

CURRENT AFFAIRS FOR UPSC

18 to 24 May 2025



DreamIAS



INTERNATIONAL

PERMANENT DAMAGE

Civic life in the United States stands on multiple, strong and independent institutions in different fields. These institutions, whether constitutionality mandated or not, have a continuity, life and standing of their own, beyond particular individuals. They enable diversity and pluralism, and provide protection against arbitrary decisions by those in power. Ironically enough, U.S. President Donald Trump is intent on damaging its oldest and wealthiest educational institution — Harvard. After harassing the institution with investigations, orders to turn over records, and freezing funds and grants running to hundreds of millions of dollars, the U.S. government has said that Harvard cannot enrol foreign students in 2025-26. Some 6,800 international students, including more than 750 from India, constitute more than 27% of its current student strength. They will have to transfer to other institutions within the U.S. or leave, as per the government, which does not want any new international student there in 2025-26 either. The U.S. government has said that the student visa programme is a privilege that it has granted and Harvard “relies heavily” on foreign students to “build and maintain their substantial endowment”, which is said to run to over \$55 billion. And it sees foreign student visas and tax-exempt status as weapons in its arsenal against Harvard.

Across the world, the authoritarian’s playbook for pluralistic societies is to identify an enemy against whom a campaign is unleashed based on real and imagined grievances. The campaign keeps the “enemy” in a state of disarray, even turmoil, with long-term damage and a chilling effect. Though sullied by unsavoury links, from the Salem witch trials to Enron, Harvard attracts some of the brightest talent from across the world and trains them for leadership roles in their chosen fields. It represents liberalism and knowledge creation that advances globalisation. Mr. Trump’s working and middle class support base looks at Harvard as one among elitist vehicles of globalisation that have excluded them while promoting affirmative action for minorities, especially African-Americans. While lineage and family background of prospective students are a factor for Harvard, an extensive scholarship programme seeks to balance that. Harvard has said that it will go to court against the government’s move just as it sued the Trump administration for freezing government funds. While the courts may well stay the ban, the damage has been done not just to Harvard but also to the image of American higher education and democratic principles. It is damage that cannot be easily remedied.

COURT BLOCKS TRUMP’S ORDER BARRING FOREIGN STUDENT ENROLMENT AT HARVARD

A federal judge on Friday blocked the Trump administration from cutting off Harvard’s enrolment of foreign students, an action the Ivy League school decried as unconstitutional retaliation for defying the White House’s political demands.

In its lawsuit filed earlier on Friday in federal court in Boston, Harvard said the government’s action violates the First Amendment and will have an “immediate and devastating effect for Harvard and more than 7,000 visa holders.”

“With the stroke of a pen, the government has sought to erase a quarter of Harvard’s student body, international students who contribute significantly to the University,” Harvard said in its suit. “Without its international students, Harvard is not Harvard.”



The temporary restraining order was granted by U.S. District Judge Allison Burroughs.

The Trump administration move has thrown campus into disarray days before graduation. International students who run labs, teach courses, assist professors and participate in Harvard sports are now left deciding whether to transfer or risk losing legal status to stay in the country, according to the filing. The impact is heaviest at graduate schools such as the Harvard Kennedy School, where almost half the student body comes from abroad, and Harvard Business School, which is about one-third international.

Along with its impact on current students, the move blocks thousands of students who were planning to come for summer and fall classes.

Disadvantage

Harvard said it immediately puts the school at a disadvantage as it competes for the world's top students. Even if it regains the ability to host students, "future applicants may shy away from applying out of fear of further reprisals from the government," the suit said.

AMNESTY SLAMS PAST MONTH'S U.S. STRIKE ON MIGRANT CAMP IN YEMEN

Rights group Amnesty International urged the United States on Monday to investigate possible violations of international law in a deadly strike on a migrant detention facility in rebel-held Yemen.

Last month's attack, which prompted international alarm and was part of the U.S. bombardment campaign against the Iran-backed Houthis, killed 68 people held at a centre for irregular migrants in Saada, the rebel authorities said at the time.

Agnes Callamard, Amnesty's secretary-general, said that "the U.S. attacked a well-known detention facility where the Houthis have been detaining migrants."

The dead were all migrants from African countries, the Houthis had said.

To Ms. Callamard, "the major loss of civilian life in this attack raises serious concerns about whether the U.S. complied with its obligations under international humanitarian law."

"The U.S. must conduct a prompt, independent and transparent investigation into this air strike," she added.

A U.S. defence official had said in the aftermath of the strike that the military launched "battle-damage assessment and inquiry" into "claims of civilian casualties related to the US strikes in Yemen".

Amnesty cited people who work with migrants and refugees in Yemen and visited two hospitals that treated the victims, saying that they had seen "more than two dozen Ethiopian migrants" with severe injuries including amputations. The morgues at both hospitals had run out of space, the witnesses told Amnesty.

In mid-March, the U.S. began an intense, near-daily military campaign against the Houthis after they had renewed threats to attack vessels in the vital Red Sea and Gulf of Aden shipping lanes.

The campaign ended with a U.S.-Houthi ceasefire agreement earlier this month.



The Houthis, who control large swathes of Yemen, began firing on Israel and Israeli-linked shipping in November 2023, weeks into the Gaza war.

NO CEASEFIRE

Ukrainian and Russian officials met up in Istanbul, Türkiye, last week, their first direct meeting since March 2022, the year when Russia invaded Ukraine. Little was achieved except for one agreement on swapping 1,000 prisoners of war each. The Ukrainian delegation rightfully complained that Moscow had made “new and unacceptable demands”. Russia’s posturing, however, seems to be a consequence of the dithering by Kyiv’s key ally, the U.S. In the run-up to the meeting, Kyiv, which has been on the back foot in the conflict, losing substantial territory in the east and reeling under failures such as the retreat from the Kursk offensive, had sought a 30-day ceasefire — an outcome that the U.S. was also pushing. While the U.S. has been discernibly less enthusiastic about continuing to arm and support the Ukrainians, during Donald Trump’s second term in the White House, Kyiv’s European allies had urged Moscow to agree to the ceasefire, or face increased sanctions and the transfer of weapons to Ukraine. After pushing Kyiv to the meeting without the ceasefire as a precondition, Mr. Trump had said on the eve of the Istanbul meet that it would not yield anything until he met directly with Russian President Vladimir Putin. True to his mercurial nature, he went on to say that the conditions of a peace deal — which he has been pushing as a means for the U.S. to exit the conflict — could only be negotiated between Russia and Ukraine, with possible help from the Pope.

Amid this diplomatic uncertainty from Washington, the Russians have shown no inclination to back down from their maximalist demands on rejecting security guarantees for Ukraine in the event of a truce, and for its demilitarisation. This week, Russia continued to launch a barrage of attacks. Kyiv did manage to rally its European allies to support it militarily while imposing fresh sanctions on Russia. But the Ukrainian regime’s precarity in its eastern regions is evident with Russia continuing to hold on to significant territory and gaining ground in fresh incursions from the east. With Mr. Trump showing scant regard towards taking a consistent position, and seemingly staking out a line that is different from that of the Europeans, Kyiv might be left with a Hobson’s choice — accommodate some of Russia’s territorial demands to begin the process of peace or endure the attritional war with limited support. Mr. Putin might have seized the upper hand in the geopolitical dynamics of the war, but its effects have been devastating for Moscow as well. Reason suggests that peace would yield greater dividends than continuing an illegal invasion and this should allow for a fresh impetus for talks leading to a ceasefire. The ball is in the Kremlin’s court.

ISRAEL’S ISOLATION

The joint statement by the leaders of Canada, France and the United Kingdom, and announcements by the U.K. and the EU to pause trade talks with Israel are proof that the Netanyahu government is growing more isolated over its brutal campaign on Gaza. Since the ceasefire ended on March 18, over 3,000 residents have been killed in the enclave, according to the Gaza Health Ministry. Israel’s chokehold on aid and humanitarian supplies has pushed thousands to the brink of starvation, a fact that even Donald Trump, President of Israel’s all-time ally, the U.S., referred to during a trip to West Asia last week. Mr. Trump’s decision to skip Israel was seen as a mark of his displeasure with Prime Minister Benjamin Netanyahu’s policy on the issue. Despite the rebukes, Mr. Netanyahu has said Israeli Defence Forces needed to continue to target Hamas operatives in the area, and added that Israel would now re-take full “military control” of the Gaza strip, which the



IDF had vacated in 2005. The comments provoked an angry response from the leaders of Canada (Mark Carney), France (Emmanuel Macron), and the U.K. (Keir Starmer), all of whom had pledged their support to Israeli actions in response to the October 7, 2023 terror attacks. They called the level of human suffering in Gaza “intolerable” and Israel’s escalation of bombardment a “disproportionate” response, condemned the Israeli leadership for threatening to evict all Palestinians forcibly from the strip, and recommitted to a “two-state solution” for Israel and Palestine, to be discussed at a United Nations conference in June. Significantly, the three countries even threatened sanctions against Israel. Mr. Netanyahu’s response, to accuse the three leaders of handing Hamas a “huge prize”, and vowing not to stop “until total victory is achieved”, indicates that he still believes that he can continue without being checked.

It is time for the international community to speak up so that Mr. Netanyahu does not think he can get away with what international agencies are calling genocide. New Delhi has notably thus far not issued any statement. This silence may be because of its own preoccupation with Pakistan and due to Israel’s unequivocal support over Operation Sindoor. There is no link or equivalence between the two situations, however. Too many lives have been lost in the incessant bombardment by Israel of an area of two million people. Despite the depredations, Israel has not, with any clarity, met its objectives of bringing back the hostages or of wiping out Hamas’s presence there yet. Mr. Netanyahu has tried to frame his government’s actions as a “war of civilisation over barbarism”, but it is he who must consider how much this direction-less war that appears to punish the weakest and most defenceless the most resembles the latter more than the former, as the numbers of supporters for this war diminish worldwide.

CAN NEW CALEDONIA GAIN INDEPENDENCE FROM FRANCE?

The story so far:

A high-stakes attempt by French Overseas Minister Manuel Valls to broker a new political accord for New Caledonia collapsed on May 8, plunging the French Pacific territory into profound uncertainty.

What is its current status?

For decades, New Caledonia, a French island territory of approximately 2,71,400 people in the southwest Pacific Ocean, has been on a complex journey regarding its status. The 1998 Nouméa Accord, born from a history of colonial tensions and a near civil war in the 1980s, explicitly recognised the “trauma” inflicted upon the indigenous Kanak people. It also led to three referendums on independence, in 2018, 2020 and 2021, of New Caledonia from France. While all three rejected independence, the final vote was boycotted by pro-independence parties and its legitimacy has been contested.

Why is independence still a demand?

New Caledonia’s modern history began with its seizure by France as a penal colony in 1853. Despite attempts to ease colonial rule, such as granting French citizenship to all inhabitants in 1957, deep divisions persisted, culminating in the 1984-1988 conflict. The Kanak and Socialist National Liberation Front (FLNKS) emerged during this period as a powerful political force, advocating for complete independence.

The 1998 Nouméa Accord was a landmark compromise. It established a unique sui generis status for New Caledonia within the French Republic. It granted the territory significant autonomy,



including its own Congress with law-making powers, and incorporated “New Caledonian citizenship” which restricted voting rights to long-term residents, a key provision for Kanak political representation.

However, due to the FLNKS boycott of the last independence referendum, over COVID-19 and customary mourning periods, the final solution to New Caledonia remained uncertain.

Why did recent talks fail?

The period following the contested 2021 referendum was marked by heightened tension, which exploded in May 2024 over a French proposal to “unfreeze” the electoral roll (to change rules which restrict voting rights to only long-term residents). The ensuing riots, the worst in decades, resulted in 14 deaths, and hundreds injured. In this volatile context, the French government, through Mr. Valls, intensified efforts to find a “third way” — a new institutional status that could offer a form of sovereignty without complete traditional independence.

Mr. Valls’s mission aimed to facilitate dialogue between FLNKS and loyalist factions towards such a consensual outcome. The concept of “sovereignty in partnership” became central. This envisioned New Caledonia gaining enhanced international recognition and control over most aspects of governance such as the judiciary, but with an immediate, negotiated delegation of the exercise of these powers back to France.

However, this path was abruptly blocked on May 8. During the negotiations, the proposal was decisively rejected by hardline loyalist factions in the island. They deemed the “sovereignty in partnership” model as tantamount to disguised independence. Instead, these loyalist groups proposed a form of partition, with the pro-independence North and Loyalty Islands provinces having an association status, while the wealthier, loyalist-majority South Province would remain fully French. This solution was found unacceptable to both the French state, which upholds New Caledonia’s indivisibility, and the independents who called this “paramount to apartheid”.

The failure of the talks has significantly amplified the obstacles. The immediate challenge is the upcoming provincial elections, due by November 2025, which will now proceed without a prior political agreement on the territory’s future.

AFTER BEIJING MEET, PAK SAYS CPEC WILL BE EXTENDED TO AFGHANISTAN

THE CHINA-PAKISTAN Economic Corridor (CPEC) is set to be expanded to Afghanistan with the foreign ministers of the three countries agreeing on it as part of broader efforts to boost “trilateral” cooperation.

— The announcement on expansion of CPEC was made following a meeting among Chinese Foreign Minister Wang Yi, his Pak counterpart Ishaq Dar and Afghan Acting Foreign Minister Amir Khan Muttaqi in Beijing, according to a Pakistani readout.

— India has been severely critical of the CPEC as it passes through Pakistan-occupied-Kashmir. New Delhi is also opposed to China’s Belt and Road initiative as the project includes the CPEC.

— The trilateral meeting was held on the concluding day of Dar’s three day visit to Beijing, the first high-level interaction after India launched Operation Sindoor targeting terror sites in Pakistan and Pakistan-occupied Kashmir (Pok) on May 7 in response to the April 22 Pahalgam terror attack that killed 26 people.

**Do You Know:**

- China-Pakistan Economic Corridor (CPEC) is a part of China's Belt and Road Initiative (BRI).
- In 2023, China's ambitious infrastructure funding project, the Belt and Road Initiative (BRI) marked a decade since it was first outlined by President Xi Jinping.
- President Xi Jinping announced the Silk Road Economic 'Belt' during his visits to Kazakhstan in 2013. The 'Belt' plan was to revitalise a series of trading and infrastructure routes between Asia and Europe. Connectivity through Central Asia was a key element of the initiative.
- Subsequently, President Xi announced a sea trade infrastructure called the 'Road'. This maritime 'Road' would connect China with Southeast Asia, Europe, and Africa. The major focus has been to build ports, bridges, industry corridors, and other infrastructure throughout Southeast Asia and the Indian Ocean.
- For some time, together these initiatives were referred to as the One Belt One Road Initiative (OBOR). Since 2015, it has been mostly referred to as the BRI.
- India's position on the BRI has remained relatively consistent since 2013. From the beginning, India had reservations about the BRI – mainly due to sovereignty-related issues, as the China-Pakistan Economic Corridor (CPEC) goes through the Pakistan-occupied Kashmir (PoK), and geopolitical implications of projects in the Indian Ocean.



DreamIAS



NATION

UNDERSTANDING INDIA'S RELATIONSHIP WITH TURKEY AND AZERBAIJAN

Following Türkiye and Azerbaijan's support for Pakistan after India's military confrontation in the wake of the Pahalgam massacre, many online travel platforms reported a sharp spike in cancellations of tour bookings to these countries. Many Indian tour operators withdrew offers and promotional packages for trips to Türkiye and Azerbaijan. On social media, calls to "boycott" both countries gained traction. Institutions such as IIT Bombay, IIT Roorkee, and Jawaharlal Nehru University suspended MoUs with some Turkish universities.

Data show that the relationship between Pakistan and Türkiye has been strengthened by arms trade. The two countries have also shown reciprocal support during past geopolitical standoffs. For instance, Türkiye has backed Pakistan on the Kashmir issue, while Pakistan has supported Türkiye in disputes related to Cyprus.

Similarly, in 2020, it was with Turkish backing that Azerbaijan captured much of the Armenian-populated enclave from Armenia. Though Azerbaijan regained full control of the region in 2023, Türkiye denied any direct involvement in that year's operation.

