



CURRENT AFFAIRS FOR UPSC

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DreamIAS



INTERNATIONAL

THREE MONTHS AFTER HE TOOK POWER, TRUMP IS FAR FROM ENDING THE UKRAINE WAR

During his campaign, Donald Trump famously claimed that, if elected, he would end the war in Ukraine within 24 hours. To his credit, Mr. Trump, after returning to the White House in January, launched a peace initiative. But three months after Mr. Trump assumed office, there was no significant progress towards a lasting, comprehensive ceasefire.

The Trump administration's growing frustration over its inability to achieve a breakthrough was evident in the remarks of Marco Rubio, the U.S. Secretary of State, on Friday. "If it's not possible to end the war in Ukraine we need to move on," Mr. Rubio stated after talks with European diplomats in Paris. "It's not our war. We have other priorities to focus on," he said. Meanwhile, in Moscow, Dmitry Peskov, the Kremlin spokesperson, announced that a 30-day pause on attacks on Ukraine's energy facilities had expired.

U.S. views

Why does the diplomatic path to ending the war remain so difficult? The answer lies in the fundamentally divergent positions of the parties involved. Mr. Trump and his top officials have argued that the Ukraine war holds limited relevance to America's security. Mr. Trump, who doesn't subscribe to the trans-Atlantic worldview of America's liberal internationalists, is also seeking a reset in America's ties with Russia. But such a reset remains impossible without first bringing the Ukraine war to an end.

Russian position

The Russians appear to recognise this is a rare opportunity to shut down the war, and are eager to engage the Trump administration. But if Mr. Trump's focus is on achieving a ceasefire, what Russia seeks is a comprehensive peace agreement. Russia has put forward three core demands. First, Ukraine must remain a neutral country (meaning, no NATO membership and no NATO troops stationed on its territory); second, the five oblasts that Russia has annexed (Crimea, Donetsk, Luhansk, Zaporizhzhia and Kherson) must be formally recognised as part of Russia, and Western sanctions be lifted; third, Ukraine must be demilitarised. The Russians believe they currently hold strategic momentum on the battlefield and are unwilling to surrender that advantage for a ceasefire. A frozen conflict, akin to the Korean armistice of 1953, would merely perpetuate the conflict rather than resolve it.

Then there are Ukraine and its European allies. Volodymyr Zelenskyy, the Ukrainian President, finds the Russian demands difficult to swallow. Having already lost significant portions of Ukraine's territories, he is unwilling to go down in history as the leader who legitimised those losses. Mr. Zelenskyy continues to seek credible security guarantees from the West and wants to retain the right to rearm and remobilise Ukraine's forces.

Several European countries, including France and the U.K., believe that if Ukraine swallows Russian demands, that would effectively rewrite the security architecture of Europe, bolstering Russia's status as a great power.



Europe today sees Ukraine as a critical buffer between Russia and the rest of the continent. A full Ukrainian capitulation, in Europe's views, would weaken its strategic position. As a result, Europe's major powers prefer Ukraine to continue to fight, or preserve the right to arm itself in the event of a ceasefire, rather than settle for a peace agreement with Russia.

As there is little common ground among the main players, Mr. Trump's overtures for peace seems to have hit a stonewall.

ELUSIVE TRUCE

The Trump administration's frustration over the lack of progress in diplomatic efforts to end the Ukraine war was evident in Secretary of State Marco Rubio's remarks in Paris last week. After talks with America's European allies, he warned that the U.S. would "move away" if there was no progress "within days". U.S. President Donald Trump appeared to endorse the comments. Despite Mr. Trump's campaign promise to end the war "within 24 hours", months into his presidency, he remains far from building a consensus on even a temporary ceasefire. If he expected the Russians to jump on a proposal for a ceasefire in return for some Ukrainian concessions, he has miscalculated. The U.S. has already ruled out NATO membership for Ukraine and declared it would not be part of any post-war security guarantees for Kyiv prior to direct negotiations with Russia. It also arm-twisted Ukraine into proposing a 30-day ceasefire. However, while Mr. Trump appears focused on an immediate cessation of hostilities, the Kremlin has insisted that any ceasefire deal must be part of a comprehensive peace agreement that addresses its core security concerns. The U.S. is reportedly circulating a new proposal to end the fighting — shared with European and Ukrainian officials, it has the U.S. prepared to recognise Crimea, which Russia annexed in 2014 following a contentious referendum, as Russian territory. The plan also takes NATO membership "off the table" for Ukraine and seeks to freeze the conflict along the front line, effectively leaving the territories Russia captured since the war began in 2022 in its hands. After responses from Ukraine and Europe, the U.S. plans to approach Moscow. But Russia has stuck to its maximalist positions, which include rejecting security guarantees for Ukraine and insisting on its demilitarisation.

Wars rarely end through maximalist positions. While Russia has made territorial gains, it has also paid a price. Ukraine, despite its apparent weakness on the battlefield, signals that it is ready to continue the fight, with western support. Europe has also made it clear that it will continue backing Ukraine — with or without American involvement. For any lasting peace in Ukraine, it is important to address Russia's legitimate security concerns. However, the Russian demands that Ukraine limit its defence partnership with its allies or accept restrictions on its military capabilities are untenable for any sovereign nation. So, Mr. Trump should continue to strive for common ground between all the parties — the U.S., Ukraine, Europe and Russia — for a durable peace, instead of appeasing just one power.

CARROT AND STICK

The U.S. and Iran are currently engaged in rare high-stakes diplomacy. They have held two rounds of talks, in Muscat and in Rome, with Oman as the mediator, about Tehran's nuclear programme. A third technical round has been confirmed for the coming days. However, tensions still remain high between the Trump administration and the Islamic Republic. It was Donald Trump, during his first term, who sabotaged a functioning multilateral agreement that had significantly curtailed Iran's nuclear programme. Ever since, Iran has accelerated its nuclear activities. While it has not



yet decided to build a nuclear bomb, most assessments agree that it has the capability to do so within weeks. At the same time, Iran's regional influence stands diminished as a result of Israel's attacks on its so-called axis of resistance and other regional shifts such as the fall of Syria's Assad regime. Israel is pressing for an attack on Iran's nuclear facilities, but Mr. Trump, according to American reports, has vetoed those plans, for now.

Mr. Trump has adopted a classic carrot-and-stick approach. He said he wanted a deal with Iran but with a warning that if talks failed, there would be bombing. He has also launched a massive aerial campaign against Yemen's Iran-aligned Houthis. In addition, the U.S. has ramped up its military presence in West Asia besides moving B-2 bombers to the Indian Ocean region — all aimed at signalling to Iran that U.S. threats should be taken seriously. But despite the combined military might of the U.S. and Israel, any attack on Iran would be catastrophic for regional security and global economy. Iran's nuclear facilities are scattered and underground, making them extremely difficult to destroy. It was precisely because there was no viable military solution to the Iran nuclear issue that world powers chose the path of diplomacy in 2015, a path Mr. Trump had abandoned in 2018 for no good reason. Nevertheless, despite the challenges and geopolitical pressure, the recent initiation of talks by Mr. Trump and Iran opens a rare window of opportunity to resolve the issue once and for all. For diplomacy to succeed, the U.S. should act as a responsible global power that is committed to preventing weaponisation of Iran's nuclear programme, rather than as a partisan patron seeking to destroy Iran on Israel's behalf. Iran, for its part, has signalled that it was open to scaling back its nuclear activities in exchange for the removal of sanctions and threats. The 2015 agreement, which limited Iran's enrichment capabilities and uranium stockpile, could serve as a reference point for a deal if talks progress constructively.

THE IRAN-SAUDI SHIFT

On Thursday (April 17), Saudi Arabia's Defence Minister, Prince Khalid bin Salman, met Iran's Prime Minister, its Chief of Armed Forces, and delivered a letter to Supreme Leader Ali Khamenei from King Salman. The last time a Saudi Defence Minister visited Tehran was 26 years ago, in 1999.

- Prince Khalid's visit occurred while American and Iranian delegations prepared to continue negotiations towards a nuclear deal (in Rome) – an endeavour that the Saudi Foreign Ministry has welcomed “as a way to end regional and international disputes”. 12 years ago, when Washington and Tehran were exploring a similar deal, the then Saudi Foreign Minister had asserted that Riyadh was “seeking neither conciliation nor a settlement between Iran and any entity that wants to negotiate with it”.

- Iran still seeks a regional order that is shaped without the United States. Tehran's 'Axis of Resistance' has usually been a modular instrument that has turned towards US forces in the region, to inflict (usually limited) damage. This allows Tehran a strong bargaining chip to impose human and material costs on the US military, spread across bases in Arab states (with the largest in Qatar).

- Saudi Arabia, on the other hand, has historically relied on the United States' security presence in the Middle East, with the US Air Force using the Prince Sultan Air Base as a hub for regional operations. In his meeting with Prince Khalid, Khamenei emphasised that “it is far better for brothers in the region to cooperate with and assist each other than to depend on others” – a nod to Iran's continued preference for reduced Saudi dependence on the United States.



- While Iran maintains that it is opposed to nuclear weaponization, its uranium enrichment has proceeded at a faster pace in the period between 2023 (when Riyadh and Tehran normalised ties) and 2025, compared to 2013 and 2015 (when the Obama-era nuclear deal was negotiated and signed).
- For instance, when Saudi Arabia was increasingly expressing its distrust of Iran in 2013, Iran's stockpile of 60% enriched uranium was at 128.3 kgs according to IAEA estimates. By February 2025, two months after MBS expressed support for expanded ties with Iran and the protection of Iranian sovereignty, this estimate was 274.8 kgs.

Do You Know:

- The rivalry between Saudi Arabia and Iran is rooted in Islamic sectarianism. While Iran is the foremost Shia state in the world, Saudi Arabia is considered to be the religious home of Sunni Islam. In modern times, this sectarian rivalry has translated into a tussle for regional hegemony. This has played a role in both sides being involved in multiple proxy conflicts against each other in Iraq, Lebanon, Syria and most devastatingly, Yemen.
- According to The New York Times, in Yemen, Saudi bombs aimed at reversing gains by Iranian-backed rebels have killed large numbers of civilians. Those rebels have responded by firing increasingly sophisticated missiles and armed drones at Saudi cities and oil facilities. All sides in the conflict have repeatedly violated human rights and international humanitarian law, a Council on Foreign Relations report said. A December 2020 UN report said that since 2015 the "war caused an estimated 233,000 deaths, including 131,000 from indirect causes such as lack of food, health services and infrastructure".

EU'S FAR-RIGHT VS JUDICIARY CONFLICT**The story so far:**

Across the European Union, a significant and escalating conflict is unfolding between ascendant right-wing nationalist parties and the judicial systems of member states. Recent court rulings targeting prominent far-right figures have led to accusations of political persecution and calls for protest, forming part of a broader, deeply contentious struggle over judicial independence, the rule of law, and the very nature of democratic governance.

Which rulings have intensified the conflict?

The immediate triggers for the heightened conflict are several high-profile court decisions. In France, the political landscape was shaken when the Paris Criminal Court delivered a verdict on March 31 against Marine Le Pen, leader of the National Rally (RN) party, sentencing her for the embezzlement of EU funds. The sentence included a four-year prison term (two years suspended) and, crucially, a five-year ban from holding public office. This ruling, handed down just over two years before the anticipated 2027 French presidential elections in which Ms. Le Pen was a leading contender, effectively sidelines her unless overturned on appeal.

Similar confrontations are evident elsewhere. In Romania, the Constitutional Court upheld a decision barring Călin Georgescu, a far-right figure who unexpectedly topped the first round of the 2024 presidential election before it was annulled, from running in the rescheduled May 2025 contest. The court's actions were rooted in the principle of "militant democracy", citing Mr. Georgescu's alleged antidemocratic behaviour, fraudulent campaign financing declarations, and



suspected links to Russian-backed subversion efforts, which led to the annulment of the initial election results.

Meanwhile, in Germany, the domestic intelligence agency (BfV) has classified the Alternative for Germany (AfD) party as a suspected threat to democracy and the constitution, placing it under closer scrutiny. Although formal attempts to ban parties in Germany face high legal hurdles and have rarely succeeded since the 1950s, the BfV's designation highlights deep concerns within the German establishment about the AfD's compatibility with the country's "free democratic basic order".

What are the reactions?

The reactions from the targeted parties and their supporters have been swift and defiant. Ms. Le Pen and her supporters immediately decried the verdict, framing it as politically motivated. She labelled the proceedings a "political witch hunt" aimed at crippling her party and argued the Sapin II law, on the basis of which she was banned from running for office, was being improperly applied retrospectively. Vowing not to "give up", Ms. Le Pen has appealed the decision, with a hearing scheduled for 2026.

Meanwhile, fellow nationalist leaders across the continent commented on the rulings. Following the Le Pen verdict, Hungarian Prime Minister Viktor Orbán posted "Je Suis Marine" on the social media platform X, while Italy's Deputy Prime Minister Matteo Salvini, leader of the Lega party, also voiced support for Ms. Le Pen and criticised 'Brussels' and 'leftwing radicals'.

The AfD in Germany has pursued legal challenges against the BfV's surveillance and classification decisions, while also taking internal steps, such as dissolving its official youth wing ("Young Alternative")—which the BfV had classified as extremist—in a move Politico described as potentially aiming to avert a ban and destigmatise the party.

The narrative consistently pushed by the European conservative-nationalists is that these legal actions are not genuine applications of law but rather politically motivated manoeuvres by an entrenched "establishment" or "elite" seeking to eliminate potent electoral rivals who have been gaining significant ground across Europe.

How does this impact wider European politics?

This resonates with a segment of the populace disillusioned with traditional politics. They argue that the judiciary — far from being impartial — has become a tool to suppress conservative-nationalist movements, questioning the selective application of laws like Sapin II and alleging that similar transgressions by mainstream figures are often overlooked.

This conflict feeds into a wider, ongoing debate within the EU concerning the meaning and application of the rule of law. Liberal and centrist forces, alongside EU institutions like the Court of Justice of the European Union (CJEU), strongly maintain that adherence to the rule of law, including judicial independence and constitutional checks and balances, is fundamental to the Union's values and legal order.

They view attacks on the judiciary, particularly measures aimed at curtailing its independence as seen in Poland, during the former ultra-conservative PiS-led government, and currently in Hungary under Mr. Orbán, as direct threats to democracy itself.



Conversely, many conservative-nationalist voices argue that the “rule of law” concept is being weaponised by Brussels and national elites to impose a specific political agenda, overriding national sovereignty and democratic mandates.

Are foreign actors involved?

Adding another layer of complexity are persistent concerns about foreign interference, particularly from Russia. Analysis from institutions like the Carnegie Endowment for International Peace and reports from organisations like The Soufan Center suggest systematic Russian efforts to undermine democratic processes in the West through disinformation, financial support for extremist parties, and cyber operations.

The Romanian election annulment explicitly referenced suspicions of external manipulation favouring Mr. Georgescu, and historical financial links between parties like Ms. Le Pen’s RN and Russian entities fuel anxieties about Moscow’s influence.

While direct interference can be hard to isolate from domestic political dynamics, experts warn that Russia actively cultivates networks and exploits existing vulnerabilities within EU member states to promote anti-EU, anti-NATO sentiment and destabilise liberal democracies from within.

Prominent figures outside Europe have also weighed in. Following the Le Pen ruling, U.S. Vice President J.D. Vance had stated that the conviction was imposed for a “very minor offense” and the resulting ban was “not democracy”.

Tech billionaire Elon Musk called the ruling “abuse” that would “backfire”, comparing it to legal actions against U.S. President Donald Trump and accusing “the radical left” of abusing the legal system globally to jail opponents.

Where does it leave the rule of law?

The escalating clash leaves the principle of the rule of law in a precarious position. When significant portions of the electorate perceive the judiciary not as an independent arbiter but as a political actor actively working against their chosen representatives, trust in fundamental democratic institutions erodes.

The rhetoric popularised by figures like Mr. Trump, calling to “drain the swamp”, finds fertile ground among Europeans, particularly younger generations who may lack lived memory of authoritarian regimes of communist Eastern Europe and right-wing military dictatorships in Iberia and Greece, where courts genuinely served as instruments of political oppression.

This erosion of trust poses a long-term challenge. As Marek Safjan, a former judge of the Polish Constitutional Tribunal and the CJEU, noted, while the European judiciary, particularly the CJEU, commands significant respect and has been key to integration, it is not immune to political pressures and the rise of populism.

If courts are increasingly seen as mere players in the political fray rather than guardians of constitutional principles, the essential checks and balances underpinning European democracies risk being fatally weakened, opening the door to further democratic backsliding and instability.



TALIBAN CHANGE TUNE TOWARDS HERITAGE SITES IN AFGHANISTAN

In March 2001, the Taliban shocked the world by dynamiting the giant Buddhas of Bamiyan. Two decades later, they are back in power and claim to be making strides to preserve Afghanistan's millennia-old heritage, including pre-Islamic relics.

Even months before their takeover in 2021 the Taliban called for the protection of ancient artefacts in the country, sparking scepticism among observers. They are "part of our country's history, identity and rich culture", the authorities declared.

Since their return to power and decades of war ended, archaeological finds — particularly related to Buddhism — have proliferated, with discoveries publicised by the authorities.

In eastern Laghman province, niches carved into rocks in Gowarjan village and carved Brahmi inscriptions have been found. "It is said that Afghan history goes back 5,000 years — these ancient sites prove it; people lived here," said Mohammed Yaqoub Ayoubi, head of the provincial culture and tourism department.

"I think the Taliban have understood how much the destruction of the Bamiyan Buddhas damaged their reputation," said Valery Freland, director of the ALIPH foundation, the International Alliance for the Protection of Heritage.



DreamIAS

**NATIONAL****U.S. VISAS ISSUED TO INDIAN STUDENTS DECLINE BY 30%**

In February 2025, the first month of the second Donald Trump administration, the number of student visas issued to Indians by the U.S. dropped by 30% compared to the same month the previous year. This decline was notably higher than the overall 4.75% decrease in student visas granted by the U.S. to all countries combined. Moreover, the drop in student visas issued to Indians was much sharper than the decline in visas issued to Chinese, Vietnamese, and Japanese students.

This worrying statistic comes at a tumultuous time when the visas of over 1,000 international students, including Indians, across the U.S. have been terminated or revoked without much notice. According to the Associated Press, at least 1,100 students across 170 colleges across the U.S. have been affected. Many students have filed lawsuits against the terminations. Associated Press quoted the name of at least one such Indian student, Manikanta Pasula, who was about to get a Master's degree in computer science at Rivier University in New Hampshire. Chinmay Deore, along with four other students at public universities in Michigan, have also filed a lawsuit. According to a report in The Hindu, the Indian government too has shifted its stance, from advising the students to "follow the law" to "offering them support" by reaching out to the affected students. Officials of the External Affairs Ministry are now advising affected students to pursue the "legal route".

J D VANCE'S INDIA VISIT: THE RECASTING

US Vice President J D Vance's four-day visit to India came at a crucial juncture, amid profound changes in Washington's approach to the world. The optics of the visit, as well as Vance's speech in Jaipur on Tuesday, must be seen in the context of the gathering apprehensions around the Donald Trump administration's trade policy, its rethinking of the US's role in the world, its hardening stance on immigration. Against this backdrop, the images of the Vance family sight-seeing, the play on the Indian connection through Second Lady Usha Vance, and the photogenic warmth of the meeting with PM Narendra Modi, with the couple's three children participating, have led to a perceptible softening. The tenor of the trip has been in stark contrast to the hard and stark stance taken by the V-P in Europe during the Munich conference earlier this year. His speech in Jaipur only underlined this.

The US V-P announced that the Terms of Reference (ToR) for a bilateral trade agreement have been finalised. He spoke of deepening defence cooperation and about offering the latest defence equipment, notably the F-35 fighter jet. He also made a case for exporting US hydrocarbons to India, and partnering in energy exploration as well as emerging technologies, including AI. The Trump administration remains consistent in its approach to the Indo-Pacific — there has been clarity on the China challenge from Trump's first term through to the Biden administration. Vance's welcoming of India's leadership of the Quad is important in this context.

Vance has sought to frame bilateral ties in terms of a convergence of interests, free from what he sees as the shibboleths of a defunct ideology. He drew a line between the Trump-Vance outlook and the "failed ideas" of their predecessors and their "attitude of preachiness... and condescension". The takeaway from Vance's visit — just over two months after the Modi-Trump summit in Washington — will be that, amid the unsettling and rebalancing, India may have more



room for manoeuvre. The challenge now is to build on this momentum amid the tumult in the global economic and strategic order that threatens prolonged uncertainty.

SENT MESSAGES

In the aftermath of the gruesome terror incident in Pahalgam, India must hear clearly the message emanating from those who committed the heinous crimes. By targeting tourists by religion and killing them in cold blood, the terrorists have sought to undermine India's plurality and what the country stands for. By killing a local Kashmiri who tried to help the hapless tourists, and by targeting people in a popular location that benefits the Kashmiri economy, the attackers have grievously harmed the livelihoods of thousands of Kashmiris dependent on tourism. By choosing to attack unarmed tourists at a time when the U.S. Vice-President was visiting India, they have also sought to undermine the perception that economic activities had returned to normalcy after the tumultuous period following the abrogation of special status for Jammu and Kashmir. The tragic by-product of the killings is now fear of the possibility that such attacks on tourists may recur, and of the economic pain that this would cause ordinary Kashmiris. New Delhi's and Srinagar's responses must keep these in mind and work towards the mitigation of fear and send a clear message — the people of India, including Kashmiris, are united against terror.

Following the attacks, New Delhi has sought to use strong diplomatic measures available in its arsenal against Pakistan, as it is well known that such terror attacks are almost always carried out by radicalised elements who are trained by Islamabad's covert agencies. As it turns out, the mere absence of spectacular violence cannot be termed normalcy. Normalcy is a relative term and it is better experienced than announced. While the large-scale violence and militancy that was seen in the 1990s never happened despite the unpopularity of these decisions, the uneasy calm was reflected in the sporadic incidents of terrorism targeting Kashmiri Pandits, migrants, and security forces in new areas that were hitherto bereft of militancy. With significant curbs on political activity, there was little outlet even for demands related to governance for the citizenry. The conduct of Lok Sabha elections and the Supreme Court-mandated Assembly election process allowed for some expression of voices in the Valley, but it is a stretch to say that this was "normalcy". The Union government must work in concert with the Jammu and Kashmir government, empower Jammu and Kashmir by restoring Statehood, and assert this cohesion to isolate radical and violent elements threatening the livelihoods of Kashmiris and the lives of tourists visiting the serene valley.

A GATHERING STORM

The diplomatic actions against Pakistan taken on Wednesday by India's Cabinet Committee on Security in reaction to the Pahalgam terror attack are a measured set of responses that indicate a larger escalation could follow. The decisions such as to cancel visas given to Pakistani nationals, suspend consular operations, and to close the Attari border Integrated Check Post (ICP) carry New Delhi's message that it does not wish to engage with Pakistan above the absolute minimum levels required. Some of these measures had followed previous attacks including Pulwama (2019). The decision to put the Indus Waters Treaty (IWT) in abeyance until Pakistan acts "credibly" against terror groups means that India will enforce its earlier decision to suspend all meetings of the Permanent Commission that oversees implementation of the treaty, end site visits by Pakistani water teams to India and continue with hydropower and desilting projects along the tributaries — measures to which Pakistan had raised objections. Pakistan's response is an attempt to mirror Indian measures, without even trying to address the anguish in India. Nor does it indicate it is



willing to track down the perpetrators, despite the fact that The Resistance Force (TRF), which claimed responsibility for the attack, is a front for the Pakistan-based LeT. Islamabad has also cancelled visas, cut mission strength and has shut down all trade. Pakistan has threatened to suspend other bilateral agreements including the practically defunct 1972 Simla Agreement, which had most notably converted the ceasefire line into the Line of Control and abjured third party mediation on Kashmir. It also suggested that India's suspension of the IWT would be seen as an "Act of War" if it meant water flows to Pakistan are reduced, and threatened tit for tat strikes if India conducts military operations that harm Pakistani citizens.

