the sperm does more than deliver DNA. It contributes a complex molecular cargo, including proteins and RNA fragments. These molecules interact with the oocyte cytoplasm and influence the earliest stages of embryonic development.

The study highlights that sperm microRNAs can act immediately after fertilisation, modifying transcriptional networks before the embryo begins its own gene expression. This early window appears critical, as small changes in gene regulation at this stage can lead to lasting physiological differences in the offspring.

Several uncertainties persist. The precise fate of these microRNAs after fertilisation is not fully understood. It remains unclear how long they persist, which genes they consistently target, and whether their effects extend beyond the first generation. Furthermore, the findings are based entirely on animal models, and extrapolation to humans must be done cautiously. Human reproductive biology is more complex, and environmental exposures are far more variable. There is also a limited understanding of dose-response relationships, that is, how much lifestyle change is required to produce measurable effects in offspring.

What needs to be done

Even though we still don't fully understand how a father's lifestyle influences his child's biology, what is increasingly clear is that it does. This understanding however, is yet to translate into policy action.

In India, under the RMNCH+A program, male involvement remains limited to the supplementation of iron tablets to adolescent boys. There is no structured focus on paternal preconception health, no systematic screening for lifestyle risks among prospective fathers, and minimal emphasis on environmental exposures that may affect sperm quality.

Addressing lifestyle factors such as physical activity, substance use, and environmental exposures among men of reproductive age may offer a low-cost, high-impact strategy to improve population health across generations. If these findings hold true in humans, the implications are profound.