Data from the Stockholm International Peace Research Institute (SIPRI) shows that Türkiye has been exporting arms to Pakistan since the 1990s. Chart 1 shows Türkiye's arms exports to Pakistan between 1995 and 2023 by category and volume. A significant share of this trade comprised artillery — defined as naval, fixed, self-propelled guns, howitzers, and multiple rocket launchers. Pakistan also received armoured vehicles from Türkiye, including tanks, armoured cars, and personnel carriers.

India has supplied weapons to Armenia (Chart 2). Most of these exports comprise surface-to-air missile systems and a few multiple rocket launchers. In contrast, SIPRI data shows no official arms transactions between India and Azerbaijan, or India and Türkiye.

Last week, some Indian trader associations passed resolutions to boycott all forms of trade and commercial engagement with Türkiye and Azerbaijan. However, data suggests that even if this escalates into an official trade ban, India stands to lose little. Crude oil is the primary import from both countries, but their combined share in India's total crude imports has remained below 1% over the past six years (Chart 3). In contrast, Azerbaijan could face a greater impact, as India was its third largest destination for crude oil as of 2023.

Another major import from Türkiye is machinery and mechanical appliances, including nuclear reactors, boilers, and related parts. But even in this category, Türkiye accounts for only about 1% of India's total imports (Chart 4). India remains far more dependent on countries such as China and Germany for such equipment.

While calls to boycott Türkiye and Azerbaijan have led to "mass cancellations" of travel bookings from India, data shows that Indian tourists formed less than 1% of all tourists to Türkiye in 2024. That said, the number of Indian visitors to Türkiye has been rising steadily in recent years (Chart 5).

In 2023, Indians made up less than 6% of all tourists in Azerbaijan, but this share rose to around 10% in 2024. The boycott calls, therefore, come at a time when Indian travel to both these countries was on the rise (Chart 6).



The number of Indian students pursuing higher education in Turkey and Azerbaijan has also increased in recent years. In 2017, the number of Indian students in these countries was less than 100. As of January 2024, it increased by at least seven times (777).

TRADE DIPLOMACY

In an escalation of bilateral trade-related tensions, India recently announced restrictions on readymade garments and other specified commodities from Bangladesh. The Directorate General of Foreign Trade's announcement targeting Bangladesh's vital apparel sector sent an unmistakable signal that deteriorating political relations have now spilled over into economic ties. By specifically denying Bangladeshi goods access to India's northeast market, New Delhi has delivered a pointed message to Mohammed Yunus, Bangladesh's interim leader, who during his visit to China in March 2025 had invited Chinese access to India's northeast through Bangladesh, describing the northeast as landlocked. While India's discomfiture about Bangladesh-China discussions regarding India's northeast is understandable, this trade restriction may hurt Bangladeshi businesses, largely dependent on garment export, but will do little to aid New Delhi's strategic interests. Bangladesh's recent political turmoil stems from protests against its former elected government, and the interim leadership — struggling with resistant bureaucracy and ongoing instability — has blamed New Delhi due to its perceived close ties with the previous administration led by Sheikh Hasina. The Yunus-led administration's warming up to Pakistan, and its ban on the Awami League — actions that go against its promises to the international community — have worsened relations. The imperative for New Delhi must be to come up with a deft outreach to other political parties in Bangladesh as they prepare for elections. While Mr. Yunus had announced that elections will be held later this year, there is still no clarity on the date.

New Delhi must, in consonance with the rest of the international community, advise the regime to conduct elections quickly. A political gesture of this nature while engaging with multiple stakeholders in Bangladesh's polity is more appropriate than using restrictive moves related to trade, as this would only heighten the anti-India sentiment being fanned by some elements in Bangladesh after the Awami League government's exit. Such radical elements, many of whom have little investment in the restoration of democratic processes, could also create fresh law and order problems that could lead to security issues in the northeast. India should carefully lay out its response keeping in mind that while it has to communicate its displeasure to the Yunus government, it also has to maintain working relations with this administration till a popularly elected government takes charge in Dhaka.

AS TRADE TIES WITH INDIA FRAY, BANGLADESH PIVOTS & CHINA GAINS GROUND

With Bangladesh set to graduate from the United Nations' Least Developed Country (LDC) category in November 2026 — a move that will end its duty-free access to export markets such as the European Union, posing fresh challenges — the country has begun a sharp economic pivot away from New Delhi towards Beijing, thereby straining trade ties with India.

- Political and economic tensions between India and its largest trade partner in South Asia are growing, as the union government on Saturday decided to impose a number of import restrictions on goods from Bangladesh — particularly ready-made garments, the country's largest export item and a key source of foreign exchange.

- This follows early signs of deteriorating ties between two countries, when New Delhi in April decided to terminate the five-year-old transshipment facility for Bangladesh's export cargo — a



mechanism that helped Dhaka smoothly ship its goods to several Western countries using Indian land routes and airports.

- While government sources say that Saturday's import restrictions and the termination of the transshipment facility are a result of similar restrictions imposed by Dhaka and port congestion caused by goods from Dhaka respectively, Bangladesh's Chief Adviser Muhammad Yunus — an economist and Nobel laureate who has suggested expanding the influence of the Chinese economy around India's strategically important Northeast region — has contributed to worsening India-Bangladesh trade relations.
- However, this fits squarely into China's broader strategy to limit India's influence, as India chose not to join the China-led Regional Comprehensive Economic Partnership (RCEP) agreement and is positioning itself as an alternative manufacturing destination by pursuing closer economic integration with the US, UK, EU, and the European Free Trade Association (EFTA) region.
- New Delhi has decided to restrict garment imports from Bangladesh as it is looking to attract labour-intensive jobs in the sector. This comes as India's textile sector could see a push due to the free trade agreements. India has already received duty-free access to the UK market for its garment exports and has sought similar access in its trade deals with the EU and US.
- Think tank Global Trade Research Initiative (GTRI) said that Indian textile firms have long protested the competitive edge enjoyed by Bangladeshi exporters — who benefit from duty-free Chinese fabric imports and export subsidies — giving them a 10–15 per cent price advantage in the Indian market.

Do You Know:

- A government official said that Bangladesh has recently imposed port restrictions on exports of Indian yarn via land ports, allowing Indian yarn exports only via seaports. This has ostensibly been done in response to demand by Bangladeshi textile mills, even though the land route offers the quickest and cheapest yarn supply to the ready-made garments industry in Bangladesh, the official said.
- China has been rapidly increasing its influence on South Asian countries, particularly Bangladesh. For instance, China has allowed 97 per cent of Bangladeshi goods duty-free access to its domestic market since June 2020. More importantly, it is helping the country diversify its export base and move its industry up the value chain.
- According to the Carnegie Endowment for International Peace, the largest number of infrastructure projects developed with Chinese help in South Asia are in Bangladesh. Bangladesh is China's second-largest buyer of military hardware globally, accounting for almost one-fifth of China's total exports between 2016 and 2020. Chinese arms make up over 70 per cent of Bangladesh's major arms purchases, according to a 2020 report by the Stockholm International Peace Research Institute.

DID TRUMP CROSS THE LINE ON KASHMIR ISSUE?

U.S. President Donald Trump's repeated claims that the U.S. mediated the May 10 India-Pakistan ceasefire has been sternly denied by the Ministry of External Affairs, including by External Affairs Minister S. Jaishankar, and has raised questions about the impact of the comments on India-U.S. bilateral ties. However, far more than Mr. Trump's incredible assertions that he threatened Delhi



and Islamabad with cutting trade in order to talk them back from a “nuclear conflict”, his references to the Kashmir dispute have been a cause for worry.

Why have the comments caused uproar?

The U.S. President was among the first leaders to call Prime Minister Narendra Modi to condemn the Pahalgam terror attack. Yet, once Indian airstrikes on terrorist infrastructure in Operation Sindoor intensified into an India-Pakistan conflict, Washington joined countries like Saudi Arabia, the UAE and Iran to push for a halt in hostilities. Half an hour before the ceasefire was announced by Foreign Secretary Vikram Misri, Mr. Trump took to his account, claiming credit for a “U.S.-brokered” ceasefire. Later, in media meets, he lavished praise on “both great nations”, promised to increase trade with them, and offered to mediate to resolve the Kashmir issue, erroneously saying it was “a thousand years old” dispute (it dates back to 1947). With his statement, elements of which he repeated in remarks at the White House; at an investors conference in Riyadh; speaking to U.S. troops in Doha; and in an interview, Mr. Trump crossed all the red lines of Indian foreign policy when it comes to Pakistan and Jammu & Kashmir. These can be summed up as no third-party mediation, no hyphenation with Pakistan, no internationalisation of the Kashmir issue and focussing on terrorism as the core concern.

What does internationalisation mean?

India’s first Prime Minister Jawaharlal Nehru is accused of the original internationalisation of the Kashmir dispute after India went to the United Nations Security Council against Pakistan’s illegal acquisition of Pakistan-Occupied Kashmir (PoK) in December 1947. An offer by Nehru to hold a plebiscite for the Kashmir Valley was contingent on Pakistan vacating PoK, and was shelved thereafter. However, as diplomat Rajiv Dogra points out in his book *India’s World: How Prime Ministers Shaped Foreign Policy*, Nehru made it clear in Parliament that he had only asked to end Pakistan’s aggression, not to seek arbitration or “adjudge the validity of Kashmir’s accession or to determine where the sovereignty lay,” but the UN broadened its scope of enquiry.

Since then, India and Pakistan have fought wars, and held talks over the issue, with no resolution. In 1972, after Pakistan suffered a humiliating defeat with the liberation of Bangladesh in 1971, Pakistan PM Zulfikar Bhutto is understood to have assured Prime Minister Indira Gandhi that the Simla accord they signed would lead to a bilateral resolution of Kashmir along the Line of Control, but then never kept the promise. In 1994, in the wake of the insurgency in J&K backed by Pakistan, Parliament passed a resolution taking a firm line: it called the State an “integral part of India”, and said Pakistan must vacate the areas of the Indian State of J&K.

After the 2019 re-organisation of J&K following the amendment of Article 370, Pakistan tried to internationalise the issue again. While it was largely unsuccessful, Pakistan, with China’s support managed to hold a UNSC closed-door meeting on “the volatile situation surrounding Kashmir”, for the first time in 50 years.

However, post 2019, the Narendra Modi government, which did negotiate with the Imran Khan government for the Kartarpur corridor and the 2021 LoC ceasefire, drew another line: that the only India-Pakistan talks on Kashmir henceforth would be for the return of PoK. While the position seemed maximalist, it was the outcome of decades of frustration at Pakistan’s refusal to keep its commitments on the LoC and cross-border terrorism.



Has any third-party ever mediated before?

The Simla accord made the UN process that Nehru invoked irrelevant. Global powers have been more difficult to keep out of trying to intervene, however. Whenever tensions between India and Pakistan run high, countries like the U.S., the U.K., the UAE and Saudi Arabia establish parallel lines to both capitals, carrying messages between them until there is a pause in the military action, as was the case after Operation Sindoor. The more notable attempts at mediation were by the Soviet Union which hosted ceasefire talks to end the 1965 war, resulting in India and Pakistan signing the Tashkent Declaration.

During the Kargil war in 1999, U.S. President Bill Clinton tried to call PM Atal Bihari Vajpayee to Washington to meet PM Nawaz Sharif, but Mr. Vajpayee told Parliament that he refused the offer. On a day-trip to Islamabad, after his visit to Delhi in 2000, Mr. Clinton then gave a radio address saying the U.S. would not mediate on the Kashmir conflict, but would encourage the two sides for bilateral dialogue, which remained the U.S.'s position until 2019. The U.S. did help in confidence-building measures on Kashmir, as India and Pakistan held direct talks through envoys from 2003-2008 on the idea of "making borders irrelevant" by turning the LoC into a more permanent boundary, but Washington didn't publicise them. After the Balakot strikes of 2019 however, President Trump, who was in his first term, announced that he had negotiated the release of Wing Commander Abhinandan Varthaman, who had been captured in Pakistan. He subsequently offered mediation on Kashmir during a press conference with Imran Khan, but was snubbed by Delhi.

Is direct dialogue with Pakistan a possibility?

Most avenues of direct dialogue with Pakistan have been closed since 2015 when External Affairs Minister Sushma Swaraj visited Islamabad. India's suspension of the Indus Waters Treaty and closure of the Kartarpur corridor to Pakistan during the recent crisis closes more channels of communication other than those between security forces at the border. Meanwhile, the back-channel between NSA Ajit Doval and his Pakistani counterparts has been used more for conflict management, like after the Pathankot terror attacks (2016), or the accidental firing of an Indian missile into Pakistan (2022). Pakistan PM Sharif's latest call for talks has been met with cold rebuff from Delhi. Mr. Modi's "new normal" outlined in an address to the nation says any talks with Pakistan will be about terrorism, and the return of PoK, which at present seem impossible conditions for Islamabad. However, as India and Pakistan have learned over the decades, not talking has also not resolved the perennial issues between them, and the absence of direct talks often causes a vacuum that other countries seek to fill by offering to mediate. For now, India's focus will remain on globalising its fight against terrorism, without internationalising the Kashmir issue in any way.

SHOULD WATER BE USED AS A WEAPON?

The story so far:

All is fair in love and war is a phrase that has literary roots and rhetorical appeal, suggesting that in matters of passion and conflict, rules can be discarded, and morality suspended. But in the realpolitik of nation-states, especially when it comes to shared natural resources, such romantic notions may be specious. Water, unlike territory or ideology, is not merely a symbol of sovereignty — it is a lifeline. Now that India has held the Indus Waters Treaty (IWT) with Pakistan in abeyance, in the aftermath of the Pahalgam terrorist attack, the question is not only about what is fair but



also about what is legal and sustainable. Can water be wielded as a weapon without collateral damage to international credibility and long-term national interest?

What is the history of the treaty?

The IWT was born not out of goodwill, but necessity. In 1947, the Partition carved two nations out of British India but left the rivers of the Indus basin awkwardly distributed. The headworks of the system — crucial for irrigation — fell within Indian territory, while Pakistan was downstream and entirely dependent on river flows. When India briefly halted water supply to Pakistan in 1948, alarm bells rang across the region. It was in this context that the World Bank stepped in to mediate what has now become one of the most successful water-sharing agreements in modern history.

Signed in 1960, the IWT allocated the eastern rivers — the Ravi, Beas, and Sutlej — to India, and the western rivers — the Indus, Jhelum, and Chenab — to Pakistan, while allowing India certain non-consumptive uses such as generating hydropower, provided they meet stringent design and operational conditions. It was a carefully calibrated compromise that reflected not just geography, but also the broader imperative of regional stability.

The treaty has withstood three major wars (1965, 1971, and 1999), repeated border skirmishes, and complete diplomatic breakdowns. Its durability lies in its technical framing and the insulation it provides from political upheavals. Annual meetings between the Permanent Indus Commissions continued even during times of war. The IWT's dispute resolution mechanism — which includes bilateral consultations, neutral expert analysis, and, if needed, mediation through a Court of Arbitration — has enabled the treaty to function despite deep mistrust between the two countries.

Yet in recent years, the insulation of the IWT from larger geopolitics has come under increasing strain.

What about India's hydro-infrastructure development projects?

India's renewed scrutiny of the IWT has come in the wake of terrorist attacks which have been claimed by Pakistan-based groups. The 2016 Uri attack and the 2019 Pulwama bombing catalysed calls from within India to re-examine the treaty. Some voices, particularly in political circles, suggested that water could be used as leverage, arguing that it was morally untenable to continue honouring an agreement with a state that encourages cross-border terrorism.

This shift in tone has coincided with India's increasing hydro-infrastructure development in Jammu and Kashmir. Projects like the Kishanganga (on the Jhelum) and Ratle (on the Chenab) hydroelectric plants have been flashpoints of contention between both countries. While India insists these are compliant with treaty provisions, Pakistan argues that the design features give India excessive control over water flows, especially during the lean season — potentially threatening Pakistan's agricultural and ecological security.

Pakistan has, therefore, invoked the IWT's adjudicatory mechanisms. In the Kishanganga dispute, Pakistan challenged India's diversion of water to a power plant. The Court of Arbitration, constituted in 2010, ruled in 2013 that India could proceed with the diversion, provided that it maintained a minimum downstream flow. The court also imposed limits on how India could manage its reservoirs.