All signs indicate the stage is being set for further escalation in tensions and a possible military standoff. Prime Minister Narendra Modi's message from a rally in Bihar is the threat of punishment "beyond imagination". New Delhi is reaching out to countries around the world, Foreign Secretary Vikram Misri is briefing foreign envoys, while senior Ministers have briefed Opposition leaders on the cross-border links. Given geopolitical currents, revulsion at such targeting of innocent tourists, and a broad understanding of India's stand on the issue of cross-border terrorism, it is unlikely that other countries such as the U.S. will press New Delhi to restrain its next steps. The government must continue to take all stakeholders, especially the Jammu-Kashmir government into confidence. Pakistan could benefit from reconsidering its disadvantageous position, and even now, show that it is willing to work against terror groups, and avert the impending escalation.

WHY INDIA'S SUSPENSION OF 65-YEAR-OLD INDUS WATERS TREATY IS SIGNIFICANT

The Indus Waters Treaty (IWT), which has survived four wars, decades of cross-border terrorism against India by Pakistan, and a long history of antagonism between the two countries, was suspended for the first time by New Delhi.

- India made its decision a day after the attack on tourists in Pahalgam, in which Pakistani terrorists took the lives of 26 people.
- "The Indus Waters Treaty of 1960 will be held in abeyance with immediate effect, until Pakistan credibly and irrevocably abjures its support for cross-border terrorism," Foreign Secretary Vikram Misri said on Wednesday evening.
- Among the slew of diplomatic actions against Pakistan announced by India — including the closure of the Attari border post, cancellation of visas, and the expulsion of several Pakistani personnel from India — the suspension of the IWT may have the most far-reaching ramifications.

Do You Know:

- The IWT was signed in Karachi on September 19, 1960, following nine years of negotiations between India and Pakistan. The Treaty has 12 Articles and 8 Annexures (from A to H). According to the provisions of the Treaty, all the water of the "Eastern Rivers" of the Indus system — Sutlej, Beas and Ravi — shall be available for the "unrestricted use" of India. Pakistan shall receive water from the "Western Rivers" — Indus, Jhelum, and Chenab.
- The decision to suspend the IWT will straightaway give more options to New Delhi on how to use the waters of the Indus river system. "For instance, India can immediately stop sharing water flow data with Pakistan. There will be no design or operational restrictions on India for the use of the water of the Indus and its tributaries. Also, India can now create storage on the Western Rivers,



Indus, Jhelum and Chenab,” P K Saxena, former Indian Commissioner for Indus Waters, told The Indian Express.

- India can also stop visits by Pakistani officials to the two hydroelectric projects currently under construction in Jammu & Kashmir — the Kishenganga HEP on Kishenganga, a tributary of the Jhelum, and the Ratle HEP on the Chenab — Saxena said.
- However, the suspension will not have an immediate impact on the flow of water to Pakistan for a few years at least. India does not currently have the infrastructure to either stop the flow of water into Pakistan, or to divert it for its own use
- The Indus Waters Treaty lacks an exit clause, meaning neither India nor Pakistan can legally abrogate it unilaterally.
- The Treaty has no end date, and any modification requires the consent of both parties. But while the Treaty cannot be exited, it does contain a dispute resolution mechanism: Article IX, along with Annexures F and G, lays out procedures for raising grievances — first before the Permanent Indus Commission, then a neutral expert, and eventually, a forum of arbitrators.
- The two hydroelectric projects in Jammu and Kashmir have been a bone of contention between India and Pakistan for years now, leading New Delhi to issue a notice, in January 2023, to Islamabad seeking the “modification” of the Treaty.

INDUS ABEYANCE IS OFFICIAL, ALL VISAS CANCELLED: DELHI TURNS THE SCREWS

Responding to the Pahalgam terror attack, a day after it put the Indus Waters Treaty (IWT) on hold, downgraded diplomatic ties and shut the Attari-Wagah border, India ratcheted up the pressure on Pakistan.

- India formally informed Pakistan that New Delhi has decided the IWT be held in abeyance with immediate effect. It also decided to cancel all existing visas to Pak nationals with effect from April 27 and suspend visa services for them.
- This move, a day after cancelling visas under a special SAARC scheme, will impact Pak nationals who come to India for medical treatment and those who visit their pre-Partition divided families.
- Additionally, New Delhi advised its nationals to avoid travelling to Pakistan and asked those still there to return.
- On Wednesday, India had also expelled diplomats and top defence officials from the Pakistan High Commission effectively halving the mission strength.
- It withdrew its own advisors and staff from its mission in Islamabad.
- Thursday’s retaliation, after the Pahalgam attack that killed 25 tourists and one local resident Tuesday, is the strongest since the abrogation of Article 370 in 2019. The Pahalgam attack is also the deadliest terror attack on civilians in India, since the 26/11 Mumbai terror attack.
- In tandem, Foreign Secretary Vikram Misri briefed a group of foreign ambassadors in the Ministry of External Affairs — part of Delhi’s coercive diplomacy to further isolate Pakistan and increase international pressure to bear on it. Delhi has underlined “the cross-border linkages of the terrorist attack.”



- Prime Minister got calls from French President Emmanuel Macron, Italian PM Giorgia Meloni, Israel PM Benjamin Netanyahu, Egyptian President Abdel Fatah el-Sisi among others over the Pahalgam attack.

Do You Know:

- In a statement, the MEA said all existing valid visas issued by India to Pak nationals stand revoked with effect from April 27, 2025. It added that medical visas issued to Pak nationals will be valid only till April 29, 2025. "All Pakistani nationals currently in India must leave India before the expiry of visas, as now amended," it said.
- This came a day after Misri had said that "Pakistani nationals will not be permitted to travel to India under the SAARC Visa Exemption Scheme (SVES) visas. Any SVES visas issued in the past to Pakistani nationals are deemed cancelled."
- The SVES was launched in 1992 after leaders at the Fourth Summit (Islamabad, 29-31 December 1988), realising the importance of having people-to-people contact among SAARC countries, decided that certain categories of dignitaries should be entitled to a special travel document. As directed by the Summit, the Council of Ministers regularly kept under review the list of entitled categories. Currently, the list includes 24 categories which include dignitaries, judges of higher courts, Parliamentarians, senior officials, businessmen, journalists, sportspersons.
- Visa stickers are issued by the respective Member States to the entitled categories of that particular country. The validity of the Visa Sticker is generally for one year. The implementation is reviewed regularly by Immigration authorities of SAARC member states.

PAKISTAN SUSPENDS TRADE WITH INDIA, SAYS DIVERTING INDUS WATER 'AN ACT OF WAR', CLOSES AIR SPACE

A day after India took several diplomatic measures against Pakistan over the Pahalgam terror attack, Islamabad said Thursday it "shall exercise the right to hold all bilateral agreements with India, including but not limited to the Simla Agreement, in abeyance."

- India put on hold the Indus Waters Treaty, downgraded diplomatic relations with Pakistan, expelled diplomats and top defence officials from the Pakistan High Commission in Delhi, cancelled all visas granted to Pakistan nationals and directed them to leave the country in 48 hours, and shut the Attari-Wagah border.
- The reaction from Pakistan came after the country's Prime Minister Muhammad Shehbaz Sharif chaired a meeting of the National Security Committee (NSC).
- A statement from its Prime Minister's Office said Pakistan "vehemently rejects the Indian announcement to hold the Indus Waters Treaty in abeyance" and any attempt to stop or divert the flow of water belonging to Pakistan as per the Indus Waters Treaty, and the usurpation of the rights of lower riparian will be considered as "an Act of War".
- "Pakistan's airspace will be closed with immediate effect for all Indian owned or Indian operated airlines... all trade with India, including to and from any third country through Pakistan, is suspended forthwith."



- It also said that it will be shutting down the Wagah border post, and reducing the strength of the High Commission to 30 and expelling the Defence services officials from the Indian High Commission, in a tit-for-tat move.

Do You Know:

- With Pakistan closing off its airspace to Indian carriers on Thursday, airlines now face longer durations and higher fuel burn for westward international flights taking off from north India — factors that could lead to a hike in airfares.
- The Indian Express's review of recent flight paths of numerous international flights departing from the Delhi airport suggests Pakistan's retaliatory action will affect Indian carriers' flights to Central Asia, the Caucasus, West Asia, Europe, the UK and North America.
- According to industry insiders, while it is still too early to assess the impact, the airlines' costs are bound to rise and could translate into higher airfares. Additionally, as airlines from other countries can continue to overfly Pakistan, they may get a cost advantage over Indian airlines on the affected routes.
- The last time Pakistan closed its airspace for an extended period — in 2019, following the Balakot airstrikes — Indian airlines lost around `700 crore owing to higher fuel expenses and operational complications that came with the longer routes.
- Air India was the worst-affected Indian carrier at the time, as it operated more west-bound international flights than other airlines. It was and continues to be the only Indian airline that operates long-haul and ultra-long-haul flights to Europe and North America.
- Following the Indian Air Force's airstrikes in Balakot, Pakistan had fully closed its airspace on February 26, 2019. It eventually fully opened its airspace for overflying in July 2019. By June, Indian airlines' collective loss due to the airspace closure was pegged at more than `550 crore, according to data furnished by the Ministry of Civil Aviation at the time. The figure, according to industry insiders, was around `700 crore till mid-July of that year, when Pakistan completely removed the restrictions.
- In 2019, due to Pakistan's closure of routes, most flights saw their durations rise by at least 70-80 minutes. Air India's flights from Delhi to Chicago had to stop in Europe for refuelling. Further, IndiGo's flight from Delhi to Istanbul, which was then being operated by narrow-body aircraft, had to make a refuelling stop at Doha.

ATTARI BORDER CLOSURE TO HIT `3,800-CR INDO-PAK TRADE

- Bilateral trade had already been in decline since India imposed a 200 per cent duty on Pakistani goods in 2019, following the Pulwama terrorist attack, data from the Land Ports Authority of India shows.
- According to official data, India exported items such as soya bean, poultry feed, vegetables, red chillies, plastic granules, and plastic yarn, while importing goods including dry fruits, dates, gypsum, cement, glass, rock salt, and herbs from Pakistan via the Land Port at Attari. The port, spread over 120 acres, assumes significance since it has direct access to National Highway 1.
- Tensions between the two countries — particularly following the Pulwama attack — reduced trade between India and Pakistan from Rs 4,370.78 crore in 2018-19 to Rs 2,257.55 crore in

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2022–23. However, trade rebounded to Rs 3,886.53 crore in 2023–24, the highest in the past five years. Notably, total cargo movement also dropped from 49,102 consignments in 2018–19 to just 3,827 in 2022–23, the data shows.

- Straw reapers and cotton yarn are among the major export items from Indian Punjab via the Wagah–Attari land route.

“Straw reapers, manufactured by various small-scale units in Punjab, are a significant export to Pakistan through the ICP at Attari. Between 2016–17 and 2018–19, the number of straw reapers exported ranged from 846 to 1,110 units, with export earnings between Rs 1,844 lakh and Rs 2,488 lakh,” the report said. “Due to trade restrictions, exports of straw reapers dropped to 100 units in 2019–20, with earnings falling to Rs 232 lakh. Exporters had expected to ship 2,441 straw reapers to Pakistan in 2020–21 under normal trade conditions, which could have generated Rs 6,195 lakh in revenue,” the report added.

Do You Know:

- In dollar terms, total India-Pakistan trade has shrunk to about \$2 billion annually over the past five years, a small fraction of the \$37 billion trade potential estimated by the World Bank. India’s overall goods trade stands at \$430 billion, while Pakistan’s is approximately \$100 billion.
- The aid-dependent Pakistani economy has also faced recurring bouts of high inflation following the Covid-19 pandemic and widespread social unrest. In May last year, violent street protests in Pakistan-occupied Kashmir (PoK) left one police officer dead and over 90 injured, according to Pakistani media reports.
- Trade experts noted that India-Pakistan trade via the Attari border had created a significant economic ecosystem in Punjab, particularly in and around Amritsar as well as Attari. The trade provided direct and indirect employment to thousands, including transporters, porters, shopkeepers, and workers in related industries.
- The Attari-Wagah land route was first opened in 2005 and truck movement on this route began in 2007. The ICP at Attari was inaugurated on April 13, 2012, under the UPA government, with provisions of facilities for fast and cost-effective land trade.

INFILTRATION, THE KEY PROBLEM

After killing 26 tourists in Baisaran, a meadow near Pahalgam in the lap of the Pir Panjal mountains, the five terrorists are learnt to have fled to the surrounding jungles that are spread across hundreds of kilometres of rugged, difficult terrain.

- This has left security forces with a daunting challenge — one that underlines the importance of a robust anti-infiltration grid to prevent terrorists from crossing over in the first place.
- The dense jungles in the upper reaches of the Pir Panjal range provide ample avenues to avoid detection. Sources say visibility in these jungles is so poor that it is difficult to spot movement even 100 metres away. Tracking down suspects in these parts requires robust technical and human intelligence support.
- Over the last few years, the armed forces have suffered serious casualties chasing terrorists in these jungles — more than 50 Army personnel have lost their lives in encounters with terrorists in the Poonch, Rajouri, Kathua, and Doda regions



- This is perhaps a direct consequence of Pakistan sending in highly trained terrorists, who operate in stealth and live off the jungle, into the Jammu region. Their lack of contact with locals, and use of advanced, stealthy communication devices has made it difficult to hunt them down.
- Sources say the Pahalgam terrorists were likely of this kind. At least three of the attackers are suspected to be from Pakistan.
- “Once a terrorist is in, it is not easy to hunt him down... So the idea should be to not let him enter in the first place,” a senior security establishment officer told The Indian Express. This is why a robust counter-infiltration grid, which includes difficult-to-breach fencing, a strong intelligence network, and trained border-guarding manpower, is the need of the hour. This is more so because terror recruitment in the Valley itself is the lowest it has ever been. Chief of Army Staff General Upendra Dwivedi in January said that 60% of the 73 terrorists killed in counter-terror operations in J&K in 2024 were from Pakistan.

Do You Know:

- Data support the effectiveness of border fencing, which picked up pace after the 2003 ceasefire agreement between India and Pakistan. According to Intelligence Bureau figures, more than half of all infiltration attempts were successful in 2002. By 2010, only a fifth of the attempts (52 out of 247) met with success.
- The India-Pakistan border (including the Line of Control) is almost entirely fenced. Since 2014, there has been a push to make this fencing more robust, and plug riverine gaps in the Jammu region with technological solutions. This received a major impetus with the Comprehensive Integrated Border Management System (CIBMS) project, launched after the 2016 Pathankot attack. The CIBMS deploys a range of state-of-the-art surveillance technologies — thermal imagers, infra-red and laser-based intruder alarms, aerostats for aerial surveillance, unattended ground sensors, radars, sonar systems for riverine borders, and fibre-optic sensors — that provide real-time surveillance data to a command and control system.
- However, it remains a work in progress. In October 2016, then Union Home Minister Rajnath Singh had announced that the India-Pakistan border would be sealed by December 2018. Cut to December 2023, with work still pending, Home Minister Amit Shah revised the deadline to December 2025. Progress of the CIBMS has been slowed by the non-availability of required technology and, at times, incoherent planning. Some of the suggestions floated in MHA meetings following the Pathankot attacks bordered on the bizarre. For instance, to plug the vulnerability at riverine patches, one suggestion was to install motorised pulleys that would constantly ferry a patrolman back and forth. This was (wisely) shot down on the grounds that if the motor malfunctioned, the sentry would be left literally hanging, a sitting duck.

HUMAN DETECTION RADARS, SEISMIC SENSORS TO TRACK TUNNELS: MHA’S HI-TECH SECURITY AT PAK BORDER

Amid a spike in encounters with foreign terrorists in Jammu, where over 50 Army personnel have died in the last couple of years, Union Home Minister Amit Shah said earlier this month that the government was deploying an electronic surveillance system along its border with Pakistan to thwart infiltrations.



- Sources said this surveillance system includes an integrated network of human-detection radars, thermal imaging and high-resolution cameras, comprehensive floodlighting along the fences, tech-enabled vigil of riverine stretches and seismic sensors to detect tunnels.
- Sources in the Ministry of Home Affairs (MHA) said some of these systems have already been installed in certain stretches while some new high-tech equipment and security systems are being experimented with to deal with some of the vulnerabilities on the border with Pakistan.
- According to officials engaged in the project, human-detection radars integrated with cameras and a command and control system are proving to be effective.

Do You Know:

- All of this is supplemented by the Comprehensive Integrated Border Management System (CIBMS), which the government fast-tracked after the 2016 Pathankot Air Base attack. According to the MHA, two pilot projects covering about 71 kms on India-Pakistan border (10 kms) and India-Bangladesh border (61 kms) of the CIBMS have already been completed.
- According to the MHA, CIBMS involves deployment of a range of state-of-the-art surveillance technologies — thermal imagers, infra-red and laser-based intruder alarms, aerostats for aerial surveillance, unattended ground sensors that can help detect intrusion bids, radars, sonar systems to secure riverine borders, fibre-optic sensors and a command and control system that can receive data from all surveillance devices in real time.
- The government also launched BOLD-QIT (Border Electronically Dominated QRT Interception Technique) under CIBMS on India-Bangladesh border in Dhubri district of Assam, along the riverine border as it was not feasible to construct border fencing. This, sources said, has been operationalised.
- “The implementation of these projects will help in integration of manpower, sensors, networks, intelligence and command and control solutions to improve situational awareness at different levels of hierarchy to facilitate prompt and informed decision-making and quick reaction to emerging situations,” an MHA official said.

DHAKA MUST HEED INDIA’S CALL ON MINORITIES

Ever since Sheikh Hasina was overthrown in Dhaka, India has raised its concerns with Bangladesh about the safety of minorities in that country. Hasina fled to India on the evening of August 5 last year, and the following day, in an all-party meeting, External Affairs Minister S Jaishankar flagged the issue. Delhi has continued to express concern over instability in Bangladesh, and in particular, the toll it takes on the safety of minorities. During a recent meeting on the sidelines of BIMSTEC, Prime Minister Narendra Modi urged the Chief Advisor to the interim government, Muhammad Yunus, to ensure that the state addresses the issue with urgency. Despite assurances, however, Dhaka has been prone to dismissing the incidents of the Hindu minority being targeted as isolated manifestations of public anger against the previous regime. Following the kidnapping and killing of Bhabesh Chandra Roy, a prominent leader, however, the Yunus government cannot continue to be in denial. Minister of State for External Affairs Kirti Vardhan Singh told Parliament in February, “Since August, reports have cited the deaths of 23 Hindus and 152 incidents of attacks on Hindu temples in Bangladesh.” The interim government must acknowledge the insecurity faced by Bangladeshi Hindus and take immediate steps to ensure their safety. A culture of impunity will only exacerbate the situation and also contribute to tensions between Dhaka and Delhi.

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India has been a friend to Bangladesh since the Liberation War of 1971. However, the interim government's foreign policy has sent mixed signals. Yunus' recent visit to China, during which he made a provocative statement about India's Northeast region, and the high-level diplomacy over the weekend between Bangladesh and Pakistan, signal Dhaka's attempts to align with Delhi's regional rivals. Despite Bangladesh's demand for reparations and a public apology from Pakistan for the atrocities committed by the Yahya Khan regime during the 1971 Liberation War, both countries appear to be on the path towards rapprochement — a significant reversal of Hasina's foreign policy.

Bangladesh must recognise that Dhaka's long-term interests are better served if it acknowledges the regional realities and understands what Delhi can offer: A stable economic and defence partnership. In turn, India should remain resolute in its demands for the protection of minorities in Bangladesh, while keeping the door open for talks with the interim government on issues ranging from border security to trade, connectivity and counter-terrorism. Delhi must also broaden its outreach. Given Bangladesh's uncertain domestic situation and the impending elections, Delhi must engage a broader swathe of forces and institutions in the country to get a deeper understanding of its changing domestic dynamics and to guard against any nasty surprises ahead.

'SHARBAT JIHAD' ADS: HC PULLS UP RAMDEV'S PATANJALI, SAYS 'CAN'T BELIEVE EYES AND EARS'

THE DELHI High Court Tuesday directed Baba Ramdev's Patanjali to immediately pull down all its advertisements allegedly referring to Hamdard's popular drink Rooh Afza as "Sharbat Jihad," saying they "shocked the conscience of the court". "I couldn't believe my eyes and ears," Justice Amit Bansal, who was hearing the case, said about Patanjali's videos.

- Senior advocate Rajiv Nayar, appearing for Patanjali, told the court that the videos will be pulled down.
- When the case first came up in the court Tuesday morning, Justice Bansal observed: "This is shocking. Shocking. It shocks the conscience of the court. Please take instructions immediately. This is indefensible according to me. Take instructions, otherwise there will be a strong order."
- Hamdard, in its suit, is also seeking a permanent injunction restraining Patanjali from infringing and disparaging its trademark, damages upto Rs 2 crores, as well as seeking an apology and retraction. It is also seeking the court's direction to the Ministry of Electronics and Information Technology and the Department of Telecommunications (DoT) to take down the links of the objectionable material.
- Appearing for Hamdard, senior advocate Mukul Rohatgi Tuesday read out tweets and the content of the video, where Ramdev allegedly makes a reference to Rooh Afza.

Do You Know:

- According to the World Intellectual Property Organization (WIPO) website, Intellectual property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce. IP is protected in law by, for example, patents, copyright and trademarks, which enable people to earn recognition or financial benefit from what they invent or create. By striking the right balance between the interests of innovators and the



wider public interest, the IP system aims to foster an environment in which creativity and innovation can flourish.

- Hamdard, through its charity wing Hamdard National Foundation India, has moved a suit claiming trademark infringement and disparagement, as well as defamation against Patanjali Foods Limited and Baba Ramdev, citing a video that showed Ramdev claiming that his competitor's profits were used "for building masjids and madrasas." Profits from Patanjali's "rose sharbat", he said, go towards building "gurukuls, acharyakulams and Patanjali University". "Jaise love jihad, vote jihad chal raha hai naa, waise sharbat jihad bhi chal raha hai (Like there is love jihad and vote jihad, there is sharbat jihad)," Ramdev added.

WHY ARE CIVIL DISPUTES BEING CRIMINALISED?

The story so far:

Chief Justice of India Sanjiv Khanna recently came down heavily on the Uttar Pradesh government over the growing trend of ordinary civil disputes being converted into criminal cases. His remarks came during the hearing of an appeal filed by two individuals, facing a cheque bounce case, who were also slapped with criminal charges including breach of trust, intimidation, and criminal conspiracy.

What were the CJI's remarks?