In the Ratle case, a fresh procedural conflict emerged. India sought the appointment of a neutral expert, considering it a technical issue while Pakistan wanted a Court of Arbitration. In 2016, the World Bank, tasked with administering the treaty's dispute process, paused both requests to avoid



parallel proceedings. However, in 2022, it allowed both to go forward, prompting India to boycott the arbitration proceedings while participating in the neutral expert process.

This precedent is significant. It confirms that the legal architecture of the IWT is not only active but likely to be triggered again if India were to withdraw from the treaty. Far from giving India decisive leverage, such a move could backfire by inviting a flurry of legal, diplomatic, and reputational consequences.

Can a third party mediate?

India has long maintained, especially since the Simla Agreement in 1972, that all disputes with Pakistan must be resolved bilaterally. This has been New Delhi's consistent position, particularly with regard to third-party mediation on Kashmir.

However, the IWT predates the Simla agreement and contains its own provisions for third-party adjudication. Neutral experts and arbitrators are not external interlopers but treaty-sanctioned mediators agreed upon by both parties. India's participation in the Kishanganga arbitration and the neutral expert process for Ratle — however begrudgingly — acknowledges this reality. The invocation of the Simla agreement cannot nullify what the IWT permits.

What about other such disputes?

Inter-country water disputes are not unique to South Asia. Europe, too, has witnessed water tensions, particularly in the aftermath of war. After World War I, disputes arose between Hungary and Czechoslovakia over the use of the Danube river. These were largely managed through negotiated settlements under the League of Nations framework. More recently, the Gabčíkovo–Nagymaros case between Hungary and Slovakia, related to a dam project on the Danube, was taken to the International Court of Justice (ICJ). The ICJ ruled in 1997 that both parties had breached aspects of their treaty obligations and urged cooperative implementation. Though slow, the resolution process underscored the importance of legal frameworks over unilateral action.

Another example is the Mekong river dispute in Southeast Asia. Countries like Laos, Cambodia, Vietnam, and Thailand share this crucial river, and tensions have flared over hydropower projects. Yet the Mekong River Commission, a multilateral framework for dialogue, has helped avert conflict through transparency and data-sharing.

In both cases, the central lesson was this: when nations retreat into unilateralism, the result is stalemate or escalation. But when legal and diplomatic channels are preserved, even deeply rooted disputes can be managed — if not fully resolved.

What are the risks of withdrawing from the IWT?

Unilaterally withdrawing from the treaty would likely invite sharp international censure. India's image as a responsible regional power would be undermined, especially at a time when it seeks a greater role in global governance. The World Bank, which served as guarantor to the treaty, would be compelled to intervene diplomatically, if not legally. Such a move could also alarm neighbours in the Himalayan basin, such as Nepal and Bangladesh, who might become wary about any future water cooperation.

Legally, the IWT is a binding international treaty. There is no provision for withdrawal. Under the Vienna Convention on the Law of Treaties, unilateral exit is only possible under extreme and narrowly defined circumstances.



Moreover, water is not just a strategic asset — it is a basic human right. Using it as an instrument of retaliation raises ethical questions that go beyond borders. Cutting off or even reducing water flow could devastate downstream communities, especially during lean periods. Even in the theatre of national security, collective punishment violates moral norms. India's true strength lies not in weaponising water, but in showcasing its commitment to a rules-based order.

What should be done?

India has every right to maximise its permitted usage under the IWT, including building hydropower projects within the framework of the treaty. It has already done so in Kishanganga, and is doing so in Ratle —albeit amid legal contestation. But abandoning the treaty would erode legal high ground and may place India on the defensive internationally.

The IWT stands as a rare monument to cooperation in an otherwise fractious relationship. It demonstrates that even in adversarial contexts, nations can agree to share what is vital and sacred — water. To undo that would not only undermine decades of diplomacy but also set a dangerous precedent for how natural resources are used — or misused— in conflict zones.

In war, not all may be fair, and in love for peace, some things must remain sacred.

INDIA TO APPRISE FATF OF LATEST EVIDENCE ON TERROR INFRASTRUCTURE IN PAKISTAN

India will take up terror funding charges against Pakistan to make a case for putting it back in the “grey list” of the Financial Action Task Force (FATF), the global money laundering and terror financing watchdog, government sources said.

— India is, specifically, planning to flag Pakistan's non-compliance of the legal provisions that it had committed itself to when it was taken off the grey list in 2022, sources said.

— When Pakistan was taken off the grey list in 2022, it was kept in the enhanced follow-up category by the FATF having been compliant with other recommendations but being ‘partially compliant’ with one recommendation (recommendation 38 of FATF) — a deficiency relating to the coverage of predicate offences.

— Originally, it was found to be non-compliant on recommendation 38 (R.38), the status for which was then changed to ‘partially compliant’ in the October 2022 review.

— In simpler terms, R.38 is regarding mutual legal assistance (MLA) for freezing and confiscation of proceeds of crime, mainly when crime has happened elsewhere and proceeds are in the relevant country (Pakistan in this case).

— Recommendation 38 of the FATF requires countries to have authority to take expeditious action in response to requests by other countries to identify, freeze and seize property laundered, proceeds from money laundering or predicate offences. Though Pakistan had issued guidelines for MLA, FATF had noted the deficiencies in its scheme for providing assistance to other countries.

— Separately, India will raise objections to a review of World Bank funding to Pakistan which is also slated for June, sources said. In January this year, World Bank and Pakistan launched a new Pakistan Country Partnership Framework (CPF) for FY2026-35.



— Being in this list adversely impacts FDI and capital flows as businesses have to undertake enhanced due diligence. Government officials had earlier said this had helped curtail illicit fund flows from Pakistan into India, especially into J&K.

— At present, FATF has put 25 countries including Kenya, Monaco, Nepal, South Africa, Vietnam in the grey list and three countries — North Korea, Iran and Myanmar — in the black list.

— Pakistan is not a member of FATF, but of Asia Pacific Group on Money Laundering (APG), the largest FATF-Style Regional Body. India is a member of APG as well as of the FATF.

— Pakistan spends, on an average, around 18 per cent of its general budget on “defense affairs and services”, while even conflict-affected countries spend on average far less (10-14 per cent of their general budget expenditure), as per public data, the source said.

— Further, Pakistan’s arms imports increased dramatically from 1980 to 2023 by over 20 per cent on average in the years when it received IMF disbursements in comparison to years when it did not, sources said

Do You Know:

— The Paris-based intergovernmental organisation FATF is the global money laundering and terrorist financing watchdog. It was formed in **1989** as a G7 initiative to examine and develop measures to combat money laundering. It originally included the G7 countries, the European Commission and eight other countries.

— According to the official site of FATF, “In April 1990, less than a year after its creation, the FATF issued a report containing a set of *Forty Recommendations*.” These recommendations aimed to provide a framework of measures to help countries tackle illicit financial flows.

— The 40 Recommendations are divided into seven distinct areas: (1) AML/CFT Policies and coordination, (2) Money laundering and confiscation, (3) Terrorist financing and financing of proliferation, (4) Preventive measures, (5) Transparency and beneficial ownership of legal persons and arrangements, (6) Powers and responsibilities of competent authorities and other institutional measures, (7) International cooperation.

— Later, in 2001, the FATF expanded its mandate to also combat terrorist financing. Since 2019, the FATF has had an open-ended mandate, after originally operating under fixed-terms.

— According to the official site of FATF, there are currently **40 members** of the FATF; 38 jurisdictions and 2 regional organisations (the Gulf Cooperation Council (GCC) and the European Commission). There are also 31 international and regional organisations which are Associate Members or Observers of the FATF and participate in its work.

SHOW OF CARDS

The Narendra Modi government has announced seven delegations to canvas support for India in global capitals, in the aftermath of its recent conflict with Pakistan. The declared intent of these delegations — with representatives from political parties, diplomats and strategic experts — is to demonstrate before the world, the unity and the character of India in the face of sectarian terrorism sponsored by Pakistan. That the members are from several political, religious, caste and regional backgrounds, is in itself a panoramic show of the founding vision of India. The modern Republic of India adopted for itself the principle that all diversities can coexist and flourish



together. This is in stark contrast with the idea of Pakistan, which was reiterated with chilling clarity by its Army chief Asim Munir weeks before the Pahalgam terrorist attack on April 22, 2025. The two-nation theory that led to the bloody division of the subcontinent and the creation of Pakistan holds that Hindus and Muslims cannot be a part of the same national community. The decline of Pakistan and the rise of India in all fields of human progress prove beyond any doubt the fallacy and the dangers of Pakistan's vision and the promise of India. In a time of national challenge, a reiteration of that founding vision can be rejuvenating.

But there was inadequate appreciation of this fundamental distinction between India and Pakistan in many capitals in the aftermath of Pahalgam. There are many reasons and India has to win back world opinion in its favour through its actions and words, at home and abroad. Statements by several world leaders appeared to place India and Pakistan on the same footing. With decades of diplomatic efforts and its own performance as a pluralistic, secular democracy and a dynamic economy, India has built a healthy perception about itself in the eyes of the world. The capable and articulate delegates can be expected to restate that message of India effectively in world capitals. The Narendra Modi government showed statesmanship and wisdom in deciding to reiterate India's unity and pluralism through these delegations. But the controversy around the selection of Congress representatives and continuing statements by BJP leaders that label political opponents as anti-nationals undermine the very attempt of unity. The government and the Congress, the principal Opposition party, should have communicated better with regard to the composition of these delegations. But now that the names have been decided, the Congress should not object to the nomination of its Lok Sabha MP, Shashi Tharoor, an international diplomat who has served as a Minister of State for External Affairs when it was in government. To politicise the nominations will serve no purpose and the Congress would only be seen doing what it accuses the BJP of: political mischief.

LATVIA, CONGO: INDIA OUTREACH TO MEMBERS OF UNSC, NOW AND FUTURE

India's multi-party outreach to rally global support for its war against terror emanating from Pakistan is not just aimed at major countries and the West Asian region, but also at countries that will be members of the UN Security Council (UNSC) next year.

— Latvia, Democratic Republic of Congo (DRC), Bahrain, Liberia and Colombia will be part of the UNSC for a two-year period from January 1, 2026 till December 31, 2027.

— Pakistan is a non-permanent member of the UNSC in 2025-2026. As part of its efforts to isolate Islamabad internationally, India wants to convey its concerns about Pakistan's support to terror groups and terror infrastructure.

— The teams will go to countries which are permanent members of the UNSC — the US, UK, France and Russia, but leaving out China, which is seen as an all-weather friend and a benefactor of Pakistan.

— Among the non-permanent members, they will tour countries whose terms expire in December this year — Algeria, Guyana, Republic of Korea, Sierra Leone and Slovenia — as well as the countries which will replace them next January.

— India's outreach to the UNSC members (both current and incoming) is important. Delhi and Islamabad had a face-off when the UNSC statement was negotiated in New York after the Pahalgam terror attack — Pakistan had the advantage of being a current non-permanent member.



— The teams will also visit key Muslim-majority countries in West Asia and South East Asia — Saudi Arabia, UAE, Qatar, Egypt, Kuwait, Indonesia and Malaysia. These are all prominent members of the OIC grouping and once-strong supporters of Pakistan – they have become more pragmatic and positive on their ties with India.

— Barring Canada, with which relations are still in the process of being repaired, the teams are also going to the remaining G7 countries — Germany, Italy, Japan and the European Union. Spain is also added as an important European partner country, which is usually invited for the G20 summit.

— Brazil and South Africa have been included as important BRICS partner countries, as well as G20 members. Ethiopia has been included as it hosts the African Union’s headquarters. Singapore, also a major partner country, is located at the information hub of the South-East Asian region.

Do You Know:

— The United Nations (UN) came into existence on 24 October 1945, after being ratified by 51 nations, which included five permanent members or P5 (France, the Republic of China, the Soviet Union, the UK and the US) and 46 other signatories. The first meeting of the General Assembly took place on January 10, 1946. At present, 193 countries are members of the United Nations.

— The UN Charter established six main organs of the United Nations, including the UN Security Council (UNSC). The UNSC held its first session on 17 January 1946 at Church House, Westminster, London. Since its first meeting, the Security Council has taken permanent residence at the United Nations Headquarters in New York City.

— The UNSC is composed of 15 members: five permanent members — China, France, Russian Federation, the United States, and the United Kingdom — and 10 non-permanent members who are elected by the General Assembly. The non-permanent members are elected for two-year terms — so every year, the General Assembly elects five non-permanent members out of the total 10.

MYSORE PAK NOW MYSORE SHRI: JAIPUR SHOPS RENAME SWEETS AMID INDIA-PAKISTAN TENSIONS

Amid the heightened tensions between India and Pakistan, sweet shops in Jaipur have taken an unusual step of renaming popular sweets by dropping the word ‘Pak’ and replacing it with ‘Shri’ and ‘Bharat’. The move has been seen as a reflection of popular sentiments against India’s western neighbour in the wake of the Pahalgam terror attack and the subsequent Operation Sindoor.

Mysore Pak, made with condensed milk and named after Mysuru in Karnataka, is now Mysore Shri. Similarly, Moti Pak, Aam Pak and Gond Pak have also dropped the ‘Pak’ in their names and adopted ‘Shri’ instead.

The name of the luxury offering Swarna Bhasma Pak has been changed to Swarna Bhasma Shri.

Most of the sweet sellers in Jaipur have made the change, believing that ‘Pak’ had a connection with Pakistan. Prominent outlets that have joined the rebranding exercise in Rajasthan’s capital include Bombay Mishthan Bhandar and Tyohaar Sweets, as well as the sweet shops in the posh localities of Mansarovar, Raja Park and Vishali.

According to the shopkeepers, the change has been made after continuous requests from customers who said the word ‘Pak’ reminded them of Pakistan. In a lighter vein, a social media

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



user commented in a post on Friday, saying, “Our demand is that when we jump into water, the sound should be of ‘chhashri’ and not ‘chhapak!’”

Abhishek Avtans, a linguist teaching Indic languages at Leiden University in the Netherlands, questioned the rationale behind the move.

“Who is going to tell them that ‘Pak’ is from ‘paka’, a Kannada word which means sweet condiment. It shares the same root as Hindi ‘pag’ (sugar syrup). The Sanskrit root for both the words is ‘pakva’ (cooked, ripe, baked) in Sanskrit,” he said in a post on X.

TOP COURT PAUSES RELEASE OF WOMAN SSC OFFICER PART OF OPERATION SINDOOR

The Supreme Court on Thursday asked the Indian Air Force not to relieve a woman Short Service Commission officer who had not been granted permanent commission and was part of the recent Operation Sindoor and Operation Balakot until further orders.

- A bench of Justices Surya Kant and N K Singh asked Additional Solicitor General Aishwarya Bhati, appearing for the Centre, why Wing Commander Nikita Pandey was denied permanent commission.

- Bhati said this was on account of the findings of a Board and that a second review Board is set to consider her case. She added that Pandey had directly approached the court seeking relief.

- The ASG said, “These are all brilliant officers. But the point is there is a comparative merit... We have a system by which we have to have certain officers going out after serving 14 years... it is the requirement of force to remain young.”

- “Our Air Force is one of the best organisations in the world. Officers are very commendable. Quality of coordination they have exhibited, I think it’s unparalleled. Therefore we always salute them. They are a big asset for the nation. Because of them, we are able to sleep at night,” said Justice Kant.

- Senior Advocate Menaka Guruswamy, appearing for Pandey, said that the Wing Commander is an expert fighter controller, who participated as an expert at the Managed Integrated Air Command and Control Systems, during Operation Sindoor and earlier, during Operation Balakot.

Do You Know:

- An officer in the Army is promoted to the rank of Colonel only after serving between 16 and 18 years, based on certain criteria such as annual confidential reports and various courses. Women officers who were inducted into the Army were inducted as Short Service Commission (SSC) officers in 1992 and in the years after did not have the choice to opt for permanent commission. JAG and Army Education Corps were exceptions, where a permanent commission was opened for them in 2008.

For other arms and services, women could not become permanent cadre, and had to retire much before they completed the service period that is mandatory to become a Colonel.

- In 2019, the Army changed its rules allowing SSC women officers to opt for permanent commission who would have otherwise retired after 14 years of service. However, this was not retrospective, and applied only to the batches of women officers starting their career in the Army in 2020.



With the landmark Supreme Court judgment of February 2020, permanent commission was granted to women officers with retrospective effect. This opened the doors for their further growth and promotions in the Army, which has been of late opening leadership and higher management courses for women.

- Once promoted to a Colonel, an officer is eligible to command troops directly in the Army, which is an acknowledgment of the leadership qualities of the officer. It is considered a coveted appointment because in no other rank — including higher ranks like Brigadier or Major General — does an officer interact directly with troops on the ground.

3-YEAR RULE: A SETBACK TO JUDICIARY ASPIRANTS

There has been growing anxiety for months around the anticipation of a verdict from the Supreme Court (SC) that would bring back a rule wherein an advocate would need three years of practice in order to become eligible to write the judicial services examinations.

And now, on May 20, a three-judge Bench headed by the Chief Justice of India (CJI) B.R. Gavai, which also included Justices A.G. Masih and K.V. Chandran, has made practical experience of three years a pre-requisite to appear for the subordinate judicial services exam. The judgment has substantiated the hypothesis that the SC has been consistently inconsistent on this issue. No empirical evidence was presented to the court about the 'lower quality' of fresh graduates (para 57), and neither was the number of fresh graduates who qualified for judicial services within a year of their graduation given in the judgment. The court simply went back to the three-year rule because majority of the High Courts advocated for it.

History of the rule

This matter has taken multiple twists since it was addressed in the 14th Law Commission of India (LCI) report in 1958, chaired by M.C. Setalvad. The Commission contended that persons with experience ranging from three to five years shall be eligible to compete in the examinations for lower subordinate judge in every State. This exam was to have questions of practical aspect and would not depend upon rote memorisation alone. Ability to draft pleadings, appreciate evidence and write judgments were also to be tested. Unfortunately, current question papers of most judicial services exams continue to test rote memory only.

For higher judiciary, an All India Judicial Services (AIJS), a centralised recruitment system for judges, was proposed. The Commission report was of the opinion that it was necessary to tap brilliant university graduates at the right time to judicial services. Therefore, the AIJS required no practical experience. Anyone holding a law degree, ranging from 21-25 years of age would be eligible, and practical experience was to be developed through a 'carefully devised scheme of training' which includes practical working in the courts. The exam was to be conducted at the National level. That is, the report contended for two different sets of eligibility criteria for recruitment at the State-level (lower subordinate judge exams) and at the national level (AIJS).

In the All India Judges' Association versus Union of India, 1992, the question of 'uniformity' in service conditions of judges across India was taken up. The judgment endorsed the LCI Report and its provisions on AIJS including the recommendation to allow fresh law graduates to compete in the exam. The top court issued directions to the Union of India to set up the AIJS. However, a review petition of the Judges' Association case, filed in 1993, held that a minimum legal practice of three years was essential to qualify for the subordinate judicial services examination.



The court in *All India Judges' Assn. (II) versus Union of India*, (1993) held "in most of the States, the minimum qualifications for being eligible to the post of the Civil Judge-cum-Magistrate First Class/Magistrate First Class/Munsiff Magistrate is minimum three years' practice as a lawyer in addition to the degree in law. In some States, however, the requirement of practice is altogether dispensed with and judicial officers are recruited with only a degree in law to their credit. The recruitment of raw graduates as judicial officers without any training or background of lawyering has not proved to be a successful experiment. Considering the fact that from the first day of his assuming office, the Judge has to decide, among others, questions of life, liberty, property and reputation of the litigants, to induct graduates fresh from the Universities to occupy seats of such vital powers is neither prudent nor desirable."

The court went on to observe, "the experience as a lawyer is, therefore, essential to enable the Judge to discharge his duties and functions efficiently ..."

The court thus gave a strong order, "We, therefore, direct that all States shall take immediate steps to prescribe three years' practice as a lawyer as one of the essential qualifications for recruitment as the judicial officer at the lowest rung."

Attracting talent

The Justice Shetty Commission, set up in 1996, found that while almost all States had complied with the three-year rule, some States had gone beyond and prescribed more than three years as minimum qualification. The report also stated that advocates with 4-7 years of experience were getting selected only at the age of 27 to 30. Therefore, in the *All India Judges' Association versus Union of India* (2002), the Supreme Court accepted the recommendation of the Shetty Commission that the three-year-rule had failed to attract the best talent to judicial services, and scrapped the rule. The court was candid in admitting that, "with the passage of time, experience has shown that the best talent which is available is not attracted to the Judicial Service. A bright young law graduate after 3 years of practice finds the Judicial Service not attractive enough. It has been recommended by the Shetty Commission after taking into consideration the views expressed before it by various authorities, that the need for an applicant to have been an Advocate for at least 3 years should be done away with..."

Now, the Supreme Court has again gone back to the three year rule, as the crucial question of how to balance attracting the best talent along with the necessary skills is still valid.

For that one must understand ground realities. No one can deny that the best law students today are in National Law Universities. Most of these students get lucrative corporate placements with huge pay packages. Many of them also need to repay education loans as almost all law universities' five-year fee ranges between ₹12-₹15 lakh. Reputed private law schools charge even more, between ₹20-₹40 lakh.

The SC yet again hopes that three years' of practice may help future judges in addressing courtroom decorum, complex procedural cases and in understanding the perspectives of all stakeholders of the judicial system. Young candidates are said to lack maturity, empathy and patience. The reality is, however, that most candidates wishing to practice don't see judicial services as a career option, while those who wish to enter judicial services rarely see practice as a career option. Most States find it difficult to fill vacancies of the higher judicial services due to the poor performance of candidates in the written examinations. Recently, Rajasthan notified that not a single candidate was found suitable.



The fact of the matter is that the mandatory three-years of practice rule will significantly discourage brighter minds from joining the judicial services. Economically backward and SC/ST/OBC candidates would be the worst hit, as they cannot afford to wait. It becomes necessary for them to start earning. These candidates would be keen to write examinations to enter civil services, public sector undertakings (PSUs), or even join academia.

Various challenges

The Bar Council of India has encouraged senior advocates and firms to pay a minimum of ₹15,000 in rural areas and ₹20,000 in urban centres to junior lawyers. This bare minimum stipend is not enough for a law student having no connections in the field. Non-matriculants in Delhi are paid ₹20,371 a month for clerical work or supervisory work in scheduled employment. An unskilled worker is paid ₹18,456 a month as per the minimum Wages Act. Only financially sound candidates would have the luxury to appear for judicial services if the three year condition is brought back.

Additionally, as per the India Justice Report, women account for 38% of the judges in district judiciary. Nine out of the top 10 candidates from the recently held Bihar judicial services exam were female candidates. Now, if the three-year rule is implemented, a number of these women, going through career breaks or maternity leaves, will suffer a setback.

Another problem is with regard to age. To appear for the civil services examinations, the minimum eligibility criteria is to be a final year student of a three-year degree programme. But for the judicial services examination, five-six years of education together with three years of experience would make them highly financially vulnerable as well as older compared to their counterparts in the civil services. This classification would neither be based on intelligible differentia nor achieve the rational object of attracting the best minds. Moreover, unlike the civil services, the judicial services exam in most States is not held at regular intervals. Even if a candidate has fulfilled the three year criteria, he/she has to wait for another few years for the exam to be advertised.

What can be done?

The solution is to catch young talent and enhance the training period to two years or more and use the best of academic and practical skills to enhance efficiency of the lower rung of the judiciary. Trainee officers may be required to serve as probationers to serving District and Sessions Judge or Justices of the High Court to enhance their understanding of the courtroom. For six months, they may be attached to senior lawyers as well.

We must also reform the examination and come up with innovative questions. The examination should be based on scenario-based questions, and judgment writing should carry more weightage. Excluding fresh talent may do more harm than good to our judicial system.

THE VEERASWAMI CASE: WHEN CAN A SITTING JUDGE FACE AN FIR?

Vice President Jagdeep Dhankhar said this week that the in-house inquiry ordered by the Supreme Court into the unaccounted cash found at the residence of Justice Yashwant Varma this March “does not have any constitutional premise or legal sanctity”, and sought an FIR against the judge.

— Dhankar also called for revisiting the SC’s K Veeraswami judgment, which he said has “erected a scaffolding of impunity” around the judiciary. The 1991 ruling deals with the filing of criminal cases against judges.



- It is fundamental to the independence of the judiciary that judges should be able to decide cases without fear of personal consequences, including criminal prosecution.
- Disgruntled litigants, political actors, or the executive can file cases to harass or intimidate judges. Therefore, the Constitution has set a high bar for initiating action against them.
- The only procedure prescribed in the Constitution is the removal of a judge through impeachment. Under Article 124, impeachment is largely a political process, initiated by parliamentarians, which ensures due process for a judge.
- However, in the 75 years since the SC and the Constitution came into being, not a single attempt at impeachment has been successful.
- Looking for alternative mechanisms to deal with complaints against judges, the SC developed the mechanism of the in-house inquiry, in which the Chief Justice of India (CJI) sets up a panel of judges to verify if there is a prima facie case against a judge. (The CJI himself has limited powers to deal with errant judges beyond transferring or withdrawing work from the judge.)
- Ultimately, though, the finding of this panel, too, has to go to the executive for impeachment to be initiated. It is at best a signal that the judiciary itself is on board with the impeachment motion, if one were to be made.

Do You Know:

- Justice K Veeraswami was the Chief Justice of the Madras High Court from May 1969 to April 1976. A biography by his colleague, Justice S Natarajan, noted that Justice Veeraswami, who was a “very competent Judge who knew all branches of law”, had turned down his elevation to the SC.
- A couple of months before his retirement, Justice Veeraswami went on leave after allegations of corruption surfaced against him. It was alleged that the judge “was in possession of pecuniary resources and property disproportionate by Rs. 6,41,416.36 to known sources of income”. The Central Bureau of Investigation (CBI) in Delhi had registered an FIR against him.
- The FIR against Justice Veeraswami raised larger constitutional questions on whether such a step could be initiated against a sitting judge. Justice Veeraswami moved the Madras High Court seeking the quashing of the FIR.
- Justice Veeraswami moved the SC in appeal, which finally decided the matter in 1991. The SC had to decide whether a judge of a High Court or of the SC is a “public servant” for the purpose of the Prevention of Corruption Act, 1947. If so, who is the “competent authority” to grant sanction to prosecute the public servant?
- The government argued that, unlike the President and Governors, there is no immunity for judges of the higher judiciary under the Constitution. In a 3-2 verdict, the SC held that while a judge can be considered a public servant for a corruption case to be registered against him, the sanction must come from the CJI.
- But it is significant that the SC did, thereafter, allow the CBI to register a case against a sitting judge. However, this power has been used sparingly by the CJI.



WHAT IS A PRESIDENTIAL REFERENCE?

The story so far:

President Droupadi Murmu, has made a reference to the Supreme Court, under Article 143 of the Constitution, on certain questions of law and has sought its opinion on those questions.

What is the historical context?

The advisory jurisdiction of the Supreme Court under Article 143 is a relic of the Government of India Act, 1935. It vested the Governor-General with discretionary power to refer any question of law of public importance to the federal court for its opinion.

A similar provision is available in the Canadian constitution. This mechanism allows the Supreme Court of Canada to offer opinions on legal questions referred to it by the federal or provincial governments. The U.S. Supreme Court on the other hand has consistently declined to provide any advisory opinion to the executive as it would violate the strict separation of powers envisaged in its constitution.

What are the provisions?

As per Article 143, the President may refer any question of law or fact of public importance to the Supreme Court for its opinion. The President makes such a reference based on the advice of the Union council of ministers. Article 145 of the Constitution provides that any such reference shall be heard by a bench of minimum five judges.

The Supreme Court may provide its opinion after such hearing as it thinks fit. The opinion is legally not binding on the President, and does not hold a precedential value for the courts to follow in subsequent cases.

However, it carries a strong persuasive value and is usually followed by the executive and the courts.

What were past instances?

There have been around fifteen references made since 1950 before the current reference. Some of the landmark opinions from such references is summarised here.

The first reference was made in the Delhi Laws Act case (1951) which laid down the contours of 'delegated legislation', through which the legislature could delegate legislative powers to the executive for effective implementation of any law. The reference in the Kerala Education Bill (1958) resulted in the court laying down the principle of harmonious construction between Fundamental Rights and Directive Principles of State Policy as well as interpretation of protection given to minority educational institutions under Article 30. In the Berubari case (1960), the court opined that ceding or acquisition of territory by India would need a constitutional amendment under Article 368. In the Keshav Singh case (1965), the court interpreted the powers and privileges of the legislature. In the Presidential poll case (1974), the court opined that Presidential elections should be held notwithstanding vacancies in the electoral college due to dissolution of State assemblies.

The opinion provided in the Special Courts Bill (1978) was significant on many counts. It provided that the court may decline to answer a reference; that the questions referred must be specific and



not vague; and that the court, while answering a reference, should not encroach upon the functions and privileges of Parliament. The Third Judges case reference (1998) laid down detailed guidelines for the collegium system with respect to the appointment of judges to the higher judiciary.

It is not obligatory for the Supreme Court to render its opinion. However, out of the references made till date, the court has declined to provide its opinion for only one reference in 1993 with respect to the Ram Janmabhoomi case.

What is the current reference?

The current reference is a result of a recent Supreme Court judgment that had specified timelines for Governors and the President to act on Bills passed by State legislatures. The court had also held that decisions by Governors and the President on such Bills are subject to judicial review. The present reference has raised 14 questions, primarily surrounding the interpretation of Articles 200 and 201, for the court's opinion. The government has raised questions regarding the authority of the courts to prescribe timelines when they are not specified in the Constitution. It has questioned whether the actions of Governors and the President can be made justiciable at a stage prior to the enactment of a Bill into a law. The reference also seeks opinion on the extent of powers that can be exercised by the Supreme Court under Article 142.

Political differences between the Union government and Opposition-ruled State governments have been the principal reason for this conflict. The Supreme Court had adopted the timelines prescribed for the President in the Office Memorandum of the Home Ministry while passing its judgment. In the Cauvery dispute reference (1992), the court had opined that it cannot sit on appeal over prior judgments in its advisory capacity. However, an authoritative opinion on this reference will hopefully settle the issues surrounding these constitutional provisions that are crucial for the smooth functioning of our democracy and federalism.

ED IS CROSSING ALL LIMITS, SAYS CJI-LED BENCH, STAYS PROBE AGAINST TASMAL

Warning the Enforcement Directorate that it was "crossing all limits" and "violating the federal structure", the Supreme Court Thursday stayed proceedings in the agency's money-laundering investigation into government-run liquor retailer Tamil Nadu State Marketing Corporation (TASMAL).

- The bench of Chief Justice of India B R Gavai and Justice A G Masih, which was hearing the Tamil Nadu government's plea challenging the ED searches at the TASMAL headquarters, sought a reply from the probe agency within two weeks.

- Appearing for the state, Senior Advocate Kapil Sibal said the corporation had found that some people who had been allotted liquor outlets were taking cash. "So the state itself filed 41 FIRs from 2014 to 2021. Against individuals, not against the corporation. The ED comes into the picture in 2025 and raids the corporation, the head office," he said.

- Issuing notice, CJI Gavai asked Additional Solicitor General S V Raju, who appeared for the ED: "How can (there be) an offence against the corporation?... You may register (an offence) against individuals, how (against the) corporation in a criminal matter?"

- The bench directed that in the meantime, there will be a stay on further proceedings against the petitioners.



- Senior Advocate Mukul Rohatgi, appearing for TASMACH said the agency had taken the phones of employees and cloned them.
- Sibal and Rohatgi urged the court to direct the ED not to use the data collected. “They have taken our data. The data cannot be used,” Sibal said. “There is something called privacy,” Rohatgi said.

Do You Know:

- The ED’s PMLA case stemmed from allegations of corruption and irregularities in TN’s liquor sales. In March this year, the ED conducted searches at multiple locations including the TASMACH headquarters. The state and the corporation came to the Supreme Court after being denied relief by the Madras HC.
- On April 23, the Madras High Court dismissed pleas filed by the State of Tamil Nadu and TASMACH challenging the ED’s searches. The High Court also rejected claims that TASMACH officials were harassed by ED during the searches.
- Formed in 1956, the ED became a prime agency following enactment of the Prevention of Money Laundering Act (PMLA) in 2002, implemented from July 1, 2005.