The Chief Justice observed that "every day, civil suits are being converted to criminal cases. It is absurd. Disputes over civil issues cannot be turned into offences... There is a complete breakdown of rule of law in Uttar Pradesh. Converting a civil matter into a criminal case is not acceptable." The Indian legal system has been witnessing a troubling trend of the increasing misuse of criminal law in matters that are fundamentally civil in nature. This tendency has been seen in civil disputes, such as money recovery, cheque bounce cases, contractual disagreements, inheritance, property partitions, commercial transactions and others. Many of these types of cases are increasingly being given the colour of a criminal dispute, often to create pressure on the opposing party.

What is the modus operandi?

A common tactic seen in most of these cases are the accusations that the opposite party had dishonest intentions from the very beginning of a civil arrangement — such as a loan, contract, or agreement. For context, if Mr. A lends money to Mr. B which Mr. B fails to repay, the matter would traditionally fall under civil jurisdiction. However, if Mr. A comes up with the claim that Mr. B never intended to repay the loan and obtained the money through deceit, Mr. A can pursue criminal charges under Section 420 (cheating) of the Indian Penal Code, now covered under Section 318 of the Bharatiya Nyaya Sanhita (BNS).

Why is this happening?

Legal experts believe that many people view civil law as an ineffective remedy, largely due to the protracted nature of most civil cases. This perception is seen in several family disputes also, where prolonged litigation frequently results in the irreparable breakdown of marriages or family relationships. There is also an impression that involving someone in a criminal case can lead to a quicker settlement. In many cases, people with influence, and/or by incentivising Police officials get their FIR registered to create pressure on the other party.



As per the National Judicial Data Grid, there are currently 1,08,38,375 civil cases pending in District Courts across India. Over 68% of all civil cases pending before the trial courts are more than one year old.

Additionally, out of the 4.52 crore pending cases in District Courts, 76% — or 3.44 crore — are criminal cases.

What have the courts said?

As early as January 2000, in *G. Sagar Suri versus State of UP*, the Supreme Court had cautioned, “It is to be seen if a matter, which is essentially of civil nature, has been given a cloak of criminal offence. Criminal proceedings are not a short cut of other remedies available in law. Before issuing process a criminal court has to exercise a great deal of caution. For the accused it is a serious matter.”

A nuanced look at the complexities of distinguishing between civil and criminal disputes, where allegations of fraud were involved, was done by the apex court in May, 2024, in *C. Subbiah @ Kadambur Jayaraj versus The Superintendent of Police*. In this case, a government school teacher, who had prior involvement in real estate, filed a complaint alleging fraud in a series of land transactions, alleging the opposite party had duped him under the pretence of lucrative real estate investments. The teacher claimed he was persuaded to register several properties in the names of the opposite party, based on assurances that he would receive both land and profits in return. After a dispute arose over profit sharing, he complained that the opposite party was not only committing a breach of trust but also intimidating him. The apex court took note of the fact that the opposite party had already passed on some plots as well as part profits from the land deals to the teacher. It observed that there is no material which can show that the accused indulged in intimidation of the teacher.

“It cannot be doubted that a dispute which is purely civil in nature has been given a colour of criminal prosecution alleging fraud and criminal breach of trust by misusing the tool of criminal law,” the apex court observed.

What is the way forward?

In the *Indian Oil Corpn. versus NEPC India Ltd.* case of 2006, the Supreme Court made it clear that “while no one with a legitimate cause or grievance should be prevented from seeking remedies available in criminal law, a complainant who initiates or persists with a prosecution, being fully aware that the criminal proceedings are unwarranted and his remedy lies only in civil law, should himself be made accountable, at the end of such misconceived criminal proceedings, in accordance with law.”

The court also recommended a practical solution to discourage such abuse of criminal process: “One positive step that can be taken by the courts, to curb unnecessary prosecutions and harassment of innocent parties, is to exercise their power under Section 250 Cr.P.C. (compensation for accusations made without reasonable cause) more frequently, where they discern malice or frivolousness or ulterior motives on the part of the complainant.”

POWER AND FREEDOM: ON THE SENTHILBALAJI CASE

The Supreme Court’s remark on April 23, asking Tamil Nadu Minister for Electricity, Prohibition and Excise V. Senthilbalaji, who has been out on bail since September 2024 in an alleged money



laundering case, to choose between his post and freedom was expected. In the last four months, the Court used strong language against the Minister on more than one occasion. Last December, the Court expressed its objection to the return of Mr. Senthilbalaji to the Cabinet a few days after it granted him bail. On March 24, it took a dim view of the lack of response from him to its question raised on February 12 over his continuance as Minister. Mr. Senthilbalaji, in all likelihood, would have anticipated what the Court said now. That two senior advocates, Kapil Sibal and Mukul Rohatgi, and an advocate for the Minister, had to persuade a Bench of Justices A.S. Oka and Ujjal Bhuyan not to issue an interim order till Monday (April 28) is no common event in any court of law, let alone the Supreme Court. The observations of the Bench that it had been a “mistake” in granting him bail and that the conduct of the Minister was “dishonest,” and the statement of Justice Oka to Mr. Sibal that “you [Mr. Senthilbalaji] will ensure that no witness comes to the box”, reflect concerns that a Minister could tamper with evidence and influence witnesses. Clearly, Mr. Senthilbalaji would have done himself a favour by not returning to the Cabinet.

Even now, it is not too late for him to resign. If he does not, Chief Minister M.K. Stalin would be forced to act against him. What is at stake is not just the continuance of a Minister, but propriety. After all, the Court had granted Mr. Senthilbalaji bail not on merits, but on the ground that he had undergone an incarceration of one year as an under trial in the case. When it had not given him a clean chit in the first instance, his re-induction into the Cabinet has naturally become a subject matter before the Court, regardless of the correctness or otherwise of the Minister’s claim that “there is not even a whisper of violation of any bail condition.” On September 28, 2024, at the time when he was granted bail, The Hindu had pointed out that “the cause of justice for the victims of the job scandal and a fair trial for the accused would be served well if Mr. Stalin avoids inducting Mr. Senthilbalaji again in his Cabinet until he is cleared of the charges.” The point still holds. Mr. Senthilbalaji should not risk the ignominy of getting dropped from the Cabinet on the recommendation of the Chief Minister.

CONSIDER MANDATING MINIMUM VOTE SHARE EVEN FOR UNOPPOSED CANDIDATE: SC TO CENTRE

The Supreme Court on Thursday sought to know whether it can be laid down in the election law to mandate a certain percentage of votes even when there is only one candidate in the fray for declaring him/her elected.

- “Will it not be a very welcome and progressive step where only one candidate is left in free [fray] and still you say that you will be declared election [elected] only when you get at least 10%, 15% (votes), whatever...,” Justice Surya Kant presiding over a two-judge bench asked the Centre and the Election Commission of India.

- “Our Constitution, and we salute it, is one of the most dynamic... It says that democracy by majority... So when we talk of the majority as the foundation stone of the democracy, why not in furtherance of achieving that very goal, we prescribe that even in a default direction, there should be at least some voters who are liking you,” Justice Kant said.

- The bench, also comprising Justice N K Singh, was hearing a plea by ‘Vidhi Centre for Legal Policy’, praying that section 53(2) of The Representation of the People Act, 1951, in so far as it applies to direct elections to Lok Sabha and state assemblies be read down or struck down as unconstitutional. The provision says that in case of an uncontested election, the Election Commission shall declare the only existing candidate as the winner forthwith without holding an election.

**Do You Know:**

- The Supreme Court directed the Election Commission of India (ECI) to introduce the NOTA option for voters in September 2013, in order to protect the secrecy of voters' choice.
- In 2004 the People's Union for Civil Liberties (PUCI) had approached the apex court seeking directions to the ECI for measures to protect the 'right to secrecy' of voters to exercise their franchise. They argued that the Conduct of Elections Rules, 1961 violated the secrecy aspect as the Presiding Officer (from the ECI) maintains a record of voters who choose not to vote along with the signatures or thumb impressions of each voter who exercises this right.
- Moreover, with the introduction of EVMs, the court noted that anyone present in the polling booth would know if a voter has decided not to vote, as the machine would not emit any light or sound (as it does when a vote is cast). The court noted that the ECI in 2001 sent a letter to the Ministry of Law and Justice seeking the introduction of a NOTA option in EVMs and ballot papers to protect voter secrecy as well as allow voters to "express his dissent/disapproval against the contesting candidates and will have the benefit of reducing bogus voting."

J P NADDA IS RIGHT IN CALLING OUT BJP MPS' CRUDE TARGETING OF JUDICIARY — HE NEEDS TO DO MORE

BJP president JP Nadda's statement distancing his party from the remarks of two MPs crudely targeting the Chief Justice of India and the judiciary is welcome. But it is not enough. Because, recently, the BJP seems beset with a troubling contagion. It folds in party MPs, at least one party office-bearer and party-appointed high constitutional functionaries. The two colleagues who invited Nadda's rebuke were four-time MP and chairman of a parliamentary committee, Nishikant Dubey, and Dinesh Sharma, also an MP. In language discourteous and lurching, Dubey held the CJI responsible for "all civil wars in the country" and criticised the Supreme Court — "kanoon yadi Supreme Court hi banayega toh sansad bhavan band kar dena chahiye (If SC makes the laws, Parliament should be shut down)". Sharma endorsed Dubey's rant: "Jan manas mein ek aashanka hoti hai (a suspicion arises in the minds of the people) ... No one can challenge the President, the President is supreme". Both MPs were speaking in the context of recent SC rulings: In the Tamil Nadu Governor case, where it set timelines in law-making for Governor and President, and in red-flagging aspects of the Waqf Act that the government has now put on hold. Of course, guardrails for the Governor are welcome but setting a timeline for the President, as this newspaper flagged, is fraught and the court may need to revisit this. But Dubey's is a hatchet job, not a critique. Indeed, hours after Nadda described the views of Dubey and Sharma as "personal statements" that the party "completely rejects", Dubey took aim again. Targeting former CEC SY Quraishi over his criticism of the Waqf Act, Dubey called him a "Muslim Commissioner" — this was after BJP general secretary (Organisation) BL Santhosh hit out at Quraishi, saying that it was "in spite of all these characters" that India remained a democracy.

It isn't just Messrs Dubey, Sharma and Santhosh. No less than the country's Vice-President and two governors have pushed at the constitutionally laid out red lines that circumscribe their high office. V-P Jagdeep Dhankhar called the SC a "super Parliament", and described Article 142, which empowers the Court to ensure "complete justice", a "nuclear missile against democratic forces". In West Bengal, Governor Ananda Bose toured violence-hit areas, megaphone in hand, and urged people to come to him directly — as if he were the local MLA or MP. And only days after the SC order that held his stalling of bills as illegal, Tamil Nadu Governor RN Ravi, became a cheer-leader for the powerful, asking students to chant "Jai Shri Ram" at a college event in Madurai.



Last year, the Narendra Modi government returned to power for a third time — its party tally dented but its political-electoral dominance unquestioned. Three assembly victories have burnished that triumph. And yet, within its ranks, 11 years later, is a winner-has-to-take-all approach. In a constitutional system, a mosaic of power and checks and balances, the Judiciary is the custodian of citizens' fundamental rights and of the Constitution's letter and spirit. On Saturday, Nadda underlined it; the PM has, time and again, spoken of the Constitution's primacy and said that the Opposition's campaign that it is in danger must be called out strongly. However, in showing disrespect to the Court, in not abiding by constitutional restraints, some elements of the powers-that-be contribute to the fraying of the fabric. Nadda has spoken, Nadda needs to act.

JUDICIARY'S PLACE ATOP THE PYRAMID

The story so far:

Vice-President Jagdeep Dhankhar recently raised certain issues with respect to the independence of the judiciary, its powers of judicial review and the judgment prescribing timelines to the President and Governor for their actions.

What is the current context?

The Vice-President expressed his views on various issues surrounding judiciary in a recent event. Firstly, he talked about the lack of transparency in the inquiry being conducted by a committee of judges in the aftermath of the recovery of huge piles of cash at a Delhi High Court Judge's residence. He questioned the legality of the procedure being followed in such cases that is not laid down under any law made by Parliament.

Secondly, he remarked about the recent judgment of the Supreme Court, in which the court had prescribed timelines for the President and Governors to take action on State legislations. The court had ruled that it could issue a writ of 'Mandamus' to these high constitutional offices in the event of inaction or inordinate delays.

Third, he raised concerns about lack of accountability of judiciary towards the public at large, unlike the legislature and executive. It was in the context of judicial review of legislation by Constitutional Benches as well as orders passed that encroach upon the executive domain. The provisions of Article 145(3), which require a minimum of five judges for adjudicating on constitutional validity in any matter, were made in 1950 when the total strength of the court was eight judges. He suggested that it may need to be revisited as the present strength is 34.

Finally, he opined that the top court has been utilising its extraordinary power under Article 142 (to provide complete justice in any case), in a way that undermines representative democracy.

A critical analysis

There have been views that the speech by the Vice-President doesn't behove the constitutional and ceremonial office that he holds. A critical analysis of the speech presents us with arguments in support and against the observations.

Apprehension about the opaqueness of inquiries conducted by the judiciary in the case of alleged misbehaviour by judges is widely shared by the common public. The Chief Justice of India should devise a procedure that provides for utmost transparency in such cases to instil confidence in the rule of law.



One of the underlying root causes for various issues concerning the judiciary is lack of accountability and transparency in appointments through the collegium process. A broad-based National Judicial Appointments Commission, with the CJI being provided a veto to have final say in the appointment process, would make the selection process more transparent and inclusive without compromising on the independence of the judiciary.

However, the recent order of the Supreme Court prescribing timelines to the President and Governors was well within its powers of upholding the constitutional principles. The two judges in this case had arrived at their conclusions based on various Constitution Bench judgments decided earlier. It is pertinent to note that similar timelines have also been provided in the Office Memorandum prepared by the Home Ministry in February 2016.

Similarly, 'judicial activism' by the courts, including its use of Article 142, has contributed significantly to providing justice to the needy as well as holding the executive accountable. Some notable orders under Article 142 include compensation for victims of Bhopal gas tragedy (1989), guidelines against sexual harassment at work place (1997), cancellation of coal-block licenses that were allegedly improperly allocated (2014), permanent commission of women officers in armed forces (2024), and directives to public officials with respect to demolitions (2024).

Further, considering the precedence developed in the past seven decades and pendency of cases in the Supreme Court, the current requirement of five judges for a Constitution Bench may be optimum.

Judicial review and its independence

Parliamentary democracy works on the principle that the executive is accountable to the legislature, which in turn is answerable to the people in every election. However, it is the judiciary which is the independent branch that upholds the Constitution and its principles in governance.

The doctrine of Parliamentary sovereignty is associated with the British Parliament. This is because there is no written constitution in the U.K. and Parliamentary laws are supreme for governance of the country. On the other hand, the concept of judicial supremacy is associated with the U.S. It is because the American Supreme Court has wide powers in interpreting their constitution as per 'due process of law'.

The Indian Constitutional scheme is a synthesis of Parliamentary Sovereignty and Judicial Supremacy. 'Judicial review' has been declared as a 'basic structure' of the Constitution in various judgments of the Supreme Court that has reinforced 'Constitutional sovereignty'. All the branches of governance should uphold the constitutional values through healthy separation of powers rather than confrontation.

DIVING INTO SC'S VERDICT ON GOVERNORS

On April 8, 2025, the Supreme Court decided a long-simmering dispute between the Governor of the State of Tamil Nadu, and the State's government and Legislative Assembly. For a period spanning years, the Governor had refused to act upon the Bills that had been passed by the State's Legislative Assembly — neither assenting to them, nor returning them to the Assembly nor referring them to the President. Effectively, the Governor had been exercising a "pocket veto" over the Bills.



Upon the Supreme Court's nudging, the Governor eventually returned the Bills to the Legislative Assembly for reconsideration; when, upon reconsideration, the Legislative Assembly sent the Bills back to the Governor's office for a second time, the Governor then referred them to the President. At the time of the court's judgment, the President had assented to one of the ten Bills before her, withheld assent to seven, and had yet to act on two.

Tamil Nadu is not the only State where such events have taken place: clashes between the centrally-appointed Governor and the Legislative Assemblies of States have been increasingly commonplace in recent years, in States where an Opposition party, or a combination of Opposition parties, are in power. The dispute before the Supreme Court, thus, was important not only for its own sake; more than that, it was representative of a broader set of tensions within India's federal structure.

Going above and beyond

In a lengthy judgment, spanning 415 pages, the Supreme Court found that there was no justification for the Governor's actions. Under the Constitution, Governors were entitled neither to exercise a veto nor a pocket veto over the State Legislative Assembly's Bills. Nor could Governors first return a Bill to the State Legislature, and then refer it to the President; it had to be one or the other (and the second, only under certain specific conditions).

The President, as well, when considering State Bills, could not withhold their assent unless there was a constitutionally-sanctioned reason for doing so (such as, for example, inconsistency between the State Bill and an existing central law). Indeed, this was the only position that adequately respected the will of the people of the States, as articulated through their elected representatives in the State's Legislative Assembly, and the only position that adequately respected India's federal structure.

The Supreme Court, however, did not stop at simply laying down the law. In a move that has raised eyebrows and generated some amount of controversy, it went further: first, it laid down specific and categorical timelines within which the Governor and the President were required to consider, and take action, on State Bills (these timelines depended on the nature of the action – assent, referral, or return). It is important to note that the Constitution itself prescribed no such timelines.

And secondly, in this specific case, having found that the Governor had acted without bona fides, and that years had passed since the Bills were first sent to his office, the Supreme Court invoked its power to do "complete justice" under Article 142 of the Constitution, and held that these Bills were deemed to have been passed, and were now law. Indeed, a day after the court's judgment, the government of Tamil Nadu promptly notified the Acts, and brought them into force.

Critics argue that in prescribing timelines where none existed in the Constitution, and by taking it upon itself to "enact" the pending Bills, the court overstepped its remit, and engaged in functions that, constitutionally, are within the remit of other branches of government. Defenders of the court, on the other hand, point to the fact that the Governor's years-long, unjustified delay had backed the court into a corner, where there was no other realistic option before it. What, then, are we to make of what the court did?

To answer this question, it is important to move beyond the specific actions of the specific actors in this drama, and consider the constitutional design itself.



Problem of constitutional design

The Indian Constitution contains a set of tensions that are the product of the historical moment in which it was written. On the one hand, the framers of the Constitution were committed to creating a federal and parliamentary structure of governance for the new nation-state that was coming into being.

On the other hand, however, prominent members of the Constituent Assembly — Jawaharlal Nehru, B.R. Ambedkar, and Vallabhbhai Patel, among others — were, at heart, centralists. For a number of distinct reasons — which did not always overlap — they wanted to ensure that even as the Constitution devolved power both horizontally (that is, away from the executive and to representative bodies) and vertically (away from the Centre, and to the States), ultimate control would be exercised by a strong, unitary executive.

To achieve this, the framers turned to what they knew best: colonial constitutional instruments, whose core governing principle had always been the principle of executive supremacy. From the beginning of the 20th century, under serious pressure from the Indian national movement, the British had grudgingly, and incrementally, allowed for the existence of representative institutions and proto-legislatures. At all times, however, they made sure to ensure that the ultimate control lay with the British-appointed executive, who could override representative institutions in the larger interests of maintaining the British Empire.

One crucial part of this arsenal was the colonial governors, who were appointed to keep nationalist aspirations within the provinces, as expressed through provincial legislatures, in check.

The framers did not, of course, borrow the colonial institution of the Governor wholesale; what they did was to carry over the form into the new Constitution. However, the moment the Constitution created two poles of authority — the Centrally-appointed Governor, and the elected State Legislature — at the federal level, tensions and conflicts were bound to arise.

One way of resolving these tensions would have been to adopt a strategy that we see elsewhere in the Constitution: extensive codification and detailed rules setting out how power would be exercised, and how it would be limited. However, when it came to the structures of government — the legislature, the executive, and the Governor — the framers did not codify; instead, they left the issue to be decided through unwritten constitutional conventions.

This choice was not neutral: the refusal to expressly limit the exercise of power meant that the Constitution contained silences where it mattered the most — silences that could, and were, exploited by actors who had no respect for constitutional conventions.

The problem before the Supreme Court, thus, was a problem of constitutional design. By design, the Constitution placed no express check on Governors engaging in pocket-vetoes. At the same time, without such a check, the system was entirely reliant on good faith: the moment a Governor chose to exploit constitutional silences, the entire federal structure could – and would – be undermined.

Time for course correction

The Supreme Court's decision, therefore, is best understood as a judicial attempt to correct defective constitutional design. The choices made at the time of the framing were playing out in a way that would reduce the principles of federalism and representative democracy to a farce —



unless there was external intervention. In our system, the only body capable of such intervention is the court.

Of course, the court's judgment is not free of problems. In doing what it did, the court granted itself further and greater powers: to enforce timelines (as well as decide exceptions to those timelines), and judge intra-State organ conflicts. This should tell us that, ultimately, such intervention is not sustainable in the long-term, as piecemeal attempts to correct defective constitutional design will lead to lop-sided results elsewhere.

What is needed, then, is an urgent conversation about the Constitution's centralising drift, and whether the centralising choices made in 1949 still hold today. A starting point for this could be questioning why it is, in 2025, that we need the office of the Governor in the first place.

In the meantime, however, the court's judgment, thus, is not gratuitous overreach; it is best understood as a temporary salve — a band-aid — on a wound that needs deeper, and more longer-term treatment.

IS INDIA WITNESSING JUDICIAL DESPOTISM?

The term 'judicial review' has not been used in our constitution but it can easily be inferred from Article 13, which says any law in contravention of the constitution shall be void. In fact, even this provision was inserted out of abundant caution, as even in its absence, such a power could have been exercised by the constitutional courts. High Courts under Article 226 and the Supreme Court under Article 32 look at the violation of rights.

Judicial review being an essential component of rule of law is part of our constitution's basic structure. Though 'judicial activism' and 'judicial review' are considered distinct, basically both are two sides of the same coin. Indeed, the judicial whistle should ideally be blown in extreme situations for a limited purpose, as the judiciary has no business taking over the governance of the country in its hands.

To overcome the crises of legitimacy for its pro-government decisions during the Emergency, the Supreme Court revolutionised the doctrine of locus standi and initiated the Public Interest Litigation. However, has the Supreme Court really become a nuclear missile, with its judges having no accountability? Are we in the midst of civil or religious war and Justice Sanjiv Khanna, in his short tenure as Chief Justice of India (CJI), is to be blamed for this? Is judicial review anti-democratic?

Has the court misused its powers under Article 142 (which provides for "complete justice")? It no more asks petitioners what right of theirs has been violated but rather whose right has been violated. In the process, it has helped the prisoners who were blinded by needles being pierced in their eyes; paying compensation for the custodial deaths and upholding rights of workers etc.

The case for complete justice

In the constitutional law debates, there have always been lovers and haters of judicial review. At times, they do change their stand depending upon whether they are in government or Opposition. Thus, Congress leaders when in power were against the judicial review but are its strongest votary today.



However, to term Article 142 as nuclear missile is too strong a statement and is basically criticism of the constitution and should have been avoided by the Vice-President of India, who himself being a senior advocate is familiar with the seminal contribution of the Supreme Court in saving our democracy. This provision was used in the Babri judgment, in issuing guidelines on mob lynching and in granting divorces in failed marriages on the ground of 'irretrievable breakdown'. True, the court should not use this power too often.

The Supreme Court has neither used judicial activism nor its constitutional power under Article 142 as an unguided missile. As a repository of people's trust in it, it has, barring few exceptions, lived up to their expectations and not betrayed their trust. Had the court ordered restoration of the Babri mosque, probably there would have been a situation of religious war but looking at the sentiments of the millions of people, the court preferred peace over justice.

Similarly, a judgment against the abrogation of Article 370 may have created a law and order situation in Kashmir. CJI Sanjiv Khanna's interpretation of the proviso of Article 370 has been severely criticised and the court's refusal to determine the constitutionality of a State being downgraded to a Union Territory was not liked by the constitutional law experts.

The democracy debate

True, Opposition is well within its right to criticise the Vice-President but it must remember its tallest leader, Pandit Jawaharlal Nehru, too had spoken in almost identical language in the Constituent Assembly on September 10, 1949: "Within limits no judge and no Supreme Court can make itself a third chamber. No Supreme Court and no judiciary can stand in judgment over the sovereign will of Parliament. If we go wrong here and there, it can point it out, but in the ultimate analysis where, the future of the community is concerned, no judiciary can come in the way. And if it comes in the way, ultimately, the whole constitution is a creature of Parliament."

He went on to observe on the possibility of picking up pro-government judges: "If courts proved obstructive, one method of overcoming hurdle is... the executive which is the appointing authority of judges begin to appoint judges of its own liking for getting decisions in its own favor." His daughter, as a strong Prime Minister, gave full effect to this policy by twice indulging in the supersession of judges. It is a different story that even the collegium routinely indulges in supersession in the name of diversity and merit.

The greatest criticism against the judicial review is in the name of democracy, as unelected judges ideally should not have power to quash laws passed by democratically elected governments. Of course, the government would be formed based on the majority in popular House, yet the constitution does not permit it to become majoritarian. Similarly, the Governor or the President cannot exercise their discretionary powers arbitrarily in assenting Bills because they too should respect the will of the democratically elected State Assemblies.

In fact, most scholars reject this democratic objection in cases of judicial review on questions pertaining to federal provisions, legislative procedure or fundamental rights, as democracy can be the best means of resolving political disputes except in issues of fundamental rights and preservation of constitutional supremacy. Unlike the United Kingdom, we do not have the supremacy of the Parliament but the supremacy of the constitution. Our parliamentarians must keep it in mind. The Vice-President too should not assert supremacy of the Parliament.



Judiciary vs the government

Generally, the Supreme Court upholds the decisions of the government and the laws enacted by the Legislature. The quashing of laws or striking down of governmental decisions happens once in a blue moon. The Supreme Court has a duty to speak against the misgovernment; if it fails to do so, it would be failing in its constitutional duty of protecting the constitution and upholding people's rights.

To say that Parliament be shut down as the court itself is making laws too is an unfair criticism. As a matter of fact, lately, the liberals have been saying that our judiciary has become more executive-minded than the executive itself. In most cases during the Modi government, the Supreme Court has gone with the government. It upheld demonetisation; it refused to recognise same sex marriages; it approved the Rafale deal; saved the BJP-Shiv Sena(S) government in Maharashtra; insisted on the National Register of Citizens for Assam; did almost nothing in the Pegasus surveillance matter; declared 'triple talak' as void; freely used sealed covers; did not agree even for a CBI probe in Judge Loya's death; made bail conditions more stringent under Unlawful Activities (Prevention) Act and for over five years, did not grant bail even to student leaders; did not hear petitions against Electronic Voting Machines (EVM) and the Citizenship (Amendment) Act, 2019.

The only big setbacks for the government were in cases against the electoral bond scheme, National Judicial Appointments Commission (NJAC), and President's rule in Arunachal Pradesh. In the recent verdict on Tamil Nadu Government's petition against its Governor, the court has merely interpreted the expression 'as soon as possible' in Article 200. The only problematic part that may qualify as judicial activism is the suggestion to President to seek the court's advisory opinion if a State law looks patently unconstitutional; the court has said "it would be prudent" (Paragraph 434). This too was to save the President from the allegations of bias, arbitrariness and mala fide.

Need for fair criticism

Let us be fair to our judges. Fair criticism is welcome but attributing motives to judges or blaming them either for the violation of separation of powers or civil war is not acceptable. Our judges do deserve respect as they have too much of work due to poor judge-population ratio. The current CJI has not given any significant judgment. Aware of religious sensitivities, he merely tried to maintain peace through his observations on the Places of Worship Act. There is no stay as of now even on the The Waqf (Amendment) Act, 2025. Cannot he even ask questions anymore?

All three organs of the government must remain within their allotted spheres. Holders of these organs do take an oath to bear true faith and allegiance to the constitution. A Governor who refuses to sign Bills validly passed by the Assembly for years together basically was in violation of his own oath.

In Supreme Court Bar Association (1998), the Supreme Court had observed that the powers under Article 142 being curative do not authorise the court to supplant substantive law. It cannot build a new edifice where none existed earlier. It cannot make any order which is inconsistent with the constitution or statutory law. The judgment in the Tamil Nadu Government's suit has strengthened, not weakened, democracy and federalism. Justice J.B. Pardiwala has not gone against any provision of the constitution. He has indeed saved the constitution from the despotism of unelected Governors and prevented Governors from becoming "super constitutional figure" (Paragraph 317).



Justice Krishna Iyer in *Maru Ram v. Union of India* (1981) has held that “no legal power can run unruly like John Gilpin on the horse but must keep sensibly to a steady course”. He also observed that no constitutional power can be vulgarised by the personal vanity of the men in authority.

The constitutional fiction of political questions beyond judicial remit cannot tie the hands of judges in exceptional situations like the one in Tamil Nadu. Its Governor’s action being found mala fide warranted such timelines. The timelines suggested by the court do not amount to amendment of the constitution at all. No court in future is going to initiate contempt proceedings against the President or even the Governors for not strictly complying with these timelines. If there is undue delay without any reason, timelines can be used to evaluate arbitrary or non-arbitrary nature of the Governor’s action/inaction.

In *Qaiser e Hind* (2001), Justice Dorairajan had observed that “the assent of the President envisaged under Article 254(2) is neither an idle or empty formality nor an automatic event” (Paragraph 73). It is an exercise of constitutional power. The Indian President too is under the constitution and not above it. Her actions too are amenable to judicial review. Even the Supreme Court is not supreme despite its nomenclature; it too must work under and within the constitutional limits.

THE CHAOS OF KARNATAKA’S CASTE SURVEY

The story so far:

On April 11, a nearly 10-year-old Socio-Economic and Educational Survey (popularly called the Caste Census) prepared by the Karnataka State Commission for Backward Classes was dusted off and accepted by the Chief Minister Siddaramaiah-led Cabinet. Two days prior, the listing of the Caste Census in the Cabinet’s agenda for discussion had surprised many. For the Chief Minister had on multiple occasions announced a discussion only to rescind it as political implications were believed to be far-reaching and difficult to handle.

The data was collected by the commission through government-appointed enumerators in April-May 2015 from about 1.35 crore households covering a population of 5.98 crores — nearly 95% of the then projected population of 6.35 crores (Census 2011 population figure for Karnataka is 6.11 crores). While the survey was conducted by H. Kantharaj Commission, the survey report, data and recommendations were submitted by K. Jayaprakash Hegde’s Commission in 2024.

Though the survey findings and recommendations were ready by late 2017, Mr. Kantharaj could not submit the report since the member-secretary had not signed it. Subsequently, the Janata Dal (Secular)-Congress coalition government and the BJP government that succeeded it also did not receive the report.

As population figures became clear after the Cabinet received the data, causing tremors in the political landscape, the fault line between the politically dominant Vokkaliga and Veerashaiva-Lingayat communities and other backward class communities became clear. The Cabinet met again on April 17 to discuss the recommendation, but did not decide on the matter. While further debate has been deferred again for May 2, no clear decision on the commission’s recommendation is expected. Meanwhile, the issue has reached the doors of the Karnataka High Court.



What are the major findings?

The vexed survey is being keenly watched for population figures of castes/communities for political reasons, though its goal had been to provide insights into 'backwardness' that the government could use to develop programmes aimed at uplifting such communities.

The survey has pegged the total population of backward classes in the State to be about 70%.

Muslims are the single largest bloc with about 75.25 lakhs or 12.58% of the total population, followed by Veerashaiva-Lingayats, a dominant and politically strong land-owning community in North and Central Karnataka, with 66.35 lakhs or about 11% of the population.

The population of Vokkaligas, a dominant and politically strong land-owning community in the Old Mysore region, has been put at 61.58 lakhs or about 10.29% of the State's population.

The Scheduled Castes constitute 18.2% or about 1.09 crore of the population, and the Scheduled Tribes number at 7.1% or 43.81 lakhs. Together, both constitute 24.1% of the population. The general category comprising Brahmins, Arya Vaishya, Mudaliars, Nagartharu and a section of Jains are about 29.74 lakhs or about 4.9% of the population.

What has the Hegde Commission recommended?

The commission has recommended an increase in the total reservation matrix for backward classes from the current 32% to 51%. Based on the weightage given to communities on socio-economic and educational parameters, it has recommended re-classification of castes; Instead of the current five categories, it has recommended six. It has proposed the removal of exemption from creamy layer policy for castes in Category 1, which are the 'most backward'.

Kurubas, the politically stronger and perceived to be educationally forward among the backward class communities, have been moved from 'more backward' to 'most backward' category, along with a few other castes. Kurubas constitute 43.72 lakh or about 7.31% of the population. Chief Minister Siddaramaiah belongs to the Kuruba community.

The socio-economic and educational data of the communities are yet to be released. Only the methodology used in the survey, the questionnaire, population data and recommendations for reclassification have been provided to the Cabinet Ministers so far. The government is yet to officially release the report for public discussion.

How have the politically dominant communities reacted?

The dominant communities have rejected the findings of the report outright, stating that they were "unscientific". Both Rajya Vokkaligara Sangha and All India Veerashaiva Mahasabha have sought another survey, questioning the authenticity of the population data.

Citing data from previous commissions, they claimed that Vokkaligas should be around 12% to 14% and Veerashaiva-Lingayats around 17% to 22% of the population. They said that many households from their communities have been left out of the survey, and that there was confusion in enumerating members of sub-castes. The data is too old to be accepted was another complaint.

Cabinet Ministers from these communities have already met separately and closed ranks to register their protest. Moves are afoot for joint meetings of representatives from both communities to plan protests together. Legal avenues are also being explored.



Other communities, including Brahmins, Christians and Yadavas/Gollas, have also stated that their population figures have been under-reported.

How has the commission justified its survey?

The commission said that the survey was scientific and unbiased, and carried out using government machinery. Nearly 5% of the population was left out due to reasons such as migration, being absent at home during enumeration and lack of cooperation.

While enumeration in rural areas was 99% to 100%, cities had a lower percentage, with only Bengaluru hitting 85%, the commission said, noting that even the national Census leaves out 3% of the population. Given the geography and population size, some are bound to be left out, it said.

Are there other issues in the report?

Experts have been critical of the removal of exemption from creamy layer policy to the Category 1 castes that are labelled as the 'most backward' among the backward classes. Among the castes listed in 'most backward' communities are about 50 nomadic and semi-nomadic communities that have neither found representation in government jobs nor the political realm, with literacy levels still lower than 50%.

Eyebrows were raised over moving the Kuruba community from 'more backward' to 'most backward' category. The community has for long been perceived to have taken reservation benefits in education and public employment. They have had good representation in politics too. The report does not provide insights into "adequate representation" that the courts have relied upon to justify the reclassification of categories.

The recommendation of enhanced reservation for OBCs to 51% breaches the Supreme Court's 50% ceiling for reservation. With 24% reservation for SC/ST and 10% EWS (yet to be implemented in Karnataka), the reservation matrix will reach 85%, which could invite legal trouble.

Why has the survey come up for discussion now?

Considered a political minefield, the survey was in cold storage for nearly a decade. The Congress, in its manifesto ahead of 2023 Assembly elections, had promised to accept the findings. Ruling dispensations have been under pressure after Bihar announced its caste census findings. Neighbouring Telangana has gone ahead with enhanced OBC reservation.

Leader of Opposition in Lok Sabha, Rahul Gandhi's nudge during the recently-concluded Congress session at Ahmedabad is believed to have spurred the Congress government here to accept the report. Party insiders also believe that the survey was brought up for discussion by Mr. Siddaramaiah to consolidate his position as leader of backward classes and 'checkmate' Deputy Chief Minister D.K. Shivakumar, who is said to be waiting on the wings to succeed him.

What happens next?

The State Cabinet is set to discuss the report again on May 2. The discussion so far has been only around the procedures in data collection. Public Works Minister Satish Jharkiholi has indicated that it could be a year before the report is accepted.



Law and Parliamentary Affairs Minister H.K. Patil has said that the Cabinet is no closer to a discussion on the survey report. Speculations are rife over a Cabinet sub-committee being set up to discuss the issue before it is brought to the Cabinet again at a later date.

ENABLING LEGISLATION

Affirmative action remains one of the most effective ways of addressing historical wrongs and systemic deprivation. The most recent attempt to address deep-rooted discrimination against persons with disabilities in Tamil Nadu is likely to have a far-reaching impact for the community. Chief Minister M.K. Stalin tabled two Bills in the Assembly last week to increase the number of persons with disabilities in all local bodies in the State. While one Bill seeks to nominate persons with disabilities to all town panchayats, municipal councils and municipal corporations with amendments to the Tamil Nadu Urban Local Bodies Act, the second intends to bring into law the decision to nominate one person with disabilities to all village panchayats, panchayat union councils and district panchayats by amending the Tamil Nadu Panchayats Act. Mr. Stalin said once these Bills are enacted, there would be guaranteed posts for 650 persons with disabilities in urban local bodies, 12,913 in village panchayats, and 388 in panchayat unions, besides 37 persons with disabilities in district panchayats. At the moment, there are only 35 persons with disabilities in urban local bodies, he informed the House. Besides ensuring dignity for persons with disabilities, and eroding stigma and discrimination, this change would empower the community, involving their representatives in decision-making at the grassroots level.

It is the role of the government to take along its citizens, particularly those who may have an impediment that might come in the way of their harnessing equal opportunities as the rest of the population. After the 73rd and 74th amendments to the Constitution that allowed for one-third representation of all seats in panchayati raj institutions and urban local bodies to be reserved for women, some States, including Tamil Nadu, increased this to 50%. Since then, the very raucous and long-drawn-out battle was finally resolved in 2023, with the Women's Reservation Act being passed for 33% reservation for women in the Lok Sabha and State Legislative Assemblies. This will be effective after the publication of the Census conducted following the Act's commencement. Meanwhile, Tamil Nadu's effort to appoint persons with disability is the first such effort in the country at bringing a marginalised community not merely into the mainstream but as leaders of society, thus raising their profile and larger acceptance, besides bringing change that will benefit the rest of the society. Given the initial experience of implementing women's reservation in panchayati raj, where women panchayat leaders were de facto replaced by the husband in decision-making, it is important that the government ensures the benefit truly reaches the intended — in this case, persons with disabilities.

OPPOSING IMPOSITION

The announcement of the BJP-led government in Maharashtra that English and Marathi medium schools will begin teaching Hindi as a third language from Class 1, as part of the implementation of the National Education Policy 2020, is running into significant political opposition. Previously, Hindi was introduced as a third language only from Class 6 onwards. Schools with other mediums of instruction have already been following the three-language formula from Class 1. While some view the announcement as an instance of Hindi imposition, others fear its potential in undermining Marathi. Chief Minister Devendra Fadnavis defended the move, stating that Hindi serves as an acceptable language of communication across India. But there are concerns about the practical challenges of this mandate: the extensive logistics involved in teacher recruitment and



training, besides salary costs. Media reports and social media chatter have pointed to an emerging hostility towards Hindi, which could be a response to the perceived imposition. There is resentment that the move is an effort to appease the sizeable population of native Hindi speakers settled in Maharashtra. Historically, the State has witnessed a strong regional political identity, epitomised by the Shiv Sena since the 1960s. This identity has emphasised Marathi pride, cultural assertion, and prioritisation of local employment. Yet, unlike Tamil Nadu, Maharashtra has not exhibited overt hostility towards Hindi. Even the Shiv Sena, which has targeted various groups — south Indians, Muslims, and north Indian migrant workers — at different times, did not cultivate animosity towards Hindi. The current resentment, therefore, seems less organic and more a product of the BJP's centralising agenda, which seeks uniformity in a culturally and linguistically diverse nation.

While the Constitution is unitary in structure, it recognises and accommodates diversity in numerous ways. Previous centralising efforts by Congress governments included the promotion of Hindi, but there was enough institutional flexibility to balance divergent interests. Though the BJP now governs with a reduced mandate, it has managed to secure support from allies for its centralising vision, provoking resistance in States such as Tamil Nadu and Maharashtra. Meanwhile, the educational landscape is undergoing a radical transformation with developments in AI and neuroscience. Instead of creating divisions, the Fadnavis government would do well to build consensus to address the evolving demands of school and higher education.

NIV'S UNCEASING REFUSAL TO SHARE VITAL DATA BEFORE PUBLICATION

A two-year-old girl from Narasaraopeta in Palnadu district, Andhra Pradesh, who was infected with H5N1 died on March 16, 2021; she was admitted to AIIMS-Mangalagiri on March 4. ICMR's Virus Research and Diagnostic Laboratory (VRDL) identified the virus as influenza A on March 7. On ICMR's direction, samples were sent to the National Institute of Virology (NIV) in Pune for Influenza A virus subtyping. NIV identified the virus as H5N1, and ICMR alerted the State government on March 31 this year.

Even three weeks after NIV subtyped the virus as H5N1, there is no information about which clade the H5N1 virus belongs to. Determining the clade through phylogenetic analysis is a simple and automated procedure, and hence can be done immediately after genome sequencing.

NIV researchers' reluctance to share vital information or quickly deposit the genome sequence data in public databases is nothing new. Be it Zika, Nipah or monkeypox virus, the genome sequence data from NIV become available only when a paper about the virus is published in a scientific journal a year or two later; NIV posted two preprints of the monkeypox study results. Even during the pandemic, the genome sequence data of the first two SARS-CoV-2 cases detected in Kerala were posted by NIV in a public database— GISAID —a day after a news item flagging the issue was published on March 4, 2020 in The Hindu.

NIV researchers prioritising paper publication over free and immediate access to genome sequence data and other vital information was once again seen in the case of an 11-year-old child infected with H5N1 in 2021. On July 15, 2021, NIV researchers determined that the child from Gurugram, NCR region admitted in AIIMS Delhi on June 12, 2021 was infected with H5N1. The child died on July 12, 2021. While it is not known when the genome was sequenced and phylogenetic analysis was carried out, NIV researchers had submitted the genome sequence in GenBank in October 2021. But the sequence data was made publicly accessible only after eight



months on June 2, 2022 when NIV researchers published the results in a journal. That the child was infected with H5N1 clade 2.3.2.1a was known only when the paper was published.

In contrast, a 2.5-year-old girl who returned to Melbourne after visiting Kolkata between February 12 and February 29, 2024 and hospitalised on March 2, 2024 days after her return from India was found to be infected with H5N1 clade 2.3.2.1a. The state Victorian Department of Health confirmed the case on May 18, 2024. Four days later on May 22, full information about the case, including the clade details, was shared with the WHO months before the results were published in January 2025. Most importantly, the genome sequence data was posted on GISAID, which is a public database, on May 22, 2024, the same day the WHO was informed.

There is a reason why it has become very important to know if the H5N1 virus found in the child in Palnadu district, Andhra Pradesh belongs to clade 2.3.2.1a. The clade 2.3.2.1a has suddenly gained more attention. The National Institute of High Security Animal Diseases in Bhopal identified reassortant H5N1 clade 2.3.2.1a virus in three domestic cat samples collected on January 16 and January 24 this year from Chhindwara city in Madhya Pradesh. In stark contrast to NIV, NIHSAD researchers have quickly shared the details about the clade and the reassortant nature of the virus in a preprint posted on February 23, 2025.

Phylogenetic analysis indicated that the H5N1 virus from three cat samples are reassortant viruses. According to the preprint, "four gene segments were closely related to H5N1 clade 2.3.2.1a viruses circulating in Bangladesh, while the remaining four segments clustered with clade 2.3.4.4b viruses". While the matrix segment clustered with H5N1 clade 2.3.4.4b virus detected in a wild bird in South Korea, the polymerase gene complex grouped with H5N1 clade 2.3.4.4b viruses detected in poultry and wild birds in Asia since 2022.

"Although cat viruses lacked classic mammalian adaptation markers they carried mutations associated with enhanced polymerase activity in mammalian cells and increased affinity for alpha 2-6 sialic acid receptors suggesting their potential role in facilitating infection in cats," they write. "The identification of reassortant H5N1 clade 2.3.2.1a viruses in domestic cats in India highlights the urgent need for enhanced surveillance in domestic poultry, wild birds, and mammals, including humans, to track genomic diversity and molecular evolution of circulating strains."

According to the World Organisation for Animal Health, as of February 20, 2025, H5N1 has been found in 99 cats and has killed 18 cats. "Since H5N1 has been found in domestic cats, there is increased risk of the virus spreading to humans due to increased chances of exposure," a researcher tells The Hindu. "Any mammalian spillover, which are cats in this case, and continued infection has a possibility to adapt to mammalian transmission (as in the case of cattle in the U.S.) and then eventually to humans by exposure."

VANDE BHARAT TRAINS HAVE WEAK DEFENCES AGAINST EVEN CATTLE, SAYS NEW SAFETY REPORT

The much-celebrated flagship train of the Indian Railways — the Vande Bharat Express — is prone to serious accidents even in cases of a cattle run-over, says a report on railway safety. The report, accessed by The Hindu, says the leading coach of the Vande Bharat trains was much lighter than the locomotive of regular trains and hitting any obstruction or even cattle run-over might lead to a serious accident at higher speeds.



The report generated by the Commissioner of Railway Safety, Ministry of Civil Aviation, explains the safety measures to be taken by the Railways for operation of high-speed trains.

Asking the Ministry of Railways to ensure provision of sturdy fencing to prevent trespassing by humans and cattle, which posed a threat to the trains, the report said level crossing gates should be eliminated on routes where trains were operated at 160 kmph.

Engineer says train safe

Asked for his comments, Shubhranshu, former Principal Chief Mechanical Engineer, Integral Coach Factory, Chennai, said the front nose cone of these trains was designed to crumple and absorb some of the impact energy. Also, the cattle guard at the front was made to scoop and deflect the obstruction.

He said the leading coaches of Vande Bharat trains were well within the average weight of the coaches. "It is light compared with a locomotive. But that is how train sets are designed. There is no locomotive at the front and the propulsion power is distributed along the train. Even the EMUs, MEMUs of Indian Railways and all train sets anywhere in the world have similar arrangements. It doesn't make the train any less safe on this account," he said.

Mr. Shubhranshu led the Team-ICF that made the first Train18 rake in a record 18 months' time in October 2018. The rake was named Vande Bharat Express and flagged off between Delhi and Varanasi by Prime Minister Narendra Modi in February 2019 and was considered as one of the most successful products of the 'Make in India' initiative.

The safety report said Railways should identify regular trespassing locations and cattle ingress and devise suitable mechanism such as deployment of Railway Protection Force (RPF) personnel, regular patrolling and providing subway for crossing.

As on December 26, 2024, a total of 136 Vande Bharat train services were running across the railway network.