MISPLACED URGENCY

By staying the operation of Tamil Nadu’s multiple amended Acts — to the extent that they empower the government to appoint Vice-Chancellors (V-Cs) of 18 State universities — the Madras High Court has effectively halted the momentum that followed last month’s landmark Supreme Court verdict, which granted deemed assent to 10 Bills on which the Tamil Nadu Governor had inordinately delayed action. The interim order, delivered by Justices G.R. Swaminathan and V. Lakshminarayanan, effectively restores to the Governor-Chancellor, the powers of appointing V-Cs, which those very Bills had sought to divest. The result is a continuing stalemate: nearly a dozen universities remain headless, with appointments frozen until further judicial intervention. The Vacation Bench, acting on a petition by a lawyer, held that interim relief was justified because the impugned Acts “fall foul of the law” laid down by the Supreme Court in prior rulings on V-C appointments. These include Professor (Dr.) Sreejith P.S. vs Dr. Rajasree M.S. (APJ Abdul Kalam Technological University) and Gambhirdan K. Gadhvi vs The State Of Gujarat (Sardar Patel University). In both cases, the appointment of V-Cs was quashed for violating Regulation 7.3 of the University Grants Commission (UGC) Regulations, 2018, which govern the composition of search committees and procedures for V-C appointments. The High Court rejected the State’s argument that it had adopted the UGC Regulations in 2021 with a caveat excluding Regulation 7.3. The judges held that stripping the Chancellor of appointment powers was plainly unconstitutional — “... is so glaring and obvious that we cannot shut our eyes,” they wrote.

What is equally glaring, however, is the misplaced urgency with which the Bench moved to deprive the amended Acts of legal effect. The High Court overlooked the Higher Education Department counsel’s submission that the State had mentioned before the Supreme Court seeking urgent listing of a petition to transfer the instant case to itself; and that the Supreme Court had indicated that the High Court may be apprised of this fact. Judicial propriety would suggest that a lower court must exercise restraint in such cases. Moreover, the interim order was passed without affording the State adequate time to file its counter affidavit. In any case, while the current impasse on V-C appointments in Tamil Nadu persists, given the conflicting case precedents — Kalyani Mathivanan and Jagdish Prasad Sharma among them — the Supreme Court, should it hear the



case, must settle, once and for all, the critical question: can UGC Regulations issued by a subordinate authority override State legislation enacted under constitutional authority?

MADRAS HC JUDGE PICKS: 88% NOT FROM GENERAL CATEGORY

Of the 17 appointees to the Madras High Court approved by the Supreme Court Collegium during the tenures of former Chief Justices of India D.Y. Chandrachud and Sanjiv Khanna, 15 (88.2%) belonged to the Backward Classes (BC), Other Backward Classes (OBC), Most Backward Classes (MBC), Scheduled Castes (SC), or Scheduled Tribes (ST). This is the highest share among 24 High Courts in that period. Data was not available for the Sikkim High Court.

In total, 221 appointments were approved by the Collegium for various High Courts in the period. The Madras High Court accounted for 33% of all approved appointees from the OBC category and 25% of all approved appointees from the SC category nationwide. The next highest share of approved appointees from non-general categories was recorded in the High Courts of Telangana (85.7%) and Karnataka (66.7%). Along with Manipur, these were the only four States where the share of such approved appointees reached or exceeded the 50% mark.

The Andhra Pradesh High Court recorded a 27.3% share of appointees from the non-general categories, which is higher than the national average of 24.4%. Read with the data above, this shows that the representation of individuals from the non-general categories was relatively higher in the southern States. Only in Kerala, less than 20% of the approved appointees were from non-general categories.

In contrast, all the appointees approved to nine High Courts — Calcutta, Delhi, Jharkhand, Madhya Pradesh, Meghalaya, Orissa, Punjab and Haryana, Patna, and Tripura — were from the general category. In Gujarat, Uttarakhand, and Rajasthan, the share of approved appointees from the non-general categories was below 17%.

Of the 221 approved appointments, 14 individuals — all from the general category — were related to sitting or retired judges of the High Courts or the Supreme Court. None of these appointments occurred in the southern High Courts. The highest number of such appointments was recorded in Rajasthan (3), followed by Chhattisgarh, Allahabad, and Patna.

Of the 221 approved appointees, 34 were women. The Madras High Court received the highest number (5), followed by Andhra Pradesh, Bombay, Delhi, Gujarat, and Telangana.

Notably, among the five women appointed to the Madras High Court, one was from the BC community, one from the MBC community, and three from the OBC category. Other High Courts that approved appointments of women from non-general categories included Telangana (1 BC, 2 OBC) Kerala (1 OBC), Andhra Pradesh (1 SC), Rajasthan (1 OBC), and Guwahati and Manipur (1 ST each).

Although the selection process is uniform across all the High Courts, the significant variation in representation among different social groups across States suggests the presence of subtle influencing factors. One could be the role of Chief Ministers, whose opinions are taken into account, along with the inputs from the State Intelligence Branch, by the Collegium during the appointments process. But it is not clear how much influence the Chief Ministers have. Another could be the better upward social mobility of BCs in southern States. If we look at the share of BCs in higher education, for instance, while Tamil Nadu is home to about 10% of India's OBC population, it accounts for about 13% of OBCs enrolled in higher education nationally. In contrast,



Bihar, which has over 12.2% of India's OBC population, contributes less than 8% of OBCs in higher education nationwide.

NEW E-ZERO FIR FOR SWIFT PROBE, CRACKDOWN ON CYBERFAUDS: AMIT SHAH

UNION HOME Minister Amit Shah on Monday said they have introduced the new e-Zero FIR that automatically converts cyber financial crime complaints with a cheating value above Rs 10 lakh, registered on the 1930 helpline or the National Cybercrime Reporting Portal (NCRP), into FIRs.

— Shah said the Indian Cyber Crime Coordination Centre (I4C), which comes under the Ministry of Home Affairs, has introduced the new e-Zero FIR initiative to nab any criminal with unprecedented speed.

— An official said the process of issuing FIRs electronically, irrespective of territorial jurisdiction, will soon be extended to the entire nation. This initiative will enable easy restoration of money lost by victims and facilitate punitive action against cybercriminals. It leverages the provisions of the recently introduced criminal laws, an official statement said.

— Shah had given instructions for the implementation of this initiative in a recent review meeting of I4C, keeping in view the difficulties faced by victims of cyber financial crimes in the recovery of the money lost.

— The NCRP and 1930 helpline have enabled easy reporting and prompt action on complaints related to cyber financial crimes.

— The Delhi police and I4C have worked together to put in place a process for registration of cases in accordance with the new provisions of Section 173 (1) and 1(ii) of Bhartiya Nagrik Suraksha Sanhita.

Do You Know:

— The I4C, established in 2018, is a department under the Ministry of Home Affairs (MHA) tasked with establishing a national-level coordination centre to address cybercrime-related issues

— A massive surge in cybercrime incidents was reported in India with fraudsters cheating people of Rs 33,165 crore in the last four years, including Rs 22,812 crore in 2024, with several Tier 2 and 3 cities identified as cybercrime hotspots, shows government data.

— Data compiled by the National Cyber Reporting Platform (NCRP), under the Ministry of Home Affairs, shows fraudsters cheated people of Rs 551 crore in 2021, Rs 2,306 crore in 2022, and Rs 7,496 in 2023.

— Data also shows that 1,37,254 complaints were received in 2021, 5,15,083 in 2022, 11,31,649 in 2023, and 17,10,505 complaints were received last year.

THE ROLE OF THE INTERNET IN SPREADING MISINFORMATION

During the recent India-Pakistan crisis, misinformation spread like wildfire across social media platforms. Unverified videos claiming to show missile strikes, manipulated images of military action, and false reports of casualties were circulated widely, stoking fear on both sides. Some news channels amplified these claims without verification.



This phenomenon is not new. The data from a survey conducted a couple of years ago by Lokniti-CSDS on 'Media in India: Access, Practices, Concerns and Effects' indicated that misinformation on social media platforms significantly affects public perception, trust, and behaviour. The data revealed widespread concern about the spread of fake news and inaccurate information online.

Nearly half of all active Internet and social media users said they had encountered false information online at some point.

Most respondents reported that this has occurred either a few times or once or twice. Further, around two-fifths of active Internet users and social media users admitted to having shared/forwarded misinformation at some point of time and realising later that it was inaccurate or fake.

There was widespread concern about the spread of fake news and inaccurate information online. According to the data, 21% of active Internet users and 20% of social media users were 'highly concerned' about encountering fake news, while 31% of active Internet users and 32% of social media users were 'somewhat concerned'.

The study further sought to understand people's experiences with fake news. Citizens who were misled by fake news, or shared it unknowingly more often than others, were more likely to be concerned about receiving it on the Internet or on social media. For instance, 88% of social media users who had unknowingly shared fake news expressed high or moderate concern about receiving it.

There was also concern, though to a lesser degree, among those who had never shared (44%) or been misled by fake news (39%). This means that there is growing general consciousness about the threat of misinformation, even among those who may not feel directly affected by it.

A substantial share of users on social media platforms reported very little or no trust at all in the news and information they encounter. Specifically, 21% of X users expressed very little trust, while 12% indicated complete distrust.

The Reuters Institute's 2024 Digital News Report reveals a significant shift in how Indians access news, with over 70% of respondents preferring online media and nearly half relying on social media platforms such as YouTube (54%) and WhatsApp (48%). This trend underscores the pivotal role that social media platforms play, and the urgent need to promote media literacy, critical thinking, and accountability to help people identify reliable information.

This analysis is based on data collected during a study jointly undertaken by Lokniti-CSDS with financial support from the Konrad Adenauer Stiftung, India Office

HOW IS CYBERBULLYING TACKLED UNDER THE LAW?

The story so far:

In the wake of the Pahalgam terror attack, Himanshi Narwal, the wife of slain Navy Lt. Vinay Narwal, issued an appeal for peace, rejecting the vilification of Muslims and Kashmiris. However, her message triggered a wave of vicious trolling on X. Similarly, after Foreign Secretary Vikram Misri announced on May 10 that India and Pakistan had reached an understanding to halt military hostilities, his account was flooded with abusive messages, with many targeting even his daughter.



What are the limitations of the existing laws?

A range of terms have emerged to describe forms of cybercrime, including cyberbullying, stalking, and doxxing. Doxxing, short for “dropping dox” (documents), involves the unauthorised release of private information, exposing victims to harassment and real-world threats. Studies show such abuse disproportionately affects women and minorities. India lacks a dedicated law to address online hate speech and trolling. Instead, a few provisions under the Bharatiya Nyaya Sanhita (BNS), 2023, and the Information Technology (IT) Act, 2000, cover certain aspects of cyberbullying. The BNS includes provisions such as Section 74 (assault or criminal force against a woman with intent to outrage her modesty), Section 75 (sexual harassment), Section 351 (criminal intimidation), Section 356 (defamation), and Section 196 (promoting enmity between groups). The IT Act supplements these offences with provisions like Section 66C (identity theft), Section 66D (impersonation fraud), and Section 67 (publishing or transmitting obscene material electronically). “The existing regulatory framework is functional but far from complete. No provision squarely criminalises sustained online abuse that does not qualify as ‘obscene,’ ‘threatening,’ or ‘fraudulent.’ While cyberbullying may sometimes be shoehorned into offences like criminal intimidation or defamation, these require proof of threat or reputational harm and are ill-suited to counter the rapid, anonymous abuse unleashed by online mobs,” Apar Gupta, advocate and founder-director of the Internet Freedom Foundation, told The Hindu.

What are the concerns over censorship?

In India, Section 69A of the IT Act empowers the government to issue blocking orders on grounds aligned with constitutionally permissible speech restrictions, such as sovereignty, friendly relations with foreign States, and public order. Platforms that fail to comply risk losing safe harbour protection under Section 79, which ordinarily shields intermediaries from liability for user-generated content. However, experts have warned that these provisions are increasingly being used for censorship. The government has often removed content without notifying affected users, violating the Supreme Court’s 2015 ruling in *Shreya Singhal versus Union of India*. While the court upheld the constitutionality of Section 69A, it underscored that blocking orders must be accompanied by cogent reasons to enable judicial scrutiny. After the Pahalgam attack, X disclosed that it had been directed to block 8,000 accounts in India but said that the government had not specified which posts violated the law in most cases.

In March, X filed a lawsuit in the Karnataka High Court against the Centre’s use of Section 79(3)(b) of the IT Act for takedown orders, arguing it circumvents safeguards under Section 69A. Unlike Section 69A, Section 79(3)(b) lacks clear definitions of “unlawful acts” and any review mechanism. Meanwhile, the Ministry of Information and Broadcasting has recently informed a parliamentary committee that it is reviewing safe harbour protections to better tackle “fake news.”

What about judicial interventions?

In February last year, the Delhi High Court ordered X to remove tweets revealing the personal and professional details of a woman who reportedly posted a critical comment about Uttar Pradesh Chief Minister Yogi Adityanath. The post triggered a wave of online harassment, with details of her workplace, residence, and photographs being widely circulated. Although these disclosures raised privacy concerns, Justice Prathiba Singh ruled that the incident did not constitute doxxing, as the information was already publicly available. However, the judge acknowledged that doxxing, though not yet a statutory offence in India, poses a serious threat. Accordingly, X was directed to disclose subscriber information associated with the offending posts. This case highlights the



contested nature of what qualifies as public information. The Digital Personal Data Protection Act, 2023, exempts from regulation personal data that is made “publicly available”, either by the individual concerned or by an entity under a legal obligation. However, it does not define what qualifies as “publicly available data.” This lack of clarity may inadvertently enable cybercrimes such as doxxing, given the ease with which fragmented data from multiple platforms can be easily aggregated and used for harassment or intimidation.

What are the challenges ahead?

Experts underscored that enforcement, or rather the lack of it, often determines whether victims can access remedies. “All laws are only as effective as their enforcement. While posts and accounts are promptly removed when government directives are issued, the same urgency is rarely extended to ordinary users reporting harassment or abusive content”, Mishri Choudhary, technology lawyer and digital rights advocate, told The Hindu. Mr. Gupta agreed, highlighting challenges such as perpetrator anonymity, cross-jurisdictional hurdles, and limited cybercrime training.

AMRIT BHARAT STATION SCHEME: PM MODI TO INAUGURATE OVER 100 REDEVELOPED STATIONS IN BIKANER ON MAY 22

Prime Minister Narendra Modi will inaugurate 103 stations, including Bikaner’s Deshnok located nearly 200 km from the International Border with Pakistan, which have been redeveloped under the Railways’ ambitious Amrit Bharat Station Scheme in Bikaner on May 22 virtually, a senior Railways official told The Indian Express.

— Some of the key stations redeveloped under the scheme, launched in 2022 aimed at transforming 1,337 stations into “city centres”, includes Rajasthan’s Deshnok & Mandalgarh, Gujarat’s Dakor & Morbi, UP’s Saharanpur junction & Govardhan station, Telangana’s Begumpet, Bihar’s Thawe junction, MP’s Shajapur, Tamil Nadu’s Srirangam, and Karnataka’s Dharwad.

— These stations are equipped with modern toilets, lifts, escalators, free Wi-Fi, improved passenger information system, waiting areas, executive lounges, bigger circulating area and grand porch, the official added. The building design is based on local culture and heritage.

— According to officials, most stations are being redeveloped through the Engineering, Procurement, and Construction (EPC) model, meaning a contractor handles a project from start to finish. However, 20 projects — such as at Pune, Delhi junction, Vijayawada, and Chennai Central — are being implemented in a Public Private Partnership (PPP) mode.

Do You Know:

— Launched on December 23, 2022, the Amrit Bharat Station Scheme envisages to develop a station as a “city centre”, which will have modern facade, regulated traffic movement, well-lit, aesthetically pleasing grand porches, landscaping, and representation of local art and culture, signages and roof plazas.

IN NUCLEAR ENERGY PUSH, GOVT TO ALLOW PRIVATE OPERATORS, LIMIT THEIR LIABILITY

IN WHAT could set the stage for an unprecedented opening up of the civil nuclear sector, the government is likely to move two crucial amendments in the laws governing the country’s atomic



energy sector in the upcoming monsoon session of Parliament, according to sources aware of the developments.