AI CAN SUPERCHARGE FORECASTING IF IT CAN WEATHER SOME CHALLENGES

India is leveraging artificial intelligence (AI) to enhance weather forecasting amid intensifying heat waves and rainfall. Unlike traditional numerical weather prediction models, which rely on physics-based equations and supercomputers, AI models learn patterns from data, identifying relationships (e.g., between wind, temperature, and cyclone formation) without needing underlying theories. This makes AI versatile for complex systems like weather, where hidden links between variables can be uncovered.

India's Mission Mausam: Launched in September 2024 with ₹2,000 crore, this initiative aims to improve weather and climate observations, modeling, and forecasting. It includes developing AI-driven models, establishing an AI/ML center, and enhancing short-range rain forecasts, urban meteorological datasets, and nowcasting using radar data. A notable example is an ML model developed by researchers from IIT-Delhi and others, which predicts monsoon rainfall with a 61.9% success rate (2002-2022), outperforming physical models by capturing nonlinear relationships and requiring less computing power.



Challenges:

Data Quality and Quantity: AI models need large, high-quality datasets, but weather data often suffers from sensor errors, inconsistent formats, and gaps, especially in remote areas. Weather's chaotic nature demands extensive data to detect patterns.

Interpretability: AI models lack transparency, making it hard to explain predictions, unlike traditional models with clear equations. This "black box" issue raises skepticism and complicates error analysis.

Human Resources: Experts debate whether the bigger challenge is data or talent. Some argue India lacks professionals skilled in both meteorology and AI/ML, as climate science bridges multiple disciplines (physics, computer science, engineering). Collaboration between AI and climate experts is critical but rare.

Infrastructure: Many Indian forecasters rely on external data or local knowledge due to limited access to high-computing models. Sparse sensor networks and inadequate meteorological infrastructure further hinder AI model accuracy.

Future Directions:

Hybrid Models: Combining AI/ML with physics-based models could improve interpretability and accuracy.

Extreme Weather: AI shows promise in predicting events like cyclones and heat waves, but their localized, rapid nature poses challenges. Trustworthiness, uncertainty quantification, and model generalization remain concerns.

Data and Expertise: While some experts emphasize the need for long-term, high-quality data and GPU-based computing, others stress building interdisciplinary talent. Initiatives like the AI/ML center at the Indian Institute for Tropical Meteorology are expected to yield results soon.

Conclusion: AI has transformative potential for weather forecasting in India, particularly for extreme events, but overcoming data limitations, interpretability issues, and talent shortages is crucial. Tailored models, better infrastructure, and interdisciplinary collaboration are key to realizing this potential.

AIR POLLUTION IN INDIA — WHERE DOES IT COME FROM?

Millions of people die prematurely from air pollution every year. Where does this air pollution come from?

Sulphur dioxide (SO₂) is the main pollutant that causes acid rain. Energy production was the biggest contributor by far. This is predominantly due to power from coal, which has sulphur impurities that are released when it is burned.

Nitrogen oxides (NO_x) can be acutely toxic, inflaming the lungs. The biggest source is transport: NO_x is emitted from the exhaust of cars and trucks. This is almost matched by the burning of coal and gas for electricity production.

Black carbon is the soot that fills our skies and lungs. It is a big problem in lower-income countries where people rely on burning biomass and charcoal for cooking and openly burning waste.



Methane (CH₄) is a greenhouse gas, so it is mostly discussed regarding contributions to climate change. Agriculture is the biggest source of methane. The other sector that contributes a lot is waste. Methane is produced when organic material, such as food waste, rots in conditions without much oxygen (a landfill).

Studies show ammonia (NH₃) could drive up to 3,85,000 premature deaths from particulate matter. Nearly all human emissions of NH₃ come from agriculture.

Non-methane volatile organic compounds can be directly toxic and mix with other gases to form ozone and small particulates. Unlike most other pollutants, solvents such as paints, cleaning products, and chemical plants are also major sources.

3 KILLED AS FLASH FLOODS, LANDSLIDES WREAK HAVOC IN J&K'S RAMBAN DIST

A cloudburst triggered flash floods and landslides in Jammu & Kashmir's Ramban district on Sunday, killing three people, blocking the Jammu-Srinagar national highway at several points, and disrupting power and water supply, officials said.

- Several parts of the Union Territory have been hammered by torrential rain, high-velocity wind, lightning and hail since Saturday evening. Scores of houses, commercial establishments and vehicles have been damaged.
- Three people were killed after torrential rainfall and hail in the Ramban tehsil of Jammu and Kashmir on Sunday (April 20) morning. Buildings collapsed, transport was disrupted and hundreds of people had to be relocated due to the heavy rain.
- The landslides buried a large number of vehicles along the national highway, as well as in Ramban town and its outskirts. Many people were left stranded along the national highway.
- Jammu and Kashmir Chief Minister Omar Abdullah said his government was in touch with local officials to coordinate the operations.
- "Extremely anguished by the tragic landslide and flash flood in Ramban, which have caused considerable damage to life and property. My thoughts are with the affected families in this difficult hour. We are in touch with the local administration to ensure immediate rescue efforts wherever needed. Later today, I will be reviewing restoration, relief, and repair plans," Abdullah said in a post on X.

Do You Know:

- While episodes of heavy rain are often termed "cloudburst", a cloudburst has a specific technical definition — rainfall of 10 cm or more in an hour, over a roughly 10 km x 10 km area.
- Cloudbursts are more common in hilly areas because of a phenomenon called 'orographic lift', which basically means warm air rising up the side of a mountain. As warm air 'climbs' a mountain, it expands because of the low pressure above. The expanding air cools, releasing the moisture it was holding as rain. But if more and more warm air keeps rising, it prevents that rain, till a large amount of rain builds up and bursts out in a massive shower all at once.
- Because cloudbursts happen in localised areas (over a roughly 10 km x 10 km area), they are difficult to capture accurately.



- As the name suggests, a flash flood happens quickly, when a lot of rain suddenly enters into the drainage systems (waterbodies, drains), and water overflows. Flash floods are again more common in hills, because rocky terrain does not absorb water very well. While river floods, the kind normally seen in plains, last longer and cause more damage to property, the sudden flash floods are more likely to lead to loss of life.
- In India, flash floods are often associated with cloudbursts – sudden, intense rainfall in a short period of time. Himalayan states further face the challenge of overflowing glacial lakes, formed due to the melting of glaciers, and their numbers have been increasing in the last few years.
- Landslide is a portion of ‘land’ coming loose and sliding — rocks and soil slipping down a mountain, for example. As the British Geological Survey’s website says, “When the force of gravity acting on a slope exceeds the resisting forces of a slope, the slope will fail and a landslide occurs...adding water to the material on a slope makes a landslide more likely to happen. This is because water adds weight, lowers the strength of the material and reduces friction, making it easier for material to move downslope.”

CENSORING CHANGE: HOW BOLLYWOOD’S ELITE RESIST CASTE-CONSCIOUS CINEMA

Hindi cinema, dominated by profit-driven masala films, often glorifies social elites while sidelining Dalit-Bahujan identities and their concerns. Mainstream Bollywood, criticised for promoting patriarchal and casteist stereotypes, rarely embraces cinema as a tool to challenge social injustices. Additionally, it tends to uphold the cultural and political agendas of traditional social elites while avoiding engaging with Dalit-Bahujan narratives and their social experiences. Popular cinema hesitates to embrace cinema as a platform for artistic and creative exploration that would unearth orthodox social practices and sensitise the audience about it.

In recent years, mainstream Hindi cinema has seen rare but significant attempts to challenge Bollywood’s stereotypical narratives through films like *Article 15*, which exposes caste atrocities through a police officer’s awakening, and *Dhadak*, which subtly weaves caste into a tragic romance, signal a shift toward socially aware storytelling. Other films like *Shamsher* and *Veda*, which address issues of caste oppression and present robust Dalit protagonists to fight such social ills, are crucial additions.

This emerging genre has carved out a peripheral yet vital space for films that expose societal injustices and advocate for reform, offering a vision of a more equitable society. Such efforts should be celebrated and supported, but the industry’s conventional ruling elites have largely distanced themselves from this shift.

Instead, these films are often criticised as threats to the dominance of social elites, accused of disrupting social harmony by foregrounding Dalit-Bahujan symbols and narratives.

The recent controversy surrounding Phule, marked by the Central Board of Film Certification (CBFC) censorship of caste-related content, exemplifies a deliberate effort to suppress stories that dare to challenge the social and political dominance of the governing elite, highlighting the ongoing resistance to transformative cinema.

The arrival of Dalit-Bahujan cinema

This new site of cinema making is an innovative improvisation as it brings stories of vulnerable social groups and provides them a dignified mantle. This genre has introduced the iconic figures



of Babasaheb Ambedkar and Mahatma Jyotiba Phule to the silver screen as their ideas and values too are influencing the narrative practices of Cinema and are getting much more resonance on the silver screen today.

The regional cinema (especially Tamil and Marathi) has offered impressive artistic cinema (like Sairat, Jayanti, Kabali, Asuran etc.) that not only entertains the audience with its creative narratives but also educates them about the issues of social dignity and the need to fight against oppressive Brahmanical orthodoxy.

These new narratives depict Dalit-Bahujan characters not as passive victims or background figures, but as empowered protagonists with agency, dignity, and purpose. They challenge the conventional grammar of Indian cinema and open up space for a more democratised cultural discourse.

In doing so, this parallel stream is not just reshaping representation but redefining what mainstream Indian cinema can aspire to be. This is a nascent but promising genre, capable of democratising the Indian film industry.

Upper casteist opposition

Jyotiba Phule and Babasaheb Ambedkar were the fierce critics of Hindu caste system and the exploitative domination of priestly castes over the majority oppressed groups. They imagined modern India as a liberated territory not only from the aegis of the imperialist domination but also from our own Brahmanical and patriarchal servitude.

However, in the nationalist historiography and popular culture, these iconic figures were often relegated as the heroes of certain caste groups while the other leaders were elevated as the prime representatives of the national interest. The popular Hindi cinema too ignored the heroes, historic events and issues pertaining to the Dalit-Bahujan masses and mostly endorsed narratives that promote the social and political interests of the conventional social elites.

In the case of recent controversy around Phule, the CBFC has created technical hurdles for its release. The film, initially set for release on April 11, was delayed to April 25, due to objections from purported representatives of the “Brahmin community” in Maharashtra and subsequent CBFC directives to remove or alter caste-related content. The board directed the filmmakers to remove caste-specific terms like “Mahar”, “Mang”, “Peshwai”, and “Manu’s system of caste”, as well as visuals like a man with a broom tied to his waist (a historical reference to Dalit oppression).

Phule appears to be advocating anti-caste politics, showcasing the Dalit-Bahujan characters as lead protagonists and offering a strong critique of Brahmanical social order. It appears that the state is ready to stop even the nascent process that could have democratised the cinema industries substantively in favour of the Dalit-Bahujan masses. Such removals by the CBFC would dilute the historical realities of Phule’s fight against caste discrimination. These edits are mostly to sanitise history to appease fringe casteist groups while undermining the film’s objective to confront the caste injustice.

On the other hand, cinema that propagate communal anxieties (Kerala Story), manipulates historic facts (Kashmir Files) and target the Muslim minorities as brutal foreign aggressors (Chaava) and anti-nationals is endorsed and promoted by the current regime at the centre. It shall be pointed out that films like Punjab 95, Tees, and Dhadak 2, which address social issues, also



faced similar censorship, suggesting a pattern of suppressing narratives that challenge the Brahmanical value system.

The struggle for representation

A brief examination of Hindi cinema reveals that most characters on-screen embody the identities of social elites, with narratives mainly reflecting their cultural interests. While Muslim and Jatt Sikh identities add some diversity, the focus remains heavily on the perspectives of the social elites. In this landscape, films like *Phule* and *Dhadak 2*, which confront caste issues, centre Dalit-Bahujan characters, and challenge the cultural dominance of Brahmanical elites, deserve recognition.

Yet, institutions like the CBFC, influenced by governing elites, appear intent on suppressing such narratives, as evidenced by the censorship hurdles faced by *Phule*. These challenges underscore the fact that the fight for social equity and freedom of expression in Indian cinema remains unfinished.

SHORT NEWS

NATIONAL CIVIL SERVICES DAY 2025

- Prime Minister Narendra Modi addressed the Nation's Civil Servants on 17th Civil Services Day 2025 on April 21, 2025. 'Holistic Development of India' was the theme of this year's Civil Services Day.
- Every year on April 21, the Government of India commemorates National Civil Services Day to acknowledge and celebrate the exceptional efforts of our civil servants engaged in public service, the backbone of the nation's administration, as they devote themselves to the cause of citizens.
- On this day, the Prime Minister of India honours civil service officers with the PM Awards for Excellence in Public Administration in recognition of their outstanding service and contributions.
- This national observance was first marked on April 21, 2006. The day's history can be traced back to the time when the first Home Minister of Independent India, Sardar Vallabhbhai Patel, addressed the probationers of Administrative Services Officers at Metcalf House in Delhi, referring to the civil servants as the "steel frame of India" on April 21, 1947.

WAVES SUMMIT

- The first World Audio Visual & Entertainment Summit, known by the acronym WAVES, will be a key forum for promoting discussions, collaboration, and innovation in the Media and Entertainment industry.
- The event will bring together industry leaders, stakeholders, and innovators to discuss prospects, challenges, promote trade to India, and influence the sector's future.
- It will be hosted by the Ministry of Information and Broadcasting, Government of India in Mumbai, Maharashtra, from May 1 to 4, 2025.



JAL JEEVAN MISSION

- The Expenditure Finance Committee under the Ministry of Finance, which appraises government schemes, has recommended Rs 1.51 lakh crore as the Centre's share for the Jal Jeevan Mission (JJM) till 2028. This is about 46 per cent lower than what was sought by the Ministry of Jal Shakti.
- Prime Minister Narendra Modi announced Jal Jeevan Mission (JJM) to provide potable water to rural households in his Independence Day Speech of 2019.
- The aim was to provide potable water in adequate quantity, i.e. 55 litre per capita per day (lpcd), of prescribed quality, i.e. BIS Standard of IS: 10500, on a regular basis to every rural household by 2024.
- The fund sharing pattern was fixed at 90:10 for Himalayan and North-Eastern States and 50:50 for other states.

SARVAM TO BUILD FIRST HOMEGROWN AI MODEL

- The government has selected Bengaluru-based start-up Sarvam to build the country's first indigenous artificial intelligence (AI) large language model (LLM) amid waves made by China's low cost model DeepSeek.
- Sarvam is the first start-up to get approved for sops under India's ambitious Rs 10,370 crore IndiaAI Mission to build a model. The start-up will receive support from the government in terms of compute resources to build the model from scratch.
- Sarvam's model will be built, deployed, and optimised in India, using local infrastructure and developed by a new generation of Indian talent. This initiative aims to promote strategic autonomy, accelerate domestic innovation, and secure India's leadership in AI for the long term, the company said in a press statement.

ACTIVE COOLED SCRAMJET SUBSCALE COMBUSTOR

- The Defence Research and Development Laboratory (DRDL), a unit of DRDO, on Friday conducted a long-duration ground test of an Active Cooled Scramjet Subscale Combustor for over 1,000 seconds at the state-of-the-art Scramjet Connect Test Facility in Hyderabad.
- Scramjets are air-breathing engines capable of sustaining combustion at supersonic speeds without using any moving parts. Hypersonic cruise missiles, a class of advanced weaponry, can travel at speeds greater than five times the speed of sound (over 6,100 km/h) for extended durations, powered by air-breathing engines.
- Air-breathing propulsion systems with supersonic combustion are crucial for sustained high-speed cruise conditions.
- Air Breathing Propulsion offers a technology solution for a low-cost space transportation system. They remove the requirement of oxidisers by utilising ambient air, resulting in a substantially higher payload fraction.



RAFALE-M DEAL

- India is set to sign a deal on procuring 26 Rafale-Marine (Rafale-M) fighter jets for the Indian Navy from France on Monday, that is estimated to cost around ₹63,000 crore, sources have said. The government-to-government deal is being signed by the Defence ministers remotely.
- Sources said that the Rafale-M jets include 22 single-seater jets that can operate from aircraft carriers and four twin-seater trainer jets, which are not carrier-compatible. The delivery of the jets will begin in 2028-29 after the contract is signed and is expected to be completed by 2031-32.
- The Rafale-M fighter jets would come along with associated ancillary equipment, weapons, simulator, spares, documentation, crew training and logistic support. Their procurement from the French Government is on an Inter-Governmental Agreement (IGA) basis.
- Four of these 26 aircraft are likely to be the trainer version. With the MiG-29 Ks slated to be phased out in the next few years, procuring the jets is an interim arrangement for the Navy's aircraft carriers—INS Vikramaditya (procured from Russia) and indigenously-built INS Vikrant—till it acquires the indigenous Twin Engine Deck-Based Fighter which is currently under development by Aeronautical Development Agency under the DRDO.
- For the Navy's fighter jet deal, the competition was between Boeing's F/A-18 E/F Super Hornet and Dassault Aviation's Rafale-M. While both fighters had met the Navy's requirements, the Rafale-M had common spares and support as the Rafale jets operated by the Indian Air Force.
- The Rafale jets, which were acquired after the Balakot aerial strike, have added to the Indian Air Force's firepower. The 36 Rafael fighter jets have been stationed in India's strategic air bases bordering Pakistan and China. The two sides have always prioritised co-production, co-development of military hardware with a focus on India's self-reliance goals.

POINT NEMO

- Indian Naval Sailing Vessel (INSV) Tarini on Tuesday (April 22) set sail from Cape Town for the final leg of its journey to Goa as part of the second edition of the Navika Sagar Parikrama expedition.
- Two women naval officers, Lieutenant Commander Roopa A and Lieutenant Commander Dilna K, embarked on a historic sailing expedition from Goa on October 2, 2024 to circumnavigate the globe aboard INSV Tarini, without external assistance and solely relying on wind power.
- During the period, the vessel encountered three cyclones while going past Point Nemo, also known as the Oceanic Pole of Inaccessibility. They also navigated the dangerous Drake Passage before passing the Cape Horn.
- This remote oceanic location is located at 48°52.6'S 123°23.6'W, approximately 2,688 kilometres from the nearest land—Ducie Island, part of the Pitcairn Islands, to the north; Motu Nui, one of the Easter Islands, to the northeast; and Maher Island, part of Antarctica, to the south in the southern Pacific Ocean.



.BANK.IN

- To combat the increasing number of digital payment frauds, the Reserve Bank of India (RBI) has decided to operationalise the '. bank.in' domain for banks.
- The '.in' is India's Country Code Top Level domain (ccTLD). This exclusive internet domain for domestic banks will minimise cyber security threats and will help in strengthening trust in the country's digital banking and payment services. The RBI has asked banks to migrate to .bank.in domain by October 31, 2025.
- A domain name is used to find websites. It is a unique and easy-to-remember address to access websites on the internet.

BANDUNG CONFERENCE AT 70

- This year marks the 70th anniversary of the first Asia-Africa summit, which took place in Bandung, Indonesia from April 18 to 24, 1955.
- Twenty-nine newly independent Asian and African countries met in what was a historical gathering of the leaders of the developing south, recently freed from the devastation brought upon their countries by the ravages of colonial rule.
- The countries signed a 10-point declaration or that co-opted the Five Principles or Panchsheel. A 10-point "declaration on promotion of world peace and cooperation", called *Dasasila Bandung* (Bandung's Ten Principles, or Bandung Spirit, or Bandung Declaration). The conference served as a precursor to the Non-Aligned Movement (NAM).

ANTI-SEMITISM

- Harvard University and the Trump administration have locked horns over allegations by the latter that the university has failed to contain anti-Semitism.
- Harvard filed a lawsuit on Monday (April 21) against the administration seeking to end the federal funding freeze on the university. Effectively, access to \$2.2 billion in funding has been cut off, while the administration is considering revoking an additional \$1 billion in grants.
- The International Holocaust Remembrance Alliance, an intergovernmental organisation formed in 1998, provided the following working definition of anti-Semitism: "Antisemitism is a certain perception of Jews, which may be expressed as hatred toward Jews. Rhetorical and physical manifestations of antisemitism are directed toward Jewish or non-Jewish individuals and/or their property, toward Jewish community institutions and religious facilities."
- However, the term itself is a misnomer as Semitic designates a language group, not a race. In a linguistic sense, the term could describe prejudice against speakers of the Semitic languages (including Arabs and Ethiopians).
- A primary reason for anti-Semitism being contentious is the enduring legacy of Nazism, which converted anti-Semitism into an institutional attack on Jewish people, ranging from a boycott of Jewish products and social ostracization and culminating in the Holocaust.



— Following the attack on Israel by the Palestinian militant group, Hamas, on October 7, 2023, and the resulting Israeli military onslaught into Palestine that has ensued since then, anti-Semitism has been used by detractors in the context of pro-Palestine protests. The Trump administration has adopted this understanding in pursuing universities and sites of such protests to shut them down.

PERSONA NON GRATA

—Persona non grata is a Latin phrase which means “unwelcome person.” It has a specific meaning in diplomacy, referring to a diplomat or foreign person whose entry or presence in a certain country has been prohibited by that country.

—The designation received diplomatic meaning at the 1961 Vienna Convention on Diplomatic Relations, which lays the ground rules for how diplomats are to be treated, including in relation to their rights and privileges in host countries. Article 9 of the treaty mentions that a country can declare any member of a diplomatic staff persona non grata “at any time and without having to explain its decision.”

TARDIGRADES OR “WATER BEAR”

— The Axiom Mission 4 will see India, Poland, and Hungary’s first government-sponsored human spaceflight in more than 40 years next month. With the addition of an American astronaut, the four-person crew will conduct various studies and activities in Space while docked at the International Space Station (ISS) for two weeks.

— Group Captain Shubhanshu Shukla, a distinguished pilot in the Indian Air Force (IAF), has been selected for the Indian Space Research Organisation (ISRO). Among the studies set to be carried out is ISRO’s Voyager Tardigrades project, which will investigate the revival, survival, and reproduction of tardigrades – creatures that have long fascinated scientists.

— “Water bear” is a bit of a misnomer for these microscopic eight-legged animals, which don’t just live in water. Measuring between 0.1 and 0.5 millimetres, they are known for surviving the most dire physical environments, from arid regions to high up in the Himalayas. They can also go without food or water for up to years, although their average lifespan is not more than a decade.

— This incredible resilience is why the animals have been on Earth for around 600 million years, and will likely withstand any major changes to the Earth’s climate in the near future as well.

— Scientists are still trying to understand the complex mechanisms involved, but one part of the equation is a process resembling hibernation. For instance, amid a lack of water, they can theoretically shut down all the life processes happening inside them.

— They are the only known animals capable of surviving even in the cold vacuum of Space. In 2007, a crewless Russian capsule on a European Space Agency (ESA) mission exposed some 3,000 tardigrades to the vacuum of space for 10 days, and they were left out there in low-Earth orbit (altitude under 2,000 km). Over two-thirds of the animals survived the mission and even gave birth to offspring upon returning to Earth.

— The ISRO project will examine the revival of dormant tardigrades, count the number of eggs laid and hatched during a mission, and compare the gene expression patterns of spaceflown vs.



ground control populations. The research seeks to identify molecular mechanisms of resilience, potentially furthering understanding about the limits of life in extreme environments.

— This knowledge could inform future space exploration and help develop biotechnology applications on Earth, at a time when governments and private companies are lining up to carry out Space missions.

FATBOYPANEL

— FatBoyPanel is a mobile-first banking trojan that has been discovered across nearly 900 different applications, primarily targeting Indian users.