- The first relates to the easing of provisions in the nuclear liability law, which would effectively cap the liability of equipment vendors in the event of an accident, both in terms of limiting the monetary exposure to the original value of the contract, and a possible time frame limitation on when this liability would apply.
- The second amendment is aimed at enabling private companies to enter nuclear power plant operations in the country, and this could also entail foreign companies potentially taking a minority equity exposure in upcoming nuclear power projects.
- Hitherto, atomic energy has been one of India's most closed sectors. The twin legal amendments are being seen as a reform push that could help leverage the commercial potential of the Indo-US civil nuclear deal nearly two decades after it was inked. New Delhi is also keen to package this as part of a broader trade and investment outreach with Washington DC, which could eventually culminate with a trade pact that is currently under negotiation.
- The two amendments are expected to take care of niggling legal bottlenecks which are seen to have stymied foreign investments in the atomic energy sector. The Civil Liability for Nuclear Damage Act, 2010, which sought to create a mechanism for compensating victims from damage caused by a nuclear accident, and allocating liability and specifying procedures for compensation, has been cited as an impediment by foreign players such as GE-Hitachi, Westinghouse and French nuclear company Areva (now Framatome).
- Amendments to the Atomic Energy Act, 1962 are being initiated to enable private companies, and possibly even foreign players at a later stage, to enter nuclear generation as operators. Currently, this is restricted to state-owned companies such as NPCIL or NTPC Ltd.
- The government has committed to getting both these legislations passed. An explicit assurance to this effect was made in the Union Budget presented earlier this year, even though the legislative route for at least one of the two proposed bills would be an arduous one.
- All this comes less than two months after the US Department of Energy (DoE) accorded an unprecedented regulatory clearance to Camden, New Jersey-based Holtec International, that potentially sets it on course to leverage the commercial potential of the Indo-US civil nuclear deal.
- The March 26 approval from DoE effectively cleared Holtec International's application for specific authorisation with respect to the DoE's restrictive regulation that is referred to as '10CFR810'. This specific authorisation (SA IN2023-001) now permitted Holtec to conditionally transfer "unclassified small modular reactor technology" to its regional subsidiary Holtec Asia, as well as Tata Consulting Engineers Ltd, and Larsen & Toubro Ltd in India.

Do You Know:

- The issue of getting a specific '10CFR810' authorisation [Part 810 of Title 10, Code of Federal Regulations of the US Atomic Energy Act of 1954] had been a big regulatory hurdle for New Delhi. This is because the regulation, while giving American companies such as Holtec the ability to export equipment to countries such as India under some strict safeguards, explicitly barred them from manufacturing any nuclear equipment or performing any nuclear design work in India. This provision was a non-starter from New Delhi's perspective, which wanted to participate in manufacturing the SMRs and co-produce the nuclear components for its domestic needs.

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



- The Union Budget 2025-26 outlines a significant push towards nuclear energy as part of India's long-term energy transition strategy. The government has set an ambitious target of 100 GW nuclear power capacity by 2047, positioning nuclear energy as a major pillar in India's energy mix. This development aligns with the broader objectives of Viksit Bharat, ensuring energy reliability and reducing dependency on fossil fuels. To achieve this goal, strategic policy interventions and infrastructure investments are being undertaken, with an emphasis on indigenous nuclear technology and public-private collaborations.
- Recognizing nuclear power as a critical component for achieving energy security and sustainability, the government has introduced the Nuclear Energy Mission for Viksit Bharat. This initiative aims to enhance domestic nuclear capabilities, promote private sector participation, and accelerate the deployment of advanced nuclear technologies such as Small Modular Reactors (SMRs).
- To facilitate the implementation of the Nuclear Energy Mission, amendments to the Atomic Energy Act and Civil Liability for Nuclear Damage Act will be taken up by the parliament. These amendments are expected to encourage private sector investments in nuclear power projects.

WHY IS THERE VARIATION IN FERTILITY RATES?

The story so far:

The Sample Registration System (SRS) Statistical Report of 2021, released by the Office of the Registrar General of India recently, showed that India has maintained its Total Fertility Rate (TFR) at 2.0 — the same as reported in 2020. While the national average for TFR has remained the same, there is a wide regional variation in TFR data for States and Union Territories (UTs) reported independently.

Which State saw highest TFR?

The highest TFR was recorded in Bihar at 3.0 and the lowest was reported for West Bengal and Delhi at 1.4. The data went on to reveal that in the decade between 2009-11 and 2019-21, TFR has been on an overall decline, in States, and nationally, albeit at different rates.

What does TFR measure?

The SRS report calculates TFR to measure the number of children each woman in India is expected to have throughout her reproductive age, which the survey defines between 15 and 49 years. According to the report, this value is derived from other indicators for fertility — more specifically age-specific fertility rates put together through a formula. Age-specific fertility rates measure the number of children women of a particular age range are expected to have.

This data is gathered as part of the SRS survey, which is the largest demographic survey conducted by India to measure various fertility and mortality indicators annually. The SRS 2021 survey was conducted across 8,842 sample units in all the States and UTs, and compiles data gathered from a sample size of about 84 lakh people.

What do fertility indicators record?

Within fertility indicators, the SRS report broadly measures the Crude Birth Rate (CBR), Sex Ratio at Birth, General Fertility Rate, Age-Specific Fertility Rate, and Total Fertility Rate, among other indicators. Crude Birth Rate measures number of live births per 1,000 people in the population,



and General Fertility Rate measures live births per 1,000 women of reproductive age (15-49 years). The surveys also measure another indicator — Gross Reproduction Rate, which reflects the number of daughters a woman is expected to have, and who will, in turn, bear children. The report further notes that the TFR of India at 2.0 has come down below the replacement level of 2.1. The replacement level TFR is measured as the number of children each woman should have for each generation to replace the previous generation's population. According to the TFR data for 2021, just six States had TFR above the replacement level of 2.1. These were Bihar (3.0), Madhya Pradesh (2.6), Jharkhand (2.3), Uttar Pradesh (2.7), Chhattisgarh (2.2), and Rajasthan (2.4). All other States had reported a TFR at or below the replacement level.

According to the SRS report, India's CBR is at 19.3 for 2021, which has declined at a rate of 1.12% every year from 2016 onwards. While all bigger States and UTs across the country are reporting a declining CBR, Uttarakhand was the only outlier, reporting a slight increase in CBR from 2016. Among the States and UTs, the rate of decline in CBR is highest for Kerala, Tamil Nadu, and Delhi, where the CBR is declining at almost twice the rate of the national average.

How do experts read fertility data?

Based on a reading of the numbers, Professor Praveen K. Pathak of Jawaharlal Nehru University's Centre for the Study of Regional Development, explains, "It clearly tells us TFR has come down below replacement levels and there are remarkable differences in data of States." He says there is a "clear indication" that in southern States and some States in the north, which are doing socio-economically well, the TFR is "far below" the replacement level, whereas States like Bihar, U.P., and M.P. are reporting much higher TFRs. "The reason being that some of these States still need human development policies, greater female education, and improving healthcare policy action. There are about six to seven States, bigger ones, where these issues persist," he said.

But moving on to the States where TFR has come down below the replacement level, Prof. Pathak cautioned that they might have their own set of challenges. He cited Sikkim, for instance, where the TFR is below 1, which is equivalent to South Korea's. "It is a reality that in many parts, people simply do not want kids. It may be because of changing family structure, opportunity cost for parents, and increasing stresses associated with caregiving." While the States with higher TFR need to tailor policies on human development that can bring them closer to the replacement level, the States reporting lower TFR have a "different set of challenges altogether", Prof. Pathak explained.

DECISIVE MOMENT

In a blow to the outlawed Communist Party of India (Maoist), its general secretary was killed in security operations in Chhattisgarh on Wednesday. The elimination of Namballa Keshav Rao, alias Basavaraju, is perhaps the biggest blow to the insurgents since the death of Cherukuri Rajkumar, the then CPI(Maoist) spokesperson in 2010, also in a security operation. Basavaraju, who had been the head of the party's central military commission before becoming the general secretary in 2018, had masterminded several attacks against paramilitary and police forces. His rise within the CPI (Maoist) marked the insurgents' reiteration of its militarist strategy, to continue their "protracted peoples' war" as against the alternative of political struggle and agitations to achieve their aims. His death — a number of Maoist personnel have been killed in the last couple of years — represents the failure of this strategy. Home Minister Amit Shah has been on record to say that the government is keen to overcome the Maoist threat by 2026 and Basavaraju's killing would suggest a major win. The fact that the Maoists had reportedly sought peace talks, even while



continuing their armed struggle, calls into question whether the Maoist leaders and activists could have been apprehended rather than eliminated. The surrender of Maoist cadres in recent days is also a case in point. But it is also well understood that the senior Maoist cadre, with roots in the People's War naxalite movement in united Andhra Pradesh, have shown little inclination to give up their armed struggle and such "encounters" are perhaps inevitable.

In recent years, and according to the Maoists' own admission, there has been a significant reduction in recruitment by the insurgents, with flagging support from the tribal population in south Chhattisgarh. Tribal youth, many of whom have experienced enormous suffering in the decades-long insurgency, are no longer inclined to adhere to the radical agenda of the Maoists. The group's poor understanding of the Indian state and its complete rejection of the electoral process as a "mere facade" have found fewer takers in the forested areas that were hitherto inaccessible to the Indian government. With the government's increased tribal welfare measures and outreach and its redoubled emphasis on defeating the guerilla warfare, the Maoists have seen an erosion of their limited military and support bases. With the death of senior leaders, the Maoist movement is surely gasping for survival, but the intensive security operations have also resulted in scores of tribal youth being killed. The government should use this situation to renew its call for peace talks to pressure the Maoists to abandon their armed struggle rather than continue the policy of "annihilation" as that could only engender fresh resentment among the tribal people.

STITCH IN TIME

Last week, the Supreme Court of India finally struck down as "illegal" two notifications by the Union Environment Ministry that allowed industrial units to set up, expand operations or change their manufacturing practices without following the due process of taking government permission beforehand. Taking 'prior' approval is a sacrosanct principle at the heart of the Environment Impact Assessment (Notification) of 2006. On the surface it appeared that the Centre, or the Union Environment Ministry, had instituted a system that made a mockery of this principle, but there was a rationale, even if it was flawed to some extent. In March 2017, the body issued a notification providing a "one-time" six-month window for industries that did not have the right environmental clearances, to apply for one. In 2021, it instituted a 'standard operating procedure' that in effect allowed projects in violation of the laws, but which could not avail of the six-month window, to apply — albeit at the cost of heavy fines — for regularisation. Moreover, all these significant changes were being issued through executive orders, rather than any attempt at amending the underlying Environment Protection Act (EIA), 2006, through Parliament.

The Centre's reasoning was three-fold. First, the process for regularising projects had already been initiated by the United Progressive Alliance government in 2012 and 2013. These were, however, struck down by the Jharkhand High Court and the National Green Tribunal on procedural grounds, and not that these projects were irredeemably violative. Second, demolishing functioning plants that were contributing to the economy and employment could exacerbate pollution and be disruptive. The Centre cited examples of various disputes involving copper mines to pharmaceutical companies where the courts had agreed that a "balanced" approach was necessary in cases involving violations. Finally, it argued that it had put in place a system whereby the industrial units seeking to be regularised would have to pay fines for the period that they had functioned in violation. The Court in its final verdict has rightly, as previous courts have, emphasised the principle of "prior" clearance, though its action may be a little late as it has clarified that companies that had regularised themselves under the 2017 and 2021 orders would be "unaffected" by the judgment. That thriving industrial units in violation of the laws



mushroomed is a testament to the collective failure of regional environmental boards to enforce laws. So it stands to reason that making these illegal units pay, under the purported new procedure, would have been a fruitless exercise. The judgment should ideally nip any “crafty” attempts by future governments to condone violations in the name of the economy though it must also trigger on-ground enforcement.

WHY SUPREME COURT STRUCK DOWN THE CENTRE’S ORDERS ON RETROSPECTIVE ENVIRONMENTAL CLEARANCES

The Supreme Court on Friday (May 16) struck down and held illegal a 2017 notification of the Ministry of Environment, Forest and Climate Change (MoEF&CC), which introduced a regime of granting ex-post facto clearances to projects – after work had already begun. The judgment followed a clutch of petitions challenging the notification.

— Additionally, the SC judgment set aside a 2021 office memorandum, which introduced a standard operating procedure for streamlining the grant of post facto clearances. The judgment also restrained the Centre from issuing similar notifications or office orders for regularising acts violating the Environment Impact Assessment (EIA) notification of 2006.

— In March 2017, the MoEF&CC issued a notification providing a “one-time” six-month window for industries to apply for environmental clearance. It was applicable if they had begun operations, expanded production beyond what they were permitted or changed their product mix without obtaining prior clearance.

— Notably, a prior clearance is mandatory under the EIA notification, 2006, to scrutinise a project’s impact on the environment, natural resources, human health and social infrastructure (such as schools and hospitals).

— The bench of Justice Abhay S Oka and Justice Ujjal Bhuyan rapped the Centre for issuing OMs “to protect those who have caused harm to the environment”, and questioned whether development can happen at the cost of the environment.

— It said that the Centre went out of its way to protect those causing harm to the environment, and that the court cannot allow such attempts, as it has the constitutional and statutory mandate to uphold Article 21 (right to protection of life and personal liberty).

— In the past, the apex court has broadened the scope of Article 21 to include the right to a healthy and pollution-free environment. It held the 2017 notification and 2021 OM in violation of Article 21 and Article 14 (right to equality before law), as the OM was for all project proponents who “were fully aware” of the consequences of violations.

— The bench cited two past judgments – Common Cause v. Union of India (2017) and Alembic Pharmaceuticals v. Rohit Prajapati (2020) – to reaffirm that ex-post facto clearances were alien to environmental law.

— It came down heavily on the Centre for violating these orders through the 2021 OM, which essentially regularised the illegality of commencing a project construction without prior clearance.



— In the Alembic case, a bench of Justice Chandrachud and Justice Ajay Rastogi had said that the concept of an ex-post facto was in derogation of fundamental principles of environmental jurisprudence, and an anathema to the EIA notification.

Do You Know:

What's fuelling deforestation

— The situation appears grimmer when viewed against the backdrop of accelerated industrialisation and urbanisation, which are the primary reasons behind forest degradation. India lost around 1,73,300 hectares of forest areas due to development projects between 2014-15 to 2023-24, according to the Union Environment Ministry.

— In mineral-rich states like Chhattisgarh, Jharkhand and Odisha, extensive mining has been the leading cause of substantial forest loss, with over 1 lakh hectares of forestland diverted for around 500 mining projects until 2018.

— In hilly areas of the northeast, shifting cultivation (Jhum), agriculture expansion, and extensive logging are the primary factors behind the loss of green cover. This made Arunachal Pradesh, Manipur, Nagaland, etc., states with the largest loss of forest cover between 2021-2023.

— Apart from this, the increasing forest fire, often triggered by human activity and prolonged dry spells, leads to further forest degradation. Climate change intensifies this risk by creating warmer and drier conditions.

— Between November 2023 and June 2024, the Forest Survey of India recorded 2,03,544 forest fire incidents. Such alarming trends underscore the urgent need for a strong and responsive legal framework to protect forest ecosystems.

FOREST CLEARANCE NOD FOR IRON ORE PLANT IN MAOIST-HIT GADCHIROLI

The Ministry of Environment, Forest and Climate Change has granted in-principle forest clearance for Lloyd Metals and Energy Limited's iron ore beneficiation plant, a facility that improves the quality of raw ore by removing impurities, in Maharashtra's Gadchiroli district where Maoists have been active for years.

- This in-principle approval paves the way for the diversion of 937 hectares of forest land and the felling of 1.23 lakh trees, according to Ministry documents.
- The forest clearance for the proposed plant comes amid the Maharashtra government's push to expand mining and industrial activity in the district affected by Left Wing Extremism (LWE).
- Last month, the Maharashtra cabinet approved the establishment of a Gadchiroli District Mining Authority, chaired by Chief Minister Devendra Fadnavis, for the management of major and minor minerals. The district holds deposits of iron ore, limestone and diamonds.
- The beneficiation plant and allied facilities have been proposed to process low-grade iron ore (hematite quartzite) extracted from the company's existing mining operations in Surjagarh, which faced operational hurdles for many years due to opposition from Maoists to any activity in the area.