— The attack begins with social engineering: scammers pose as officials or trusted entities and approach users via WhatsApp. They then send a malicious APK, encouraging the user to install it. Once installed, the app gains access to sensitive data and steals one-time passwords (OTPs) to execute unauthorised transactions.

K KASTURIRANGAN

— Former Isro chief K Kasturirangan passed away at 84 on April 25, 2025.

— He who served in ISRO for more than three and a half decades, headed the organisation between 1994 and 2003, a little turbulent time for the space agency a number of international restrictions, including access to cryogenic technology. The restrictions became even tighter after India's nuclear test in 1998.

— It was during Kasturirangan's leadership that ISRO embarked on a path of self-reliance and began planning for the big missions like Chandrayaan. Kasturirangan later became a member of the Rajya Sabha and then a member of the erstwhile Planning Commission. He also served the government in a number of other advisory capacities. He either headed or was part of committees that advised the government on a range of issues including higher education, technology, and even environment.

'VOICE OF VOICELESS': ADIVASI WRITER-ACTIVIST WHO FOUGHT FOR JHARKHAND'S 'JAL, JUNGLE, ZAMEEN'

Rose Kerketta, writer in Adivasi Kharia and Hindi languages, an eminent educationist, Jharkhand movement activist, and staunch advocate of women's human rights, breathed her last after prolonged illness on April 17 at the age of 84. One of the leading voices of the Jharkhand movement – which led to the formation of the Jharkhand state in 2000 — and a prolific writer on Adivasi rights, she was laid to rest at the GEL Church cemetery in Ranchi.

**BUSINESS AND ECONOMY****WORLD BANK SEES FY26 GROWTH AT 6.3% ON GLOBAL WEAKNESS, POLICY UNCERTAINTY**

The World Bank has cut India's growth forecast by 0.4 percentage points to 6.3 per cent from 6.7 per cent for the current financial year 2025-26, citing global economic weakness and policy uncertainty.

- It is seen slowing from 6.5 per cent growth estimate (7.0 per cent earlier) in FY25, the Bank said in its latest South Asia Development Update on Wednesday.
- "In India, growth is expected to slow from 6.5 per cent in FY25 to 6.3 per cent as in FY26 as the benefits to private investment from monetary easing and regulatory streamlining are expected to be offset by global economic weakness and policy uncertainty," the World Bank said.
- The downgrade in India's growth projections by the Bank comes just a day after the International Monetary Fund (IMF) also cut the growth forecast for India. The IMF had lowered India's growth estimate by 0.3 percentage points to 6.2 per cent from 6.5 per cent for FY26 and by 0.2 percentage points to 6.3 per cent from 6.1 per cent for FY27.
- The estimates are lower than the 6.5 per cent growth projection by the Reserve Bank of India (RBI) for FY26. As per the RBI, the real GDP growth for India for FY26 is seen to be lower than the earlier projection of 6.7 per cent, with Q1 growth seen at 6.5 per cent; Q2 at 6.7 per cent; Q3 at 6.6 per cent; and Q4 at 6.3 per cent.
- Growth was affected in the previous financial year 2024-25 due to slower pace of private investment and public capital expenditure falling short of targets set by the government, the Bank said.
- The government has announced fiscal consolidation but also tax cuts to support private consumption and regulatory streamlining to spur private investment, it said. However, the benefits to private investment from monetary easing and regulatory streamlining are expected to be offset by global economic weakness and policy uncertainty, it said.

Do You Know:

- Commenting on the debt position in South Asia, the Bank said governments in India, Maldives, Pakistan, and Sri Lanka are already liable for above-average net interest payments relative to GDP, and will seek to finance fiscal deficits of between 7-17 per cent of GDP in 2025. "In some countries, growing debt service pressures could generate cycles of rising risk premia and debt distress," it said.
- Overall, growth in South Asia is expected to soften to 5.8 per cent in 2025, 0.4 percentage point below October forecasts before rising to 6.1 per cent in 2026.
- The region's economies face heightened downside risks, including from a highly uncertain global landscape, it said.
- Growth is projected to be slower for India's neighbours such as Bangladesh, where the growth is seen slowing to 3.3 per cent in FY25 amid political uncertainty and persistent financial challenges, and then a pickup to 4.9 per cent in FY26.



- In Bhutan, the growth forecast for FY25 has been downgraded to 6.6 per cent due to weak agriculture sector growth but upgraded in FY26 to 7.6 per cent due to expected strength in hydropower construction.

CAUGHT IN THE TECH COLD WAR

By the time Nvidia disclosed in a regulatory filing that the U.S. government had imposed new licensing requirements on the sale of H20 chips to China, including Hong Kong and Macau, the chipmaker was already reeling. The decision, delivered by the Trump administration, would abruptly end shipments of its China-focused AI chips and saddle the company with a \$5.5 billion hit to revenue due to unsellable inventory. For the world's most valuable semiconductor company and the undisputed leader in artificial intelligence chipmaking, this was not just a commercial disruption, it was a geopolitical collision.

This moment represents a dramatic escalation in the long-running tussle between the U.S. and China over control of critical technologies. And Nvidia, caught in the middle, finds itself facing the limits of doing business in both worlds.

The AI engine

Founded in 1993, Nvidia was initially known for its graphics processing units (GPUs), which powered video games with increasingly lifelike visuals. But by the 2010s, its chips found new utility far beyond gaming. Researchers discovered that Nvidia's parallel processing architecture was ideal for training large language models (LLMs), a breakthrough that transformed Nvidia from a gaming company into the backbone of the AI revolution.

The company's H100 and A100 chips have become industry standards for training LLMs and running generative AI tasks. With a market share estimated to be over 80% in AI data centre chips, Nvidia has fuelled the rise of companies such as OpenAI, Anthropic, and Google DeepMind.

Nvidia's chips have also been used by Chinese firms such as Tencent, Alibaba, and ByteDance to build their own AI systems. For years, China accounted for a significant portion of Nvidia's business. About a fifth of its revenue in 2023, or \$17 billion, came from chip sales to companies in China. That business has become more fraught as tensions between Washington and Beijing grew.

In 2022, the Biden administration began tightening export controls on advanced semiconductors, citing national security concerns, with a singular goal of preventing American technology from enabling China's military ambitions, including autonomous weapons systems, surveillance tools, and cyber warfare capabilities.

Nvidia responded by creating "downgraded" versions of its flagship chips by slowing down their performance with hardware and software tweaks, and also specifically building a new one, the H20 chip. These chips, known to be specifically designed for China, allowed Nvidia to keep a foothold in the market while technically adhering to U.S. restrictions.

That workaround now appears to have been closed. The Trump administration's latest move requires Nvidia to obtain licences to sell even these downgraded AI chips. The new rules also affect Advanced Micro Devices (AMD) and come just weeks after U.S. lawmakers pressed the White House to halt Chinese tech firms' access to Nvidia products, citing concerns that the chips were being stockpiled by companies with ties to China's military.



Nearly \$16 billion worth of H2O chips are currently pending export to Chinese tech giants, including Alibaba, ByteDance and Tencent. The White House's decision has hit Nvidia's stock hard, triggering a sharp selloff. But the longer-term impact may be more significant than a temporary dip in valuation.

The black swan moment

At the heart of the new urgency is a Chinese company that seemingly came out of nowhere: DeepSeek. In January, it released an AI reasoning model called DeepSeek R1 that it claimed was trained for only \$6 million, which is a fraction of the cost associated with U.S. equivalents like OpenAI's o1 reasoning model.

What truly alarmed U.S. officials was how DeepSeek did it. According to the U.S. congressional investigations, DeepSeek reportedly acquired tens of thousands of Nvidia GPUs through intermediaries in places such as Singapore and used techniques like distillation, allegedly including proprietary OpenAI data, to rapidly develop its model. Analysts estimate the company had access to as many as 60,000 chips, some of which should have been restricted under U.S. export laws.

Reports also revealed that several of DeepSeek's researchers have connections to Chinese military institutions, including defence labs associated with nuclear weapons development and organisations already sanctioned by the U.S. government. These ties deepened the suspicion that DeepSeek's rapid rise wasn't just a tech story, but a strategic threat.

The Trump administration responded by not only tightening rules for Nvidia and AMD, but also considering broader penalties against DeepSeek, including blacklisting it from acquiring American technology and potentially restricting access to its services for U.S. citizens and entities.

For Nvidia, the developments are an existential test of its global business model. The company has worked for years to remain compliant with U.S. laws while still selling to China, the world's second-largest AI market. But as restrictions multiply and political scrutiny intensifies, that balancing act is becoming impossible.

Nvidia now faces a future in which it must pivot aggressively back toward domestic and allied markets. It has pledged to invest \$500 billion in U.S.-based AI infrastructure, including opening a server manufacturing facility in Houston and partnering with chip packaging firms in Arizona.

Still, the company's China withdrawal could have lasting consequences. Analysts warn that if Nvidia pulls back, Chinese firms like Huawei could fill the gap. Already, Huawei is developing its own AI chips and could soon offer a homegrown alternative to Nvidia's dominance. Losing market share in China not only negatively impacts Nvidia's financial performance but also poses a potential threat of establishing a global competitor.

CHINA OPPOSES ANY DEALS BETWEEN U.S., OTHER NATIONS AT ITS EXPENSE

China warns countries seeking tariff exemptions from the U.S. to limit trade with China or face countermeasures; the Trump administration is preparing to pressure nations seeking tariff reductions or exemptions from the U.S. to curb trade with China, including imposing monetary sanctions



China on Monday accused Washington of abusing tariffs and warned countries against striking a broader economic deal with the United States at its expense, ratcheting up its rhetoric in a spiralling trade war between the world's two biggest economies.

Beijing will firmly oppose any party striking a deal at China's expense and "will take countermeasures in a resolute and reciprocal manner," its Commerce Ministry said.

The ministry was responding to a Bloomberg report, citing sources familiar with the matter, that the Trump administration is preparing to pressure nations seeking tariff reductions or exemptions from the U.S. to curb trade with China, including imposing monetary sanctions.

U.S. TARIFFS: CHINA HAD REROUTED EXPORTS TO STAY ON TOP TILL 2023

Trade data shows that despite facing tariff headwinds from the U.S., the world's largest importer, China, the world's largest exporter, has managed to increase its overall exports, till at least 2023. A series of tariff escalations by the U.S. on Chinese products from 2018 led to fewer imports by the U.S. from China in the following years. Despite this, China's share in global exports rose from around 13% in the years before the tariff escalations to 15% in the years following them.

In fact, the U.S.'s share in many of China's top export commodities declined considerably after the tariff escalations in 2018. China was able to make up for the fall by finding newer markets or selling more to other trade partners.

In January 2018, the average rate of U.S. tariffs on Chinese products was a little over 3%. By the time President Donald Trump's first term ended, the average tariffs on each others' products was around 20%, which remained the same during the Biden years as well. However, this year, the U.S.'s tariffs on Chinese products kept increasing and is now finally pegged at a staggering 145%. Beijing retaliated by raising duties on U.S. products to 125%.

With the tariffs reaching very high levels, it remains to be seen whether China will be able to retain its dominance in world trade. In fact, by April 2025, all the commodities exported by the U.S. to China and vice-versa were subjected to some level of tariffs. This was not the case during former U.S. President Joe Biden's term, with tariffs being applied on around 60-70% of the products.

During the five years prior to the tariff escalations (2014-2018), China's exports to the U.S. grew by 35.5% when compared with the previous five-year period (2009-2013). However, in the five years following the escalations (2019-2023), export growth slowed significantly, rising by only 20% relative to the 2014-2018 period.

China was able to offset this decline by boosting exports to non-U.S. markets. While exports to non-U.S. countries grew by only 26.8% in the 2014-2018 period, they increased by 37.3% during the 2019-2023 period, effectively compensating for the drop in exports to the U.S.

In the post-escalations period, China's share in the world's total exports increased in electrical machinery, furniture, plastics, vehicles, organic chemicals, rubber and paper. In other words, for these major export items, despite the decline in the U.S.'s share, China continued to dominate world trade.



ASIA MAY BUY MORE U.S. OIL TO OFFSET TRADE IMBALANCE

Asian governments are looking to buy more U.S. oil and gas as they scramble to lower trade surplus with Washington in the hopes of easing tariff burdens under President Donald Trump's sweeping new import duties. Many Asian countries run large trade surpluses with the United States and are also major energy importers. Mr. Trump's tariffs, partially paused, have rattled economies and markets. Below are some of the steps Asian countries plan to increase the purchases of U.S. oil and gas.

Indonesia

Indonesia will propose increasing its imports of crude oil and liquefied petroleum gas (LPG) from the U.S. by about \$10 billion as part of its tariff negotiations, Energy Minister Bahlil Lahadalia told media.

Mr. Bahlil said the energy ministry recommended increasing the LPG import quota for the U.S. as well as importing more U.S. crude to help reach the target.

Pakistan

Pakistan is considering importing crude oil from the U.S. for the first time to offset a trade imbalance that triggered higher U.S. tariffs, according to a government source and a refinery executive.

The refinery executive told Reuters the idea is to buy U.S. crude equivalent to Pakistan's current imports of oil and refined products, or about \$1 billion of oil.

India

India is weighing a proposal to scrap import tax on U.S. liquefied natural gas (LNG) to boost purchases and help cut the trade surplus with Washington, a key irritant for Mr. Trump, government and industry sources said.

It also plans to end taxes on U.S. ethane and LPG imports. The country's largest LNG importer GAIL India Ltd. has issued a tender to buy an up to 26% stake in a LNG project in the U.S. combined with a 15-year gas import deal.

Thailand

Thailand said on Wednesday it plans to import more U.S. LNG and ethane over the next five years.

In addition to an existing plan to import 1 million metric tonne per year of LNG worth \$500 million next year as part of a 15-year plan starting in 2026 totalling 15 million tonne, Thailand plans another contract for more than 1 million tons of U.S. LNG over the next five years. Thailand also plans to import 400,000 tonne of U.S. ethane worth \$100 million over the next four years, its Finance Minister said.

Alaska LNG project

Mr. Trump wants Japan, South Korea, and Taiwan to join the \$44 billion natural gas export project in Alaska, part of Washington's broader push on trade and tariffs.



The project aims at transporting gas south from Alaska's remote north via a \$44 billion, 1,300-km (800-mile) pipeline, to be shipped as LNG to Japan, South Korea and Taiwan, bypassing Panama Canal.

An Alaskan delegation visited Japan in late March to brief policymakers and meet possible backers of the project. Japanese trading house Mitsubishi Corp may consider investing in the Alaska LNG project, though any decision will need careful review, CEO Katsuya Nakanishi said.

South Korean industry Ministry officials are considering travelling soon to Alaska for working-level negotiations. Last month, Taiwanese state energy firm CPC Corp. signed a pact with Alaska Gasline Development Corp. to buy LNG and invest in the project, a move Taiwan's President Lai Ching-te said would ensure the island's energy security.

WHY DID CHINA BLOCK EXPORTS OF RARE EARTH ELEMENTS?

The story so far:

Amid the ongoing U.S.-China trade war, Chinese authorities have reportedly imposed export controls on rare earth elements (REEs) and magnets that are needed in a range of manufacturing activities, from semiconductor fabrication units to defence equipment. This has been one of the more recent salvos in the trade war between the two countries, but the export restrictions apply to any Chinese refinery that can export refined rare earths outside the country.

What are rare earth elements?

Rare earth elements are a series of 17 substances that are present in the earth's crust. Unlike what the name may indicate, rare earths occur plentifully in nature, but the rarity comes from the ability to isolate them chemically and make them usable in industrial applications. Heavy and light rare earths occur naturally in several countries, such as India, China, Myanmar, Japan, Australia and North Korea.

China's curbs target dysprosium, gadolinium, lutetium, samarium, scandium, terbium, and yttrium, seven of the 17 elements classified as REEs.

Dysprosium's so-called magnetic susceptibility makes it ideal for use in hard disks and car motors; gadolinium is used in nuclear reactors for shielding and in some medical equipment; lutetium and compounds with it are used in PET scanners and in petroleum refineries; samarium is used in powerful magnets in personal electronics; scandium-aluminium alloys are used in fighter aircraft; terbium is used in lighting for personal electronics; and yttrium is used in cancer treatments and superconductors.

What are China's export restrictions?

Practically all heavy REEs used all over the world are refined in China. From personal electronics to defence, therefore, Beijing has enormous leverage over the entire world for a range of supply chains for critical raw and intermediate materials. The export restrictions don't appear to amount to an outright ban, but could interrupt supplies to countries for a few weeks as refiners work through the process of getting permits.



What is the impact on India?

Indian supply chains may not be immediately impacted by REE export restrictions in China. While the government has taken steps to boost domestic production of semiconductors and defence equipment, the more advanced stages of manufacturing typically happen abroad in countries like China itself, and Japan. The latter country has already taken steps to insulate itself from REE supply shocks, by building a months-long stockpile.

India has recognised the importance of REE production, as it is estimated to have 6% of their total deposits. Mining and refining activities tend to present great environmental strain, which have been factors in India's practically non-existent capabilities in those activities.

India has light REE extraction capabilities through the state-owned Indian Rare Earths Ltd, such as monazite extraction from beach sand in Kerala.

India imports a limited quantity of REEs. In a response to the Lok Sabha earlier in April, the Ministry of Mines said 2,270 tonnes of REEs were imported in 2023–24. As such, the country's strategy depends on both boosting domestic production and imports.

What is the government's plan?

"As a policy framework for utilizing critical minerals, including rare earth metals, the National Critical Mineral Mission (NCMM) has been launched, which is India's strategic initiative to secure critical mineral supply chain by increasing domestic critical minerals production and foreign supply sources," the Ministry said in Parliament.

Critical minerals are a larger umbrella under which REEs fall.

"China's restrictions on certain critical minerals, the Russia-Ukraine War, and other issues highlight the fragility of critical mineral supply and the need for diversifying sources," the Ministry of Mines said in a presentation on the NCMM in January.

Under the NCMM, the government has said it will facilitate or engage in 1,200 exploration projects, award exploratory licenses to incentivise private exploration, and auction more critical mineral blocks.

WILL TRADE WAR LEAD TO IMPORT SURGE IN INDIA?

The story so far:

U.S. President Donald Trump's 'liberation day' tariffs and China's retaliatory tariffs have induced fears in India about impacted countries re-routing their exports to the large consumer market. Reports say the Ministry of Commerce and Industry is wary of any potential surge in imports of farm produce from the U.S. and manufactured goods from China, Vietnam and Indonesia, among other countries.

What is the concern about dumping?

With President Trump's tariff regime making it difficult for countries to sell in the U.S., they may potentially look to India's large consumer market to dispose of their goods. This is especially true of goods which are either being extensively produced in their factories beyond their domestic



consumption or are of considerable importance to their overall economic and/or export ambitions.

In light of the present circumstances, two noteworthy examples, where this dynamic may play out entail Bangladesh's readymade garments and textile industry and Indonesia's electronic equipment industry. The former is the world's second largest garment manufacturer, with the sector accounting for 80% of its exports. Indonesia's electronics industry has been a key driver of their economic growth and employment, according to the International Labour Organisation (ILO). Now with increased tariffs, the countries could be in for a potential lookout for alternative markets to sell their products.

According to observers, China too could be looking for avenues to deal with its manufacturing overcapacity. The World Trade Organization (WTO)'s trade review of China, published in July last year, inferred it to have grown into a "major global manufacturing hub in recent decades". It attributed this to abundant and productive labour, high-quality infrastructure alongside trade and investment liberalisation, among other factors. However, member countries felt that the subsidies accorded by the Chinese government, particularly to state-owned enterprises, "distorted global markets and promoted overcapacity". The WTO observed in the review that manufactured goods accounted for over 95% of China's exports. In March, data from Chinese Customs pointed to the U.S. as its biggest export destination. However, now Beijing may be looking towards other markets.

Why is U.S. farm produce important?

This is one arena where the tariff threat may have a potential reverse effect on Washington with repercussions for India as well. According to the U.S. Department of Agriculture, China was the third largest export destination for their agricultural products. Exports, however, declined 15% on a year-over-year basis in 2024 to \$24.7 billion because of "rising competition" to U.S. soyabean and corn from South America. Considering Beijing's retaliatory tariff on the U.S., the North American country's produce, especially soyabean and corn, could also seek a market in India.

Which sectors will get affected?

According to Ajay Srivastava, founder of the think-tank Global Trade Research Initiative (GTRI), sectors at most risk include chemicals, steel, aluminium, textiles, plastics, rubber, electronics and consumer goods. Several of these are already under investigation with the Directorate General of Trade Remedies (DGTR).

An important example is the domestic steel sector where sentiments have been marred because of dumping-induced downward revision in prices. Preliminary findings of the anti-dumping investigation, published in March, attributed "trade diversion due to protective measures" imposed by the U.S. and EU (starting 2018) as the "major cause" for surge in imports of certain steel products. The DGTR reasoned that large steel producing economies such as Japan, South Korea and China held high steel producing capacities that exceeded their domestic consumption. Thus, to curb the spike in imports, the DGTR recommended imposing a provisional safeguard duty of 12% for 200 days in March. In the chemical sector, the DGTR concluded earlier this year that China was dumping titanium oxide, used in cosmetics and paints, into the country and "injuring the domestic sector".

Mohit Singla, founder-chairman at the Trade Promotion Council of India (TPCI), told The Hindu that consumer products particularly will face "a lot of dumping". More importantly, however, Mr.



Singla indicated any potential dumping would particularly bother small industries (such as textiles) which are sparsely distributed and difficult to organise together. "For smaller industries and MSMEs, it is almost impossible for them to get together to fight surge in imports unless the government takes suo motu cognisance of such imports rising," he observed. This contrasts with larger industries, with lesser players and being closely monitored, joining hands to collaborate to seek safeguard duties.

In a larger context, Mr. Srivastava held that while the risks from dumping are real, they are likely to be manageable. He points to India regularly imposing anti-dumping duties on products from China, Korea and EU, among others, and facing similar actions abroad. "These duties typically cover a small share of total imports, so while dumping may increase in certain sectors, the broader economic impact should stay limited thanks to existing safeguards," he stated.

Can the dynamics be reversed?

Observers have indicated that it is unlikely that Indian firms would be able to null the impact of dumping by improving quality of their products or offering competitive pricing. Mithileshwar Thakur, secretary general at the Apparel Export Promotion Council (APEC), explained to The Hindu that dumping cannot be countered by competitive pricing because the margins tend to be "huge". He held that only trade remedial measures such as safeguards, countervailing measures and/or anti-dumping duties would be of help. "(By any pricing revision or other means) you can increase the competitiveness by 10-15% and never 100%. It is impossible to counter dumping by improving competitiveness," he stated.

Mr. Thakur said the APEC has already taken up concerns about potential dumping in the sector with the Ministry of Commerce and Industry. An anti-dumping duty proposes to rectify the distortive effect of unfair trade practices that entail goods being exported to another country at prices lower than their normal value with a predatory intent, in other words, dumping. Safeguard duties strive to mitigate the impact of a sudden surge in imports. Mr. Singla held that seeking anti-dumping duties typically entail an "exhaustive" and quasi-judicial process. He suggests looking at a safeguard duty to address a surge in imports which can be "simply" placed by assessing trends over a six-month period.

GOVT IMPOSES 12 PER CENT SAFEGUARD DUTY ON IMPORT OF SOME STEEL PRODUCTS

Amid fears of dumping into India following steep US duties on Chinese goods, the government has imposed a 12 per cent safeguard duty on non-alloy and alloy steel flat products, a notification from the Ministry of Finance released on Monday showed.