- The mining lease, spread over 348 hectares, was initially granted to the company for 20 years in 2007 and was later extended until May 2057, according to company documents submitted to the Centre.
- The conditional in-principle approval was granted on May 12, following a recommendation of the Ministry's forest advisory committee (FAC), which scrutinises proposals seeking forest clearances.
- The minutes of the FAC meeting show that compensatory afforestation for diversion of over 900 hectares of forest land has been proposed in Chiplun, Ratnagiri district on Maharashtra's coast.
- One of the key conditions laid down is that the forest land has to be strictly used in a phased and regulated manner to "ensure environmental responsibility and sustainable development". The 937 hectares has to be used in three phases with 300 hectares in the first phase, 200 hectares in the second phase, after compliance of the first phase.

Do You Know:

- In December 2016, Maoists torched 69 trucks and three earth movers at the Surjagarh mine in Gadchiroli – one of the biggest arson attacks by Maoists in the region. Before the 2016 violence, Jaspal Singh Dhillon, vice president of Lloyd Steel, was shot dead, allegedly by Maoists.
- Maoist insurgency in Gadchiroli has been ebbing gradually owing to operations of the state's elite anti-Naxal commando force C60 as well as operations of the Central forces.
- Chief Minister Fadnavis spent the first day of the year in Gadchiroli, where 11 Maoists surrendered before him and he also inaugurated a 32-km long state transport bus service.

WHY INDIA NEEDS STABLE URBAN FORESTS**The story so far:**

One of Hyderabad's last remaining urban forests, Kancha Gachibowli, faced the threat of extinction when the Telangana government decided to give away 400 acres of its land for industrial development. Justifying its move by claiming ownership over the forest, the government alleged that protesting students were misled by real estate interests. However, the Supreme Court took cognisance of the felling of 100 acres of trees and reprimanded the State government. This issue highlighted the vulnerability of urban forests and environmentally insensitive models of urban development.

Why do urban forests matter?

Urban forests — such as Kancha Gachibowli in Hyderabad, Aarey in Mumbai, Turahalli in Bengaluru, Neela Hauz and the Ridge in Delhi, and Dol Ka Baadh in Jaipur — are significant for healthy urban living. The National Green Tribunal issued a notice to the Madhya Pradesh government against the rampant felling of trees in Bhopal. Similarly, the High Court had to intervene in the case of indiscriminate tree felling in Allahabad in Uttar Pradesh. Many such instances from across India emphasise a need to understand that the urban forests matter to public life.

Studies worldwide have underlined the importance of urban forests in coping with the built concrete environment and the emissions from automobile vehicles. They help mitigate climate



change, reduce the urban heat island effect, and control stormwater runoff, erosion, and flooding. Urban forests also sequester carbon and absorb pollutants. The density of green spaces in cities ensures the longevity and survival of the endangered birds and animals.

Diminishing urban forests in India's metropolitan cities spell severe consequences. For example, in November 2024, the Central Pollution Control Board (CPCB) reported alarming levels of the air quality index (AQI) in Delhi at 494. Other cities such as Chennai, Hyderabad, and Bengaluru had AQI levels above 100. The CPCB mentions PM 2.5 and PM 10 pollutants — mostly from vehicle emissions and construction dust — as the main causes. Urban forests can serve as a safeguard against toxic urban air. A 2006 study by the U.S. Department of Agriculture Forest Service showed that one hectare of trees can remove around one ton of air pollutants.

Urban social and cultural life is otherwise fraught with speed and risk. A sense of romance, repose, relaxation, and nature-sensitive recreation is due to proximity to urban forests. The sustained preservation and consistent creation of urban forests can make Indian cities breathable and urban living beautiful.

Why are judicial interventions important?

Urban forests have featured in policies, missions, and judicial interventions in India. Both the National Forest Policy of 1988 and the National Mission for Green India of 2014 underlined the imperative of increasing afforestation and social forestry. The Smart Cities Mission and Atal Mission for Rejuvenation and Urban Transformation, launched in 2015, integrated smart urban designs with ecological and social development.

Besides, the judicial interventions play important roles in promoting and protecting urban forests. The landmark Godavarman case in 1996 broadened the definition of forests to enhance the protection of urban greenery. Consequently, in 2004, the apex court issued interim orders to all the States in India for the identification, scrutiny, and mapping of forests across their territories. The aim was to generate a comprehensive forest inventory in order to enhance conservation efforts.

Another instance of judicial intervention was in 2015 when the Delhi High Court directed the Delhi government to notify and protect the Delhi Ridge, also known as the Aravalli leopard wildlife corridor. Similarly, the apex court issued a stay order on the tree felling in Aarey in Mumbai in 2020 in response to the petitions by the citizens who conducted the Save Aarey Forest movement. Equally significant is the instance of the civil society and concerned citizens protesting against the felling of trees in the biodiversity-rich areas of the Baran district in Rajasthan. The Rajasthan High Court took suo motu cognisance of the matter in 2024.

The judicial interventions are requisite in the protection of forests and instilling awareness among the citizens. And, so are provisions in the Constitution of India, such as Article 21 (Right to Life), which includes the right to a healthy environment. Equally important are Articles 48A and 51A(g), ensuring the promotion and improvement of the natural environment.

What is the main goal of the Nagar Van Yojana?

Prime Minister Narendra Modi duly observed the importance of wildlife and biodiversity conservation on the occasion of World Wildlife Day on March 3, 2025. Such a spirit is conducive to the drive to protect urban forests, too.



The Ministry of Environment, Forest and Climate Change (MoEF&CC) of the Government of India had rolled out the Nagar Van Yojana (urban forest scheme) in 2020. The objective was to promote and grow forest spaces in urban areas. The Nagar Van Yojna envisages developing a thousand urban forests by the year 2027. According to the India State of Forest Report 2023, the scheme has resulted in an increase of 1445.81 km of tree and forest cover.

Why is the threat to urban forests concerning?

Rapidly urbanising India grapples with the consequences of abysmal regard for environmental conservation and sustainability. The threat to urban forests is a challenge to our biomedical, social, and cultural well-being. It is imperative that we, the people, play a role as citizens and civil society.

The Supreme Court order directing the Telangana government to restore the forested area of Kancha Gachibowli augurs well for a holistic soul searching. The mushrooming concrete jungles in the cities shall not devour the urban forests.

THE MONSOON'S GREEN ENERGY POTENTIAL

As the sweltering heat of summer reaches its peak, our thoughts turn towards the approaching rainy season. Data collected by weather stations and rain gauges for over a century tell us that this season begins with the arrival of the southwest monsoon over Kerala on June 1, give or take a week. Weather forecasting has become more accurate in recent years, and it is predicted that the monsoon will reach Kerala around May 27 this year.

Southwesterly winds traveling over the Indian Ocean, along with strong air currents traveling over the Arabian Sea from East Africa (the Somali Jet Stream), carry moisture to our lands, refreshing our senses and lightening our moods.

In today's world, these winds also carry with them the promise of renewable energy. An awareness of climate change has brought clarity to the urgent need for lowering our dependence on energy derived from fossil fuels. India's position here is particularly acute. Nearly 75% of our electricity comes from coal. As a part of an ambitious plan to shift to low carbon energy, the Central Electricity Authority aims to have 121 GW of installed wind capacity by 2032, building upon an existing capacity of 45 GW.

Fossil fuel-fired power plants can generate electricity when it is needed. Renewable sources such as wind have variations, and this leads to lower capacity utilisation. Therefore predicting when wind will be in motion is critical to making the best use of investments in wind energy.

The goal is to generate the maximum amount of electricity for a grid while burning the least amount of fossil fuels. Seasonal climate forecasts are necessary for this planning and start at the regional level. For example, the state of Rajasthan has very poor winds from October to December.

Monsoons are strong drivers of climate. The cool gusty monsoon winds can be predicted and modelled, just as rains can be. Cities need more power during summer, when agricultural demand is low. Power generated during the monsoons is a boon to the agriculture sector, as kharif crops (planted in June, harvested in October) take up more electricity than the winter rabi crop. At windy locations such as the Western Ghats, a wind turbine generates 70% of its annual power output between June and September.



However, there is a great deal of variability in the velocity of surface winds during this season. Anticipating this variation is of great use in minimising deficit or surplus in power generation. This has led to the refinement of numerical weather prediction models, which work at a resolution of a few hundred metres, a kilometre, and so on. Using such models, the National Institute of Wind Energy in Chennai has developed a Wind Atlas of India, a very useful tool for planning future wind farms.

What about AI? The quantity (and quality) of high-density data from radar and satellite images has grown rapidly.

Densification techniques such as Google's MetNet3 are used for integrating this with measurements including wind speed, temperature, etc., from a relatively small number of weather stations. This allows the model to estimate wind speeds in the areas between stations, resulting in a high-resolution wind speed map derived from a small amount of directly measured data.

INDIA LOST 18,200 HECTARES OF PRIMARY FOREST IN 2024: REPORT

India lost 18,200 hectares of primary forest in 2024 compared to 17,700 hectares in 2023, according to new data from Global Forest Watch (GFW), a global collaboration of over 100 organisations.

— The GFW data also said the country lost 3,48,000 hectares (about 5.4 per cent) of humid primary forest between 2002 and 2024. This is equivalent to 15 per cent of India's total tree cover loss during the same period.

— Between 2019 and 2024, India lost 1,03,000 hectares (1.6 per cent) of humid primary forest, which is 14 per cent of its total tree cover loss in those years.

— The data also showed that the country lost 16,900 hectares of humid primary forest in 2022, 18,300 hectares in 2021, 17,000 hectares in 2020, and 14,500 hectares in 2019.

Do You Know:

Indian State of Forest Report 2023

— The 18th biennial State of Forest Report (ISFR-2023) was released by Environment Minister Bhopender Yadav on December 21 at the Forest Research Institute in Dehradun. The ISFR is released biennially and involves forest cover mapping of the country using satellite data.

— India's green cover has exceeded the 25% threshold with 8,27,357 sq km (25.17%) of the country now under forest (21.76%) and tree (3.41%) cover. Of this, 4,10,175 sq km is classified as dense forests.

— The net forest cover has increased by 156.41 sq km between 2021 and 2023 taking the geographical area under forest cover to 21.76 per cent, a paltry rise of 0.05 per cent compared to the 2021 assessment. With the increase in the net forest area, the total area under the forest cover is now 7,15,342.61 sq km.

— Between 2003 and 2013, forest cover increased by 0.61 percentage points, from 20.62% to 21.23%. In the next 10 years, it grew by only 0.53 percentage points to 21.76%.



— ISFR-2023 shows that 3,913 sq km of dense forests — an area larger than Goa — have disappeared in India in just two years since 2021. This is consistent with the worsening trend over the past two decades: 17,500 sq km of dense forests were wiped out between 2013 and 2023, while 7,151 sq km disappeared between 2003 and 2013.

WITH CENTRAL FORCES AND DRILLING EQUIPMENT BROUGHT IN, LOCALS RESTART PROTEST AGAINST SIANG DAM

Protests have again broken out in Arunachal Pradesh's Siang district against the proposed 11,000 MW Upper Siang hydropower project. This comes days after security forces were moved into the area and the National Hydroelectric Power Corporation (NHPC) brought in equipment to begin drilling work for a project feasibility analysis.

— The protesters, including those whose villages and farmlands would be affected by the dam, began an indefinite dharna at Beging in Siang district under the banner of Siang Indigenous Farmers' Forum (SIFF).

— Beging is the site where state authorities and the NHPC have sought to begin core drilling work to prepare a pre-feasibility report (PFR) for the project, a step that has been stalled for a year because of local opposition.

— The Beging or Paring site is one of three proposed project sites along the Siang — the other two being Ugeng and Dite Dime.

— Last December, panic and protests had spread in the region after the state government took a decision to deploy nine companies of CAPF as well as additional police to the proposed project sites in a bid to begin the drilling work

— Both the central and state governments are pushing for the Siang dam as a means to counter the possible effects of the China's planned 60,000 MW dam — the world's largest hydro-electric project — on the Yarlung Tsangpo river in Tibet.

— The Yarlung Tsangpo flows into Arunachal Pradesh, where it is known as the Siang. It then joins other tributaries like the Dibang and Lohit to become the Brahmaputra in Assam.

Do You Know:

— The Upper Siang project is a proposed 11,000 megawatt hydropower project on the Siang river in the Upper Siang district of Arunachal Pradesh.

— The Siang originates near Mount Kailash in Tibet, where it goes by the name of Tsangpo. It traverses more than 1,000 km eastward, before forming a horseshoe bend around the towering Namcha Barwa peak, and enters Arunachal Pradesh as the Siang. Further downstream, in Assam, the river becomes the mighty Brahmaputra.

— In 2017, the government proposed to replace the planned 5,500 MW Siang Upper Stage-I and 3,750 MW Siang Upper Stage-II hydel projects with a single, multi-purpose project of higher capacity — the aforementioned Upper Siang project.

— Set to be built by the National Hydroelectric Power Corporation (NHPC), the project would entail the construction of a 300-metre high dam, the largest in the subcontinent, when completed.



GETTING ON THE GREEN TRACK

Everybody has their favourite way of travelling. Usually, the choice of the mode of transport is driven by convenience, comfort, and cost. But things are changing around the world for a completely different reason. There is growing interest in what experts call a “modal shift” — moving people and goods from roads and flights to railways — that could have a big impact on the environment, traffic, and even the economy.

— This matters because cars, buses, and trucks are significant sources of CO₂ and other greenhouse gases (GHG) that cause global warming. In fact, transport causes nearly a quarter of the world’s energy-related carbon emissions.

— Road transport is the biggest culprit, whereas rails are much cleaner. For example, trains produce only about 19 grams of carbon dioxide for each passenger per kilometre — compared to 63 grams for buses, 123 grams for aeroplanes, and 148 grams for cars. Freight carried by train is also much more efficient.

— Despite the environmental benefits, rail use is going down worldwide. Between 2007 and 2021, the share of freight moved by train fell from 51 per cent to 40 per cent globally. For passengers, the share dropped from 12 per cent to 8 per cent.

— This loss is mainly because road transport is growing fast, especially in countries like India and China. If this trend continues, emissions from the transport sector in lower-income countries could cause a 16 per cent rise in GHG emissions.

— The European Union is setting an example with policies to move freight from roads to rail or ships. It aims to shift 30 per cent of road freight to rail or ship transport by 2030 and over 50 per cent by 2050. China is trying to shift freight transport to rail and has already seen less road traffic and a cleaner environment as a result.

— India has one of the largest railway networks in the world, and many people and goods already travel by train. However, the shift toward road transport is also happening here because improvements in infrastructure have made it easier to travel by road.

— The National Rail Plan aims to boost the freight modal share of railways to 45 per cent by 2030 with significant investments in Dedicated Freight Corridors. A similar plan is needed to increase the passenger modal share of rail.

— The Delhi Metro alone is claimed to have removed over five lakh vehicles from the road daily in 2021, cutting CO₂ emissions by at least 23.82 grams per km traveled. In Mumbai, the metro and monorail modal share is projected to rise from 2 per cent to 36 per cent, reducing motor vehicle use from 35 per cent to 24 per cent.

— A modal shift from road to rail is crucial for India, which is one of the world’s largest GHG emitters, with 14 per cent coming from the transport sector alone. India plans to attain net zero status by 2070, which will require drastic cuts in GHG emissions from all sectors, including transport.

— India can also earn carbon credits by proving that the modal shift is reducing emissions through more rail use. These credits can be sold internationally to help fund more green projects.



— Shifting transportation from roads to rail is not just about trains but about building a cleaner, safer, and sustainable future. India has a huge opportunity to lead this change, reducing emissions while boosting its economy and improving daily life.

Do You Know:

— Carbon dioxide emissions from India's transport sector could be reduced up to 71 per cent by 2050 if high-ambition strategies are adopted on three key parameters – electrification, improving fuel economy standards, and switching to cleaner modes of transport and mobility, said a new study by World Resources Institute (WRI) India.

— The transport sector accounted for 14 per cent of total energy-related CO₂ emissions in 2020, 90 per cent of which was driven by road transport, which remains the most carbon-intensive.

— Out of this 90 per cent, two-wheelers contributed about 16 per cent, cars about 25 per cent, buses 9 per cent, freight light-duty vehicles (LDVs) 8 per cent, and freight heavy-duty vehicles (HDVs) 45 per cent (the highest).