- This follows an investigation by the Directorate General of Trade Remedies (DGTR), under the Ministry of Commerce and Industry, which in its findings last month said that there was a "sudden and sharp" surge in imports that could "cause serious injury to the domestic industry".
- "The safeguard duty imposed under this notification shall be effective for a period of two hundred days (unless revoked, superseded or amended earlier) from the date of publication of this notification in the Official Gazette and shall be payable in Indian currency," the notification stated.
- Notably, several specialised steel items have been excluded from the scope of the measure, including Cold Rolled Grain Oriented Electrical Steel (CRGO), tinplate, stainless steel, rubber-coated steel, brass-coated steel, and aluminium-coated steel, among others.



- The notification added that the safeguard duty will not apply to product categories priced above the import price on a Cost, Insurance and Freight (CIF) basis—set at \$675 per metric tonne (MT) for hot rolled coils, sheets and plates, and \$964 per MT for colour-coated coils and sheets, whether or not profiled.

- In its submission to the Ministry of Commerce and Industry, the Indian Steel Association (ISA) had said that since the United States imposed a 25 per cent duty under Section 232 of its Trade Expansion Act, 1962, several countries have introduced multiple trade remedy measures against steel imports. “The evidence indicates that 129 trade remedy measures were imposed by various countries against steel products between 2019 and 2023,” ISA had said.

Do You Know:

- According to Investopedia, dumping is when a country or company exports a product at a lower price than its domestic sale price. In the context of international trade, dumping is often considered an unfair pricing strategy. Because dumping typically involves substantial export volumes of a product, it often endangers the financial viability of the product’s manufacturer or producer in the importing nation.

— An anti-dumping duty is a protectionist tariff that a domestic government imposes on foreign imports that it believes are priced below fair market value.

- The Directorate General of Trade Remedies (earlier known as Directorate General of Anti-dumping and Allied Duties) was named in May 2018 as an integrated single window agency for providing comprehensive and swift trade defence mechanism in India.

—Earlier, the Directorate General of Anti-dumping and Allied Duties (DGAD) dealt with anti-dumping and CVD cases, Directorate General of Safeguards (DGS) dealt with safeguard measures and DGFT dealt with quantitative restriction (QR) safeguards.

—The DGTR brings DGAD, DGS and Safeguards (QR) functions of DGFT into its fold by merging them into one single national entity.

—DGTR now deals with Anti-dumping, CVD and Safeguard measures. It also provides trade defence support to our domestic industry and exporters in dealing with increasing instances of trade remedy investigations instituted against them by other countries.

—DGTR functions as an attached office of Department of Commerce, Ministry of Commerce and Industry. It is a professionally integrated organisation with multi-spectrum skill sets emanating from officers drawn from different services and specialisations.

- A WTO member may take a “safeguard” action (i.e., restrict imports of a product temporarily) under the WTO Agreement on Safeguards to protect a specific domestic industry from an increase in imports of any product which is causing, or which is threatening to cause, serious injury to the industry.

- According to Investopedia, Protectionism refers to government policies that restrict international trade to help domestic industries. Protectionist policies are usually implemented with the goal of improving economic activity within a domestic economy but can also be implemented for safety or quality concerns.



—Protectionist policies are typically focused on imports but may also involve other aspects of international trade, such as product standards and government subsidies.

—Import tariffs are one of the top tools that a government uses when seeking to enact protectionist policies.

TALKING MODE

U.S. Vice-President J.D. Vance's first visit to India was marred by the brutal terror attacks in Pahalgam, but his messages of solidarity with India, even as he chose to continue his family vacation at the Taj Mahal, have been appreciated in New Delhi. Visits by American Presidents to India have been rare, other than for ceremonial reasons, and Mr. Vance is the first American Vice-President to travel to India in 12 years, after Joseph Biden visited in 2013. The visit was a "largely private" affair, as Mr. Vance, his wife of Indian-origin Usha Chilukuri Vance, and their three children took in the sights in Delhi, Jaipur, and Agra. The visit provided for a quick review of decisions made during Prime Minister Narendra Modi's trip to the U.S. in February, although the Vance-Modi talks on Monday did not produce substantial outcomes apart from an announcement that the terms of reference for the Bilateral Trade Agreement (BTA) being negotiated in Washington had been finalised. They also provided for a chance to discuss U.S. President Donald Trump's visit to India later this year for the Quad Summit, and plans for Indo-Pacific strategy. It is unclear whether Mr. Modi raised India's concerns over a number of issues with Mr. Vance, including U.S. tariffs and their impact on the global economy, the U.S. crackdown on immigration, as well as the recent revocations of visas issued to hundreds of foreign students, more than half of whom were Indian, according to a survey.

However, at a public address in Jaipur, Mr. Vance responded to some of the criticism of the Trump administration's actions. Rather than seeking to "start a trade war", Mr. Trump hopes to "rebalance global trade", Mr. Vance said, and outlined the BTA as a "final deal" for "fairness". He also raised the need for India to drop "non-tariff barriers" that stop U.S. access to the Indian market — understood to relate mainly to selling agricultural produce and dairy products, a sensitive issue in India. On defence, Mr. Vance said that India was a trusted partner for co-production of U.S. defence hardware, and repeated Mr. Trump's offer of F-35 fighter jets. He criticised previous U.S. governments for cutting back on fossil fuel energy production, and said Mr. Trump's policy of "drill, baby, drill" would be to India's benefit if it increases the purchase of oil and natural gas from the U.S. Finally, he stressed the importance of amending India's nuclear liability law so that U.S. companies would feel comfortable in setting up nuclear power plants in India. Broadly, Mr. Vance's effort during his visit to India was to underline the importance of statements and demands already made by President Trump. New Delhi must consider carefully what it seeks from the U.S. in return, as thus far Mr. Modi and his ministers who have travelled to the U.S. have been in "listening mode", studying the Trump agenda rather than reacting to it — whether it is in the area of geopolitical moves regarding the Russia-Ukraine conflict and Israel's war on Gaza, or those spurring global trade disruptions.

J D VANCE VISIT, BILATERAL TRADE AND HOW TO DEAL WITH CHINA

US Vice President J D Vance's visit to India comes in the midst of a global trade war. In this time of uncertainty, however, the first high-level visit from the Trump administration also signals the strong political backing in both countries for a trade deal. The two sides "welcomed the significant progress" in negotiations over the agreement. This political push comes ahead of a three-day visit



to the US by Indian government officials, led by chief negotiator Rajesh Agarwal. Reportedly, 19 chapters are under negotiation, covering areas such as tariff and non-tariff barriers and rules of origin, among others. The White House also articulated the “goal of enhancing bilateral trade and supply chain integration in a balanced and mutually beneficial manner”.

As per the White House, more than 75 countries have approached it in order to “discuss new trade deals”. But US Treasury Secretary Scott Bessent is said to be prioritising India, along with Japan, South Korea, Australia and the UK as “among his top targets for new trade deals”. The Japanese trade delegation met with US officials a few days ago. But President Donald Trump, who was part of the negotiations, expanded their scope to include non-tariff issues as well. South Korea is holding talks this week. Trump has said that the US is having “nice conversations” with China. But, on its part, Beijing has warned countries against entering into trade deals with America at its expense. The Chinese Ministry of Commerce has said that “if this happens, China will not accept it and will resolutely take reciprocal countermeasures”.

On Tuesday, the IMF slashed global growth forecasts with trade uncertainty affecting economic activity. It now expects the world economy to grow at 2.8 per cent in 2025, down 50 basis points from its earlier estimate. All countries are likely to take a hit. The Fund now projects the US to grow at 1.8 per cent, down 90 basis points from its earlier assessment. China is expected to grow at 4 per cent, 60 basis points lower than its earlier estimate, while India’s growth has been marked down by 30 basis points to 6.2 per cent. In this uncertain global environment — the IMF has also cut global trade growth by almost half — as New Delhi moves ahead with the US trade deal, the importance of China to the global trading system, and to India, cannot be understated. China is at the centre of global manufacturing supply chains. In 2023-24, India-China bilateral trade stood at a staggering \$118.4 billion. A trade deal with the US should not be seen as being adversarial vis-a-vis China. The trade dynamics between the countries are complicated and challenging; they will require deft handling.

INDIA-US BTA TALKS BEGIN IN WASHINGTON

The first in-person meeting between the chief negotiators of the Bilateral Trade Agreement (BTA) between India and US after the finalisation of terms of reference (ToR) got underway on Wednesday, in Washington with both sides aiming to iron out issues for a faster deal over the next three days.

- Apart from the scope of liberalisation, modalities and scheduling of negotiations to complete them within the autumn deadline will also be discussed. While negotiators meet in person, experts from both sides remain engaged digitally to aid the process.
- Both sides are also attempting to cover as much ground as possible in the 90-day period of pause in reciprocal tariffs to reach some kind of an interim trade agreement or understanding with the US. If the progress is slow then there is possibility that Indian exports to the US will be subject to additional duties. Under the reciprocal plan US has announced 26% additional duties on India but its full implementation has been put on hold.
- The US has been vocal about its demands from New Delhi on agriculture, auto and overall trade deficit. In a statement on Tuesday, the US Trade Representative Jamieson Greer again stated, ““There is a serious lack of reciprocity in the trade relationship with India. These ongoing talks will help achieve balance and reciprocity by opening new markets for American goods and addressing unfair practices that harm American workers.”



- Officials say that India too has certain asks from the US in the BTA. In some sectors like tobacco and peanut butter the US imposes very high tariffs and other restrictions. In textile, clothing and other items of Indian export basket too there is not much difference between Indian and US rates.
- In 2024-25 India's merchandise exports to the US grew 11.6% on year to \$ 86.51 billion while imports grew 7.4% to \$ 45.3 billion. This resulted in a surplus of \$ 41.21 billion for India. To balance that trade one of the options that has been proposed is India buying more petroleum and defence items from the US.
- The ToR has 19 chapters each dealing with a different topic like goods, services, non-tariff barriers, rules of origin, customs facilitation, dispute settlement and regulatory issues. During the visit the ToR would be further developed, an official said.

Do You Know:

- This is not the first time India and the US have agreed to explore the possibility of a trade agreement. However, the US-led 14-member Indo-Pacific Economic Framework for Prosperity (IPEF), of which India is a part, could not agree on the "trade pillar" of the IPEF in 2022 as it did not offer tariff reductions or increased access to the US market.
- Due to job losses in several areas — particularly the United States' industrial belt following China's entry into the WTO — sentiment among US lawmakers has turned against granting more market access to foreign goods.
- A paper by the US-based think tank National Bureau of Economic Research titled 'Importing Political Polarisation and Electoral Consequences of Rising Trade Exposure' (2017) stated that growing import competition from China has contributed to a shift to the right in the political beliefs of US adults.

—The paper also noted that in the 2016 presidential election, trade shocks increased the vote share of the Republican candidate — Donald Trump.

- Trade experts suggest that a BTA would likely require India to lower tariffs to allow greater entry of American goods, rather than the US reciprocating, as average tariffs in the US are already among the lowest in the world.
- Think tank Global Trade Research Institute (GTRI) said this is not the best time for a trade deal with the US, as the current regime simply does not respect FTAs. This is illustrated by the Trump administration's imposition of tariffs on Mexico and Canada on steel and aluminium "in violation of United States-Mexico-Canada Agreement (USMCA) provisions," GTRI said.
- A 2022 report by think tank Delhi Policy Group (DPG) highlighted that tariff imbalances were a key reason why ASEAN countries export more to India than they import from it.

GOLD GLITTERS ABOVE `1 LAKH: WHY YELLOW METAL PRICES ARE SURGING?

Gold prices are glittering above the Rs 1 lakh-level per 10 gm for the first time as the international prices surged after US President Donald Trump unveiled plans to overhaul the Federal Reserve. Gold consolidated its position as the best safe haven asset in the volatile global financial markets.

- The price of 24-karat gold (999 fineness) was quoted at Rs 101,350 per 10 gm in the Mumbai bullion market on Tuesday. The price of 22 karat gold was quoted at Rs 92,900 per 10 gm on



Tuesday as global markets continued to remain jittery over Trump's tariff plans and his threat to revamp the US Fed that could lead to a spike in inflation and interest rates.

- Gold prices in India generally follow international prices. Global gold prices continued to surge with rates crossing \$3,400 an ounce even as the US dollar tumbled. Gold has gained nearly 59 per cent since March 2024. A weaker dollar boosts demand for gold, since it makes the metal more affordable to investors holding foreign currencies.
- The gold price rally is largely driven by renewed uncertainty surrounding US monetary policy, after Trump unveiled plans to overhaul the Federal Reserve. The US President intensified his attack on Federal Reserve chief Jerome Powell for not cutting interest rates even as the US dollar sinks in the currency market.
- The surge in gold prices is also driven by escalating geopolitical risks, strong central bank demand, and persistent inflation concerns. There are heightened tensions on the Russia-Ukraine front too. This new layer of uncertainty is complicating the path ahead for the US Fed decision on the interest rates.

Do You Know:

- India is the second largest gold market in the world after China. Gold demand in the country in 2024 stood at 802.8 tonnes, as against 761 tonnes in 2023. China's demand was 985 tonnes. The total gold demand value in India went up by 31 per cent at Rs 5.15 lakh crore in 2024, compared to Rs 3.92 lakh crore in 2023, according to a World Gold Council (WGC) report,
- Gold holds a significant place in Indian culture, often being accumulated over generations. During times of financial need such as hospital expenses and college fees, individuals are more willing to pledge their gold holdings like jewellery to secure loans.

DreamIAS



LIFE AND SCIENCE

DOES THE PLANET K2-18B SHOW SIGNS OF LIFE?

The story so far:

On April 16, an international research team uploaded a paper in which it reported that the distant exoplanet K2-18b may be habitable. The claim was met with cautious excitement by astronomers. While finding places in the universe that could harbour life is a vital quest in the field, experts — including the team that made the finding — are cautious because many similar claims in the past have had to be retracted after closer inspection.

What is K2-18b?

K2-18b is an exoplanet — a planet outside the solar system. It's located 124 lightyears away from the earth in the constellation Leo, orbiting the star K2-18. It is 5.2-times wider and roughly nine-times more massive than the earth, dimensions that suggest it likely possesses a hydrogen-rich atmosphere. The amount of stellar radiation it receives from its star is comparable to what the earth receives from the sun. It was discovered by the Kepler telescope in 2015. In 2019, the Hubble Space Telescope found that its atmosphere contains signs of water vapour. Four years later, the James Webb Space Telescope (JWST) also detected signs of carbon dioxide and methane. Scientists had previously shown in modelling studies that it's possible to find methane and carbon dioxide and no ammonia in a hydrogen-rich atmosphere if (but not only if) there is a liquid water ocean on a planet's surface.

What kind of planet might K2-18b be?

According to the new work, K2-18b might be a Hycean world: covered with an ocean overlaid by a hydrogen-rich atmosphere. The JWST is designed to study such planets better than other telescopes can, although K2-18b itself isn't confirmed to be Hycean. Some computer models suggest it may also have a stratosphere and some carbon oxides and cyanide in the middle atmosphere. Researchers have also said its surface conditions may be close to the runaway greenhouse threshold — when the concentration of greenhouse gases in the atmosphere prevents any heat from escaping the surface. This is why Venus is a hellscape.

In the new paper, the team reported the presence of two compounds — either dimethyl sulphide (DMS) or dimethyl disulphide (DMDS) — in K2-18b's atmosphere. Scientists have suggested that DMS could be a biomarker, a sign of life, on exoplanets. DMS on earth is made mostly in the oceans. Phytoplankton produce a molecule called dimethylsulphoniopropionate. When they die, enzymes break up the molecule to release DMS. It's also emitted when bacteria break up plant matter. In 2015, researchers reported that 76% of soil bacteria contain a gene that allows them to produce DMS.

Is K2-18b really habitable?

Experts have said the only way to find extraterrestrial life is for them to directly detect it. This is why NASA launched its Clipper mission in 2024 to study Jupiter's moon Europa. Attempts to look for conditions suitable for life (that too only life as we know it) and the presence of specific molecules from a distance can only be suggestive of habitable conditions.



Many uncertainties in these studies also arise from astronomers' instruments and the accuracy of models they use to simulate conditions in outer space. Hitherto unknown chemical processes may be capable of creating the molecules scientists consider to be biomarkers. Or JWST not being able to detect certain compounds could mean they're present at concentrations below its detection threshold.

In 2023, the team had reported detecting a hint of DMS on K2-18b; now it has said the compound may actually be present in 1,000-times greater quantities than on the earth. Since DMS is shortlived, something on the surface could be constantly producing it. However, the paper only reported a significant detection of DMS or DMDS, not DMS alone.

Scientists have also been modelling the physical conditions on K2-18b to check for alternative explanations for its chemistry. One study in 2023 said "most of the current Hycean world observational targets are not likely to sustain a liquid water ocean." In 2024, a U.S. team published a paper saying the JWST observations can be explained by K2-18b being "a gas-rich mini-Neptune" that "does not need a biosphere or other unknown source of methane to explain the data". In January, an international team reported that "a comprehensive reanalysis" of K2-18b data collected by JWST confirmed the presence of methane but yielded "no statistically significant or reliable evidence for carbon dioxide or DMS." This conclusion doubted whether K2-18b was a Hycean world.

Several false alarms — including the TRAPPIST-1 system, the exoplanet WASP-12b — have taught scientists to scrutinise such claims.

POLITENESS TO LLMS COSTS MONEY. LET'S THANK AI ANYWAY

With great bandwidth comes great responsibility. Or so Sam Altman will have one know. Responding to a user on X, the OpenAI CEO said that common courtesies such as "please" and "thank you" to ChatGPT's many versions cost his company substantially — "Tens of millions of dollars well spent, you never know," he wrote. In other words, every time one expresses gratitude to the machine, somewhere a server burns a little brighter — and OpenAI's expenses soar.

The figure might be somewhat inflated but Altman may have a point. AI models run on large language models (LLMs), which require sophisticated graphics processing units (GPUs) to process data and respond to prompts efficiently in real time. This requires significant electricity, and also water. While global data centres account for about 2 per cent of the world's electricity usage, studies have also shown heightened water consumption by AI infrastructure: A 100-word response requires three bottles of water to cool down the servers.

Of course, this poses a larger philosophical dilemma: Must the price of civility be counted in GPU hours? Experts say politeness to the machine has its own advantages. It trains AI to respond in kind to users, setting a more collaborative tone of interaction. For a generation of digital natives who have primed themselves to communicate in emojis, acronyms (save the FOMO), and the occasional all-caps screams, there might be valuable life skills there, especially given the fact that they have successfully anthropomorphised chatbots into their personal digital Jeeves. There's also an ethical question: If treating AI with kindness is expensive, is compassion inadvertently being priced out of the future? The ancient Greeks might offer perspective here. Socrates held that civility underpinned meaningful dialogue; Aristotle believed ethical habits were formed through iterations. In training machines to be courteous, humans might simply be reinforcing for themselves the idea that a good society is built on thoughtful dialogue, no matter the cost.



YOUTUBE TURNS 20: SMALL BIG SCREEN

On August 23, 2005, a 26-year-old named Jawed Karim uploaded a video of his visit to the elephant enclosure in a San Diego zoo on a brand new website. Elephants have “really, really, really long trunks”, he says in the 19-second-long clip, before ending with, “and that’s pretty much all there is to say”. But for the over 2 billion users who would, over the next two decades, log in to YouTube — as the website was christened, Karim was a co-founder — there was clearly a lot more to say. And they proceeded to do so, making and uploading video after video of the banal and the fantastical, the spontaneous and the scripted, turning YouTube into the internet’s preferred soapbox, stage, arena and confessional.

This week marks 20 years since Karim startled absolutely no one with his observation about elephants. YouTube is today home to over 20 billion videos, with over a billion monthly active users. A whole generation of digital natives has grown up with the website, even as YouTube itself has outgrown its early ambition of offering ordinary people the opportunity to turn, however briefly, into video stars. Officially out of its “teens”, it has now set its sights on the entertainment big league, with CEO Neal Mohan describing it as “the new television”.

Like the other great challenger of the era, Netflix, YouTube’s glitzy present has eclipsed its scrappy beginnings. The Algorithm — upper-case, all-consuming — now decides what the viewer watches next. The joy of early YouTube was that it offered a window into the lives of others: Their triumphs, “fails”, homages and reviews. As studios like Disney premiere content on the website, and the smallest — and youngest — of the screens takes on the big broadcasters, and even cinema, the amateurs who turned the website into a repository of the unexpected and the unfiltered are quietly being ushered off the stage.

META, APPLE GET €700 MN FINE FOR VIOLATING EU ANTITRUST RULES

Apple was fined 500 million euros (\$570 million) on Wednesday and Meta 200 million euros, as European Union antitrust regulators handed out the first sanctions under landmark legislation aimed at curbing the power of Big Tech.

- The EU fines could stoke tensions with U.S. President Donald Trump who has threatened to levy tariffs against countries that penalise U.S. companies. Trump’s White House called the fines a “novel form of economic extortion” that the United States will not tolerate.
- They follow a year-long investigation by the European Commission, the EU executive, into whether the companies comply with the Digital Markets Act (DMA) that seeks to allow smaller rivals into markets dominated by the biggest companies.
- The fines signal that the EU is sticking to its guns in enforcing the new rules, which were introduced in 2023. That is despite Trump citing the DMA while vowing in February to “defend American companies and innovators from overseas extortion”.
- The EU will be encouraged by a U.S. court judgment earlier this month which found that Google illegally dominates two markets for online advertising technology, Commission sources say. That ruling could pave the way for U.S. antitrust prosecutors to seek a breakup of its ad products.

**Do You Know:**

- According to the Competition Policy of EU, Antitrust rules prohibit agreements between market operators that would restrict competition, and the abuse of dominance. European Antitrust policy is developed from two central rules set out in the Treaty on the Functioning of the European Union:

- Article 101 of the Treaty prohibits agreements between two or more independent market operators, which restrict competition. The most flagrant example of illegal conduct infringing Article 101 is the creation of a cartel between competitors, which may involve price-fixing and/or market sharing.

- Article 102 of the Treaty prohibits firms that hold a dominant position on a given market to abuse that position, for example by charging unfair prices, by limiting production, or by refusing to innovate to the prejudice of consumers.

- Apple avoided a fine in a separate investigation into its browser options on iPhones after making changes that allow users to switch to a rival browser or search engine more easily. Regulators said these comply with the DMA and closed the investigation on Wednesday.

- The iPhone maker was still charged with breaching DMA rules on the grounds it hindered users from sideloading, a practice that involves downloading alternative app stores and apps from the web.

A POPE WHO CHOSE EMPATHY

They went, Pope Francis joked in 2013, to the ends of the Earth to find him. The then-newly-anointed head of the Catholic Church was the first from Latin America to be pontiff. But the joke — as indeed his choice of name, drawn from Francis of Assisi, the patron saint of the poor — contained a deeper message. It signalled a new vision for the Church, one that would embrace the outcast and the marginalised. Under his leadership, the Pope said, it would be “a Church that is poor and for the poor”.

Pope Francis, who died this week aged 88 following a period of illness, never stopped speaking up for the disenfranchised and the disempowered, travelling around the world to urge peace, justice and reconciliation, even as his health began to fail. Born Jorge Mario Bergoglio in Buenos Aires, Argentina, he ascended to the highest office in the Vatican following the shock resignation of Pope Benedict XVI. As he reversed the course of conservatism set by his predecessors, the new pontiff quickly came to be viewed as an agent of necessary change at a time when the Church was being seen as out of step with the times. A believer in dialogue and debate, Pope Francis advocated empathy over doctrinal rigidity, simplicity over pomp. “Who am I to judge?” he once said, when a journalist questioned him about queer relationships. His ready smile and avuncular charm helped bridge the distance between the Church and the global laity, even as within the institution he pushed hard against overcentralisation of power in Rome. He nudged open doors that had long been closed by advocating a greater role for women and allowing priests to bless same-sex marriages. Not that his papacy was entirely without missteps. In 2018, for example, the pontiff expressed “shame” for mishandling sexual abuse allegations against Chilean clergy. And if traditionalists criticised him for going too far, for many progressives, he didn’t do enough.

And yet, over the course of his 12-year-long reign, Pope Francis emerged as one of the strongest moral voices of the time. He called for humane treatment of migrants, and was vocal about centring the needs of the poorest people and regions in the face of climate change. Pope Francis



actively sought to forge ties with the Islamic world and consistently spoke up for people living amid violence and conflict, from Ukraine and South Sudan — where he kissed the leaders' feet in 2019, as he implored for peace — to Gaza, the plight of whose embattled population he invoked in his final Easter address this Sunday. Even as the fissures of inequality and prejudice have deepened around the world, the unwavering commitment that Pope Francis displayed towards his vision for the Church and his tireless advocacy on behalf of the downtrodden will be his lasting legacy.

IN A BLACK-AND-WHITE WORLD, COLOUR ME OLO

In 1856, an 18-year-old was trying to find the cure for malaria. Instead, he found a way to create the colour purple. William Henry Perkin, a student at London's Royal College of Chemistry, dipped a piece of cloth into his mixture of coal aniline and chromic acid. The cure for malaria was still about a century away, but what Perkin did discover was a way to create the first colour in synthetic form. Researchers from UC Berkeley and the University of Washington this week made a similar discovery. They had laser pulses fired into their eyes and claimed to have found "olo", an "incredibly saturated" blue-green, a colour "never seen before by the human eye".

The discovery was made using a device called the Oz Vision System, named after Emerald City in L Frank Baum's *The Wonderful Wizard of Oz*. The colour cannot be seen by the naked eye without laser stimulation. The scientists used the Oz to stimulate only the M (medium) cone cells in the eye, allowing them to view the colour. It was named "olo" to denote the binary 010, indicating that of the three cone cells in the eye — L (long), M and S (short) — only one, the M, is stimulated.

Scientists have argued that the discovery will be helpful in better understanding colour blindness and how the human brain visualises colour. But it has also been contested because of its limited value. After all, what is a new colour when only a few people can see it? If not material or scientific value, olo certainly seems to add philosophical value to the understanding of the world. In a world given to viewing the Other in strict binaries of black and white, olo, with its blue-green timbre and contested existence, shows that there is always room for ambiguity. It also comes with a simple lesson: There is value in looking at things through someone else's eyes. You may just discover something new.

LOW SNOW LEVELS IN HINDU KUSH REGION AND A REMINDER TO BREAK THE ICE

The time snow remains on the ground during the winter months — snow persistence, in scientific parlance — in the Himalayan Hindu Kush Region (HKH) has been coming down drastically in recent years. Four of the five winters between 2020-21 and 2024-25 saw below-normal snow persistence. According to a report by the International Centre for Integrated Mountain Development (ICIMOD), released on Monday, the snow level plummeted to a record 23.6 per cent low in the winter of 2024-2025. When it melts in summer, the snow from the mountains contributes about a fourth of the run-off of the 12 major rivers in the region, including the Ganga, Indus, Brahmaputra, Mekong and Amu Darya. The winter season anomalies could, therefore, lead to reduced snow melt and, in turn, affect the water security of more than two billion people across these river basins, the ICIMOD report warns. The fall in river run-offs could have spinoffs on water availability for drinking, irrigation and hydroelectricity generation.

Low snow persistence is a classic fallout of climate change. The Himalayan region, for instance, is particularly vulnerable to high temperatures. Studies have shown that the rise in temperature in the Himalayas has exceeded the global average for at least four decades. An ICIMOD report of 2019

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



had warned that even if the global temperature rise is limited to the Paris climate pact's threshold of 1.5 degrees Celsius, the HKW region will witness a warming of 0.3 degrees Celsius. Local developments like changes in the land system — the transformation of farmlands into urban areas — have combined with broader climatic changes to drive the temperature rise. Extra-tropical storms from the Mediterranean, for instance, are known to contribute to winter precipitation in the Himalayas. But weaker western disturbances in recent years seem to have disrupted the timing of seasonal precipitation, leading to shifts in snowfall patterns.

In the coming months and years, policymakers will need a two-pronged approach to climate change. Even as they plan a transition towards greener forms of development, planners will need to find ways to shield people from the adverse effects of global warming. The ICIMOD report should occasion investments in better water management, drought-proofing agriculture, improvements in warning systems and greater regional cooperation on rivers and natural resources. The countries in the Subcontinent and China usually collaborate in global climate forums. However, riparian issues are amongst the most contentious in the region, and ecosystem-based approaches are often hostage to politics. Data-sharing mechanisms on river flows, flood and drought alert systems, even a common renewable energy grid, could reduce people's vulnerabilities in the face of melting glaciers and declining snowfall.

WHY FIRST CONFIRMED IMAGE OF THE COLOSSAL SQUID IN DEEP SEA IS SIGNIFICANT

The cephalopod was first discovered in 1925 when scientists found arm fragments from two squid in the belly of a sperm whale. Until last month, humans had not seen it in the depths of the Southern Ocean, its natural habitat.

- In the Age of Sail, when much of the world's oceans were still uncharted, the mythical Kraken, a gigantic tentacled sea monster with a taste for human flesh, was a sailor's worst nightmare. "Below the thunders of the upper deep; Far, far beneath in the abysmal sea; His ancient, dreamless, uninvaded sleep; The Kraken sleepeth: faintest sunlights flee..." wrote Lord Alfred Tennyson in his 1830 poem titled The Kraken.
- But the Kraken was not just a product of superstition. Today, it is well-known that its descriptions were probably based on sightings of real animals, namely the giant squid (*Architeuthis dux*) and colossal squid (*Mesonychoteuthis hamiltoni*), the largest cephalopods (class of marine animals including octopii and cuttlefish), and possibly the largest invertebrates in the world.
- Despite their size, these deep-sea squid remain elusive. Until very recently, a century after it was first identified and named, there was still no image of the colossal squid in its natural environment.
- This changed last month when a team of scientists, on board a research vessel in the South Atlantic, recorded a juvenile colossal squid, only a foot long, 2,000 feet under the ocean's surface. The footage taken near the South Sandwich Islands was released on April 15.

Do You Know:

- The colossal squid has long been a creature that stirred imaginations. It's believed these animals can reach up to 7 metres in length and weigh as much as 500 kilograms — that's nearly the size of a school bus and heavier than most grand pianos.



- What sets them apart from their more famous cousin, the giant squid, are the rotating hooks that line the middle of their eight arms. It's no wonder they've inspired so many sea monster stories. Until now, the only solid evidence of them came from bits and pieces found inside whales, hinting at deep-sea battles between two massive predators.
- And even now, we know remarkably little about how they live, grow, or reproduce. Young ones, like the squid that was filmed this month, appear almost see-through and delicate. As they age, their bodies become tougher, and their features more alien. Although there have been reports of dying adults being caught accidentally by fishermen, this is the first time we've seen one alive — thriving in the deep.
- As exciting as this sighting is, it raises even more questions. The Natural History Museum has often reminded us how hard it is to estimate how many of these creatures exist, or where exactly they live. As recently as 2022, scientists were still calling them “a species that straddles the line between legend and reality.”

'TEXT NECK': MOBILE PHONES ARE RESHAPING OUR SPINES

Text neck is a repeated stress injury as well as pain, sustained from excessive watching or texting on handheld devices for long periods of time. The dependence on mobile phones is increasing rapidly, and people spend long hours on their phones, which leads to various musculoskeletal problems. Individuals with this syndrome usually present with neck pain, restricted cervical range of motion, reduced muscle strength and endurance, altered cervical joint position error, along with postural alterations like forward head posture and rounded shoulders.

According to recent research, 79% of those aged 18 to 44 have their phones with them virtually all of the time, with only two hours of their waking day spent without them.

In the neutral position, an adult's head weighs 10-12 pounds. With the flexion of the head, the load increases towards the neck, and the weight is calculated to be 27, 40, 49, and 60 pounds at 15°, 30°, 45°, and 60° respectively. People who use a smartphone frequently have a downward gaze to focus lower, and keep their heads in a forward position for lengthy periods, which can cause neck strain, eventually hastening the process of ageing in the cervical spine. The symptom can result from improper workstations, poor ergonomics, inadequate breaks, and prolonged improper postures.

Common symptoms of text neck include headaches, stiffness, shoulder pain, and persistent neck pain. In more extreme situations, tingling or numbness in the fingers or arms could be present, suggesting that nerves are being squeezed.

Text neck, if ignored and untreated, can result in serious long-term consequences, such as flattening of the spinal curvature, early onset of arthritis, spinal misalignment, spinal degeneration, disc space compression, disc herniation, nerve or muscle damage, inflammation of cervical ligaments, nerve irritation, and an increase in spine curvature.

A case study

Take this case of a young IT professional. He came in with severe neck pain radiating to the right arm and to the thumb. He had developed neurological weakness in the form of a poor hand grip and an inability to extend the wrist.



An MRI revealed a huge C5/6 disc pressing on the right side of the C6 nerve root, leading to this catastrophe. He was immediately taken up for endoscopic removal of disc, decompression of the affected nerve root, followed by replacement by an artificial disc with the aim to retain movements at that level and to avoid adjacent disc degeneration. He regained all of his lost power and was pain-free immediately, and was able to rejoin work in a week.

Not all people however, end up with the above scenario, and not all require surgical intervention unless neurological weakness is detected. A personalised approach, along with community awareness are both factors that can play a vital role in the rationalisation of text neck syndrome.

Simple changes in lifestyle can often be part of the initial course of treatment. Pain can be relieved and further damage can be avoided with physical treatment, posture correction, stretching exercises, and screen time reduction. Also helpful are ergonomic workstations, supportive chairs, and regular pauses when using a laptop or phone.

Surgery might be considered in situations where the spine has sustained structural damage, such as slipped discs or significant nerve compression. It's easier to prevent text neck than to treat it. Maintaining an active lifestyle, holding displays at eye level, and encouraging proper posture can all have a big impact. In the digital age, spinal health can be significantly protected by early awareness and conscious practices.

TINY DEVICE ENHANCES PACEMAKER'S ABILITIES

Scientists at Northwestern University in the U.S. have engineered a pacemaker smaller than a grain of rice. The makers of the device say it can be implanted in a non-invasive procedure and that it doesn't need an external power source to operate. The team published its paper in Nature on April 2.

The device opens the possibility of replacing other, more cumbersome medical procedures, especially for infants born with congenital heart disease and people recovering from cardiac surgery.

People who have just undergone heart surgery need temporary pacemakers — as do infants born with congenital heart disorders. Both groups are prone to declining cardiac health and slow heart rates for some time.

The biggest highlight of the new device is its small size — so small that its developers have said it can simply be injected into the heart. While scientists at Oklahoma University had previously built a small pacemaker, the new one from Northwestern University is reportedly smaller by 2.5 times.

A traditional temporary pacemaker requires invasive open heart or endovascular surgical methods to both implant and remove.

In the four to seven days when the pacemaker is required, electrodes in larger devices also have to be integrated with the tissue, rendering their removal a non-trivial procedure for the patient. In fact, this procedure has been known to increase the risk of infections, internal bleeding or sometimes even death.

The new device has been made with bioresorbable materials, meaning that after the required duration, the pacemaker simply dissolves into the tissue, causing no harm to the person.



It has two electrodes on the bottom-most of its multiple functional layers. They interact with the body's fluids to convert chemical energy into electrical energy, like how a car battery does but at a much smaller scale. This is its power source.

Once the pacemaker is injected into the body, the patient wears a patch on the outside of the chest that relays signals to the device. If the patch detects any irregularities in the heart rate, an LED attached to it flashes infrared light at the rate at which the heart ought to beat. The pacemaker receives these light signals and adjusts its signals.

Infrared light passes through the body pretty easily — it's the same wavelength of light pulse oximeters used to elucidate blood oxygen levels, for example.

The researchers measured the delay between the flashes and the readjustment to be 25 microseconds, "far beyond the requirements for cardiac pacing," per their paper.

The researchers said many of these little pacemakers could be placed along the heart's walls to help pace the organ at multiple points. They were able to test and confirm the usefulness of the device in adult hound dogs, rats, and pigs as well as in donated human hearts.

LANDMARK AGREEMENT

After nearly three-and-a-half years and 13 rounds of meetings, member-states of the World Health Organization (WHO) have agreed on measures to prevent, prepare for and respond to pandemics. On April 16, the Intergovernmental Negotiating Body finalised a proposal for the WHO Pandemic Agreement. The draft, described as a "generational accord to make the world safer", is now ready to be adopted next month by the World Health Assembly. Though more limited in scope than the ambitious one first proposed by WHO, it is still a remarkable achievement considering the varied priorities and compulsions for the Global North and the developing countries, especially with the U.S. not a part of WHO since January. While the developed countries baulked on firm commitments to sharing diagnostics, treatments, vaccines and technology transfers, developing countries hesitated to commit to sharing pathogen samples and genome sequences without assured access to tests, treatments and vaccines developed using the shared material. The disagreements are reminiscent of how Indonesia turned the spotlight on the inequitable H5N1 sample sharing mechanism in the mid-2000s in the absence of equitable and affordable access to vaccines developed using its samples.

The first article that all countries agreed upon was the commitment to protect health-care workers better. The most remarkable achievement was in getting every country to agree on the pathogen access and benefit sharing system. Developing countries that share pathogen samples and genome sequence data are guaranteed to get access to any diagnostics, vaccines or treatments that are developed using the samples/data. Negotiations on how countries will share samples and vaccines/drugs are set to continue. Pharmaceutical companies have committed to donate 10% of their production to WHO and offer up to another 10% at affordable prices. The COVID-19 pandemic brought the inequitable vaccine distribution to the fore. Many developed countries stockpiled vaccines while many developing countries, especially those in Africa, were left waiting for vaccines. The case of vaccine manufacturers sharing the technology with developing countries during a pandemic has also been sorted out. The main debate centered around the conditions under which this transfer will happen. Countries have agreed that technology transfer will be on "mutually agreed terms", and not "voluntary" as pharma companies wanted it to be. According to the journal, Nature, besides "promoting equitable access to health products, the treaty underlines



that countries should ‘promote and otherwise facilitate or incentivise’ the exchange of technology and know-how” that will enable developing countries to make their own vaccines.

THE VACCINATION CRISIS: CHIPPING AWAY AT HARD-WON GAINS AGAINST INFECTIOUS DISEASES

Since their introduction in the late 18th century, vaccines have been critical in giving humankind the upper hand in its battle against pathogens. Infectious diseases are the cause of fewer than one in six deaths today. The availability of Covid vaccines less than a year into the pandemic marked a high point in the history of vaccination. However, the toll taken by Covid does not seem to have instilled a sense of urgency to implementing projects against infectious diseases. Immunisation drives have slackened, even in parts of the developed world. In a joint statement, on Wednesday, to mark the beginning of World Immunisation Week, the WHO, UNICEF and the Gavi vaccine alliance warned that “there has been a global uptick in outbreaks of vaccine-preventable diseases such as measles, meningitis and yellow fever”. In 2024, almost 1,400 meningitis deaths were reported across 24 countries. In the past year, 61 countries have reported measles outbreaks — the US is in the throes of its first outbreak since 2000.

A funding crisis is limiting the capacity of agencies such as the WHO to vaccinate children in poor countries and conflict zones such as Gaza. At the same time, in the US, misinformation appears to have chipped away at hard-won gains. The rate of children who have been vaccinated for measles, polio, whooping cough, and chickenpox has fallen slightly since the pandemic. However, this small decrease seems to be creating pockets of kindergarteners who no longer have herd immunity. Alaska, the worst hit by the measles outbreak, has seen a near 10 per cent drop in vaccination rates in the past two years.

In the US, the pushback against inoculation has gathered pace during Donald Trump’s presidency. Under Robert Kennedy, a known vaccine sceptic whose handling of the measles crisis has received flak — Peter Marks, the Food and Drug Administration’s top vaccine official, resigned last month calling out the US health secretary for spreading misinformation — the US health administration has starved the Centers for Disease Control and Prevention (CDC) of finances. The fund crunch has claimed its first casualty. The world’s largest study on the safety of Covid vaccines, stewarded by the New Zealand-based Global Vaccine Data Centre, was terminated a year shy of completion because the cash-strapped CDC can no longer fund it. The setback, barely two months after the US withdrew from the WHO, should lead to reflection. The fight against infectious diseases is too significant to depend on a single donor. It’s time that other countries, corporates and philanthropic groups step up.

MORE COMMON

How common are giant viruses?

For the first time in Finland, researchers have isolated a giant virus which was named Jyvaskyla virus. The discovery shows that giant viruses are more common in northern regions than researchers have thought. It also illustrates that there are still many structures whose origins and functions have not been properly studied. In recent years, giant viruses have been discovered that can be as large as bacteria. These viruses infect amoebas and other microscopic organisms. Most of the giant viruses identified so far have been found in Europe and South America, and their life cycles and distribution are poorly understood. The giant virus, named Jyvaskyla virus, was discovered when environmental samples were mixed with a culture of the amoeba Acanthamoeba



castellanii. Researchers elucidated the genome and structure of the Jyväskylä virus, which was found to be related to Marseille viruses previously isolated from France. Other new giant viruses were also detected in environmental samples.

THE MOSQUITO EFFECT: HOW MALARIAL CHAOS INFLUENCED HUMAN HISTORY

April 25 has been recognised globally by the World Health Organization (WHO) as World Malaria Day (previously African Malaria Day), since 2006 to highlight the need for continued investment and innovation. The “butterfly effect” from chaos theory might result in a Tornado, but the “mosquito effect” (through the parasite it carries) has fundamentally altered human migration patterns, enabling European colonisation and reshaping the geopolitical landscape of entire continents. The mosquito, a seemingly insignificant insect, wielded astonishing power and profoundly altered human civilisation. Malaria, derived from the Italian “mala aria,” meaning “bad air”, is a saga of discovery, colonisation, human suffering and scientific breakthroughs.

Miasma to parasite

Before modern science unravelled malaria’s secrets, people believed it was caused by miasma — poisonous air emanating from marshes. It wasn’t until 1880 that the French military doctor Alphonse Laveran identified the malaria parasite from the blood of soldiers who had died of fever in Algeria. However, identifying the parasite was just the first puzzle; the full picture of malaria’s transmission remained elusive. In 1885-86, Camillo Golgi and Angelo Celli demonstrated the cyclical nature of the fever in relation to the parasite. In 1892, Ettore Marchiafava further characterised the five species of the parasite, distinguishing *Plasmodium falciparum* from others. Of notable mention is Patrick Manson, often regarded as the ‘father of tropical medicine,’ who first established the role of mosquitoes in disease transmission with filariasis and later mentored Ronald Ross. In 1894, Manson hypothesised that mosquitoes could transmit malaria, too. Ross, inspired by Manson’s theory, identified the parasite in the gut of the *Anopheles* mosquito after studying avian malaria in birds in 1897. His breakthrough paved the way for understanding human disease. Giovanni Battista Grassi made significant contributions by linking human malaria to the female *Anopheles* mosquito in 1898. By 1898, the complete transmission cycle of malaria was scientifically understood.

Before these discoveries, European colonial efforts in Africa were severely constrained by extraordinarily high mortality rates. In coastal African colonial trade posts, European troop mortality averaged 500 deaths per 1,000 soldiers annually in the 1800s, with those venturing inland facing even worse prospects of up to 60% mortality. In 1865, a British parliamentary committee recommended withdrawing from West Africa altogether due to disease threats. When the Gold Coast (modern Ghana) became a colony in 1874, the first three candidates declined the governor’s position due to “health concerns”, and the fourth died of malaria within a month of taking office. Consequently, until 1870, European powers controlled only 10% of the African continent, with settlements primarily restricted to coastal areas. Africa was known as “the white man’s grave,” a place where European colonial ambitions perished.

The correlation between understanding malaria and colonial expansion is striking. As scientists decoded malaria’s mysteries between 1880 and 1900, European powers dramatically expanded their control across Africa. Following the 1884 Berlin Conference, which regulated European colonisation and trade in Africa, the “Scramble for Africa” accelerated rapidly. By 1914, European powers had seized control of nearly 90% of the continent, with only Liberia, Ethiopia, and a few more maintaining independence. This was no coincidence. With knowledge about malaria



transmission, colonial administrators implemented targeted prevention strategies for European settlements: draining mosquito-breeding swamps, establishing segregated European quarters, and creating hill stations at higher elevations with fewer mosquitoes. Scientific findings about malaria transmission quickly percolated into colonial policy. By 1901, the British adopted a policy of segregated living based on new knowledge about *Anopheles* mosquitoes and the racist perception of Africans as disease reservoirs.

Scramble for Africa

King Leopold II of Belgium epitomised this exploitation in the brutal colonisation of the Congo. Equipped with quinine, mosquito nets, and a scientific understanding of malaria, European troops subdued resistance and established lucrative colonies. Quinine, derived from the bark of the Cinchona tree, was discovered during Portuguese conquests in South America. Its use post-1880s was guided by scientific understanding. But, the success of colonizing Africa was not purely biological. Innovations and technology to build railroads, steamships, enhanced rifles, and telegraphs helped navigate and control vast territories. But, knowledge about malaria transmission was the “keystone technology”. It neutralised nature’s deadliest resistance, allowing soldiers to survive and civil servants to administer colonial machinery.

The impact of malaria extended beyond Africa. In the trans-Atlantic slave trade, Africans with a natural genetic resistance to malaria were preferred labour in malaria-infested regions like the Caribbean and the Americas. Consequently, they were traded at higher prices than European labourers, who died of the disease. It created a racialised labour economy, the aftershocks of which echo even today. The modern racial tensions in American and European societies bear this genetic legacy. The valuation of African bodies not only established brutal slavery systems but also seeded pseudo-scientific justifications for racial superiority. Thus, malaria contributed to the present long-standing racial prejudices and social structures.

Malaria today

With quinine as a base, more refined drugs like chloroquine and artemisinin followed. Insecticide-treated bed nets and indoor spraying revolutionised prevention. Today, the malaria vaccine RTS,S brings new hope, though challenges persist. Malaria remains treatable, but Africa still shoulders 94% of the global burdens (as per the WHO World Malaria Report 2024). Beyond medicine, malaria is increasingly considered in modern environmental impact assessments. Deforestation, water stagnation, and climate change influence mosquito habitats, making disease control part of ecological planning.

Today, malaria continues to afflict approximately 263 million people annually, killing over 600,000, with Africa reporting 95% of the mortality. Although the death toll has decreased substantially, in absolute numbers, malaria remains a major public health challenge. The history of the discovery of malaria transmission is a powerful reminder that scientific breakthroughs can have complex and contradictory impacts. The discoveries that eventually saved millions of lives also enabled colonial exploitation.