TYRE PARTICLES: HOW EVS ARE A CLIMATE SOLUTION WITH POLLUTION PROBLEM

By eliminating greenhouse gas (GHG) emissions, electric vehicles (EVs) play an important role in the fight against climate change. However, while contributing to solving one problem, they may be adding to another. A new study by Indian researchers has found that EVs may be bad news for tackling air pollution.

— The study, published in *Soft Matter*, a journal of the Royal Society of Chemistry, has shown that EVs, on account of their greater weight, experience higher wear and tear in their tyres compared to conventional vehicles, and release substantially larger numbers of small plastic particles in the atmosphere.

— The disintegration of automobile tyres results in the release of small rubber particles that are air pollutants.

— The normal wear and tear of tyres produces particles of broadly two sizes – one, about 1-10 micrometres; the other, more than 100 micrometres. Particles of intermediate sizes are also produced, but they are relatively fewer in number.

— The study by researchers from the Tata Institute of Fundamental Research (TIFR), IIT Bombay, and Columbia University in the US has, for the first time, established the relationship between the weight and speed of a vehicle to the size of the plastic particles released from tyres as a result of wear and tear.

— The tyres of heavier and faster-moving vehicles produce a higher proportion of smaller particles, shows the study. Unlike the larger particles that settle on the ground due to gravity, smaller particles remain suspended in the air, adding to the concentration of air pollutants.

— Thus, degradation caused by sudden braking or encounters with potholes, which the researchers call “primary fragmentation”, results in the release of mainly smaller particles of varying sizes.

— And gradual wear and tear, called “sequential fragmentation” in the study, leads to the release of mainly larger particles.



- Thus, an improvement in road quality would likely reduce the release of larger particles, but would have little effect on the smaller particles.
- The results of the study are globally relevant because of the ongoing push for the adoption of EVs. Electric vehicles are significantly heavier than conventional petrol vehicles because of the batteries – which can weigh anything between 300 kg and 900 kg.
- The weight of the batteries necessitates the reinforcement of the vehicle frame, which adds to the overall weight. Typically, an EV is at least 15-20% heavier than a comparable conventional vehicle.
- EVs are also able to accelerate more rapidly. This can lead to additional stress on the tyres due to increased friction and heat generation.
- The tyres of EVs are, therefore, likely to undergo a greater degree of primary fragmentation, releasing larger amounts of smaller plastic particles that add to the concentration of pollutants in the atmosphere.
- Current air quality regulations in most countries are aimed at controlling PM2.5- and PM10-size particles. Tyre fragments are smaller than these.
- With the proliferation of EVs, and tyre fragments becoming a more noticeable constituent of air pollution, these regulations would probably need to be expanded.
- At the same time, tyre manufacturers would need to invest in research and development to produce sturdier tyres that are better suited to heavier EVs.

Do You Know:

- Road transport accounts for almost 10% of global GHG emissions, the result primarily of the burning of fuel in vehicles.
- Carbon dioxide emissions from India's transport sector could be reduced up to 71 per cent by 2050 if high-ambition strategies are adopted on three key parameters – electrification, improving fuel economy standards, and switching to cleaner modes of transport and mobility, said a new study by World Resources Institute (WRI) India.
- India's transport sector accounted for 14 per cent of the total energy-related CO₂ emissions in 2020, and there is a need for an emission reduction roadmap and targets for this sector, the study said.
- The mandate of expanding electric vehicle sales is most effective in terms of CO₂ emissions reduction, with an annual abatement potential of 121 MtCO₂e (Metric tonnes of carbon dioxide equivalent). The study added that the decarbonisation of electricity generation could complement the electrification targets in the transport sector.

LIONS OUT OF THE WOODS

The latest population estimation exercise in Gujarat has recorded 891 lions, a 32% jump in population since 2020. In these five years, lions have also expanded their range by 17% — from 30,000 to 35,000 sq km — and now cover 58 talukas (up from 53 in 2020) in 11 districts.



- While announcing the numbers on Wednesday (May 21), Gujarat Chief Minister Bhupendra Patel proudly noted that the increase in the lion population is a result not only of favourable geographic and climatic conditions but also of the state government's consistent and dedicated efforts. For this success story to continue, however, more needs to be done.
- From under 200 in the 1960s when their last home in Gir was accorded special protection, Asiatic lions have made a remarkable recovery. For most parts, this journey has been slow and steady — the population did not cross the 300-mark until 1995 when the lion broke free from the safety of the forests.
- Between 1990 and 2005, the lion's range doubled from 6,600 sq km to 13,000 sq km. But in those early days of breaking new ground, the expansion of lions' range resulted only in a modest 26% jump in numbers, from 284 to 359.
- In the next 15 years, though, as the lion once again doubled its range from 13,000 sq km to 30,000 sq km, already established satellite populations added up to record an overall jump of 88% in lion numbers from 359 to 674.
- The latest estimation confirms that trajectory. However, this is only the second instance after the 2015 estimation when the population growth rate exceeded the rate of range expansion. It must also be mentioned that the absolute numbers offered without a standard error range are unusual for any scientific estimation method.

Do You Know:

- The lions have colonised at least three new areas — Barda wildlife sanctuary, Jetpur and Babra-Jasdan — in the last five years. A nearly 900-strong population scattered across 358 locations strengthens the species recovery trend that made IUCN change the Asiatic Lion's status from "critically-endangered" to "endangered" in 2008.
- A closer look at the numbers, however, shows that the population growth has not been commensurate with the expansion of the lion's range over the decades. Since 1990, the lion's range has expanded by 430%, but the corresponding jump in numbers, at 214%, has not been half as swift.
- This is because the Saurashtra peninsula has very few protected wilderness areas — Gir National Park and a few small sanctuaries such as Pania, Girnar, Mitiyala and the recently colonised Berda — for the lion to flourish.
- Over decades, as these sanctuaries have neared their carrying capacity, lions wandering out for space have reached wasteland, farmland and agri-plantations, interspersed with clumps of natural vegetation tagged as forest patches.
- Even on government records, only 56% of Gujarat's 891 lions were found in forested areas. While the relevant data is missing in the latest census, the 2020 report showed that the lion's population density drops from 15.2 per 100 sq km in forested areas to just 1.65 in non-forested areas.
- Non-forest areas close to human habitations are not the ideal habitat for a large carnivore species. A former chief wildlife warden of the state acknowledged that there are "covert cases" of retaliatory killings when lions died of electrocution, "drowning in wells" or were "shot in self-defence".



KURMA MELA: THE SCIENCE OF THE MASS NESTING OF OLIVE RIDLEY TURTLES

The Olive Ridley turtle (*Lepidochelys olivacea*), a vulnerable sea turtle species, made headlines earlier this year: a record-breaking seven lakh turtles had nested at Odisha's Rushikulya beach alone in March.

These turtles are renowned for their synchronised mass nesting events called arribada, a Spanish word that means "arrival." For many people, the Rushikulya arribada signalled hope — but for conservation biologists, it raised critical questions about the future of these vulnerable animals and whether human interventions, even well-meaning ones, could change the course of nature itself.

While some localised populations of Olive Ridley turtles have expanded, the IUCN Red List has estimated that the number of Olive Ridleys worldwide has dropped by 30-50% since 1960. The Olive Ridleys' primary nesting sites are along the Pacific coasts of Mexico and Central America, although Odisha is also a particularly critical location.

The State's 480-km-long coastline hosts three major nesting beaches: Gahirmatha, between the Brahmani and Baitarani river mouths; Devi, 100 km south of Gahirmatha; and Rushikulya, 320 km further south.

The where of it

Research has found that Olive Ridley turtles that hatch at a nesting site are "imprinted" with a map of the local magnetic field. Decades later they return with remarkable precision to the site by following this map. The phenomenon is called philopatry: a blend of memory, environmental factors, and the earth's geomagnetic cues. Philopatry is reinforced by a multiplier effect: as females with strong philopatric tendencies increase in number, they reinforce site fidelity across generations.

There are other ecological factors too. Studies on the loggerhead sea turtles (*Caretta caretta*) have also revealed that their nesting zones are near free swirls of cold water in the seas — called cold-core eddies — that move nutrients up from the deep sea to the surface, including those rich in chlorophyll. Other factors that affect their choice of nesting sites include salinity, land slope, risk of predation, and rainfall.

Nesting sites are considered more suitable if more turtles have nested there before — but as turtle populations swell whereas the size of the most favourable nesting grounds doesn't, beaches often become battlegrounds. A population that arrives after another has already nested at a beach might dig up existing nests — female turtles are guided by olfactory cues and female urine — and break the eggs. This happened earlier this year during the second mass-nesting event at Rushikulya.

Eggs that are broken and displaced attract predators. Experts previously believed predators used visual cues to detect turtle nests. More recent research has found that olfactory cues, especially the scent of disturbed soil and broken eggs, are more significant. Thus, a species' most successful survival strategy may also sow the seeds of its decline.

In sea turtles, temperature determines the sex of hatchlings. Studies of loggerhead turtles have found that their populations are more female when they nest on warmer beaches. Researchers are still collecting similar data pertaining to Olive Ridley turtles. With rising temperatures shifting



the sex ratio more towards females, the multiplier effect is expected to get reinforced as more females return to mass-nesting beaches in the coming years.

How mass nesting begins

For their first arribadas, female sea turtles pick their nesting sites without any discernible pattern and use them irregularly. If a female turtle reaches the reproductive stage of its life before it is able to reach the beach where it hatched, it may establish a new nesting site closer to its foraging grounds. Its hatchlings will be imprinted with this location, and they will attempt to return to it later.

Put another way, for a sea turtle population to thrive, it needs strays and wanderers like these turtles, which establish new places for the arribada. If they had been forced to stick to one site over millions of years, they would likely have become extinct due to overcrowding in the mass nesting beaches.

Modern conservation has helped boost turtle populations, especially by artificially incubating eggs and protecting beaches. The question naturally arises: could these measures be too successful? Because if weaker individuals that would have perished in the wild are now able to survive and reproduce, the population's genetic resilience will drop.

People, turtles, popularity

No conservation story is complete without acknowledging the role of local communities. In Odisha, fisherfolk and villagers are vital allies: they guard nests, curb egg poaching, and guide conservationists. But not all human interactions are benign.

Turtle tourism has surged in recent years. The influx of visitors creates opportunities to raise awareness, but it also stresses these gentle creatures. Crowds gather to watch nesting turtles at night, using bright lights, clicking selfies, and — in some disturbing cases — scooping sand out of the ground to watch the egg-laying or even sitting on turtles for photographs.

Such acts disturb nesting behaviour and may have a lasting impact on the turtles' memory, discouraging them from returning to the site.

Scientists are also just beginning to understand the cognitive and emotional inner lives of turtles. It's entirely possible that what we think of as harmlessly marvelling at them could be disrupting the ancient rhythms of these mariners.

In other words, it's no longer about numbers or rescue operations. The priority is to ensure the longevity of these nesting beaches and to balance tourism with ethical responsibility.

Olive Ridley turtles have endured mass extinctions, shifting continents, and rising seas. Their resilience is remarkable — but not limitless. Regardless of whether turtles continue to return to nesting sites despite these disturbances, humans' ethical responsibility is clear: to safeguard the ecological balance that keeps sea turtles going.

NAVY RECREATES STITCHED SHIP BASED ON 5TH CENTURY AJANTA PAINTINGS

The Indian Navy on Wednesday formally inducted and named a stitched sail ship, INSV Kaundinya, at a ceremonial event held at the Naval Base in Karwar. INSV Kaundinya is a recreation of a fifth-century vessel depicted in the paintings at the Ajanta Caves.



The project was initiated through a tripartite agreement signed in July 2023 between the Union Culture Ministry, the Navy, and Hodi Innovations, with funding from the Culture Ministry, and is meant to showcase India's rich shipbuilding heritage.

"Following the keel laying in September 2023, the vessel's construction was undertaken using a traditional method of stitching by a team of skilled artisans from Kerala, led by master shipwright Babu Sankaran. Over several months, the team painstakingly stitched wooden planks on the ship's hull using coir rope, coconut fibre and natural resin," the Navy said in a statement. It was launched in February 2025 at Goa.

Transoceanic trip next

Named after Kaundinya, the legendary Indian mariner, the ship will now begin preparations for a transoceanic voyage along the ancient trade route from Gujarat to Oman, scheduled for later this year, the Navy said.

The Navy played a central role in the project, overseeing the design, technical validation, and construction process. With no surviving blueprints or physical remnants, the design had to be extrapolated from a two-dimensional artistic iconography.

The stitched ship is equipped with square sails and steering oars, which are entirely alien to modern day ships. The hull geometry, rigging, and sails had to be reimaged and tested from first principles.

The Navy collaborated with the Department of Ocean Engineering, Indian Institute of Technology-Madras, for model testing to validate the vessel's hydrodynamic behaviour at sea.

MANUSCRIPTS MISSION TO BE LAUNCHED BY PM ON JUNE 9

Prime Minister Narendra Modi will on June 9 launch the revamped National Manuscripts Mission, announced in the Union Budget for 2025-26.

The Gyan Bharatam Mission, which is expected to cover more than one crore manuscripts, will be responsible for the survey, documentation and conservation of India's manuscript heritage lying with academic institutions, museums, libraries, and private collectors.

To accommodate this new initiative, the Union Budget had hiked the budgetary allocation for the existing National Manuscripts Mission (NMM) from ₹3.5 crore to ₹60 crore.

Sources told The Hindu that a series of meetings, helmed by the Union Culture Secretary, had taken place to finalise the contours of the new organisation being set up and it was expected to be launched on June 9 by the Prime Minister.

The Hindu had reported last October that the Union Culture Ministry was set to "revive and relaunch" the NMM and was mulling over the formation of an autonomous body to help preserve ancient texts in India.

The NMM is a part of the Indira Gandhi National Centre for the Arts. It was set up in 2003, but had not taken off as expected.

The Culture Ministry had organised a meeting first on October 14, 2024, to discuss the way forward. The meeting, chaired by Culture Minister Gajendra Singh Shekhawat, was attended by



experts in the field like former Chairperson of the Central Institute of Indian Languages (CIIL), Mysore and linguist Udaya Narayana Singh; Professor K. Ramasubramanian of the Indian Institute of Technology, Bombay; M.A. Alwar of Samskriti Foundation; Sudha Gopalakrishnan, Founder Director of NMM; Chamu Krishna Shastry, Chairman of Bhartiya Bhasha Samiti; and Shrinivasa Varakhedi, Vice-Chancellor of Central Sanskrit University, Delhi.

The expert group also included a programme manager from Google Arts and Culture.

3 lakh titles digitised

According to sources, the NMM has till date, prepared a metadata of 52 lakh manuscripts and roughly over three lakh titles have been digitised.

However, only one-third of them have been uploaded.

A senior official from the NMM said out of the nearly 1.3 lakh manuscripts uploaded, only 70,000 were available for viewing.

The reason for this was that there was no “access policy”, which means there is no incentive for private owners to make manuscripts available with them to be viewed.

Around 80% of manuscripts in India are with private parties.

The NMM has also said that over the past 21 years, it has undertaken preventive and curative conservation of nine crore folios.

A TRAGEDY RECORDED FOR POSTERITY: INSCRIPTION NEAR TEMPLE IN KARNATAKA LISTS DROUGHT DEATHS IN 1539

A sculptural inscription discovered near the Chandrashekara temple at Guttala in Haveri district of Karnataka has documented the death of 6,307 people due to drought in the local area, making it the first such historical record of a humanitarian disaster caused by a natural calamity in India.

The discovery has been hailed as a significant addition to India's epigraphic heritage. The inscription is dated Saka 1461, Vikari, Bhadrpada su.5, which corresponds to August 18, 1539 CE, according to K. Munirathnam Reddy, Director, Epigraphy, Archaeological Survey of India (ASI).

In Kannada language

He said the inscription is in the Kannada language and script, and it solemnly records the tragedy, marking it as one of the large-scale natural calamities documented epigraphically in Indian history.

The text, inscribed on a stone slab, states that 6,307 people had perished due to drought. It notes that their bodies were buried by Marulaih Odeya, son of Nanideva Odeya of Guttavalala, by carrying them in baskets for the merit of Timmarasa Svami, the ruler of the seeme (a territorial division), after paying obeisance to the feet of god Basaveshwara. The inscription is accompanied by a sculpture depicting a person — ostensibly Marulaih Odeya — carrying a basket containing two or three bodies on his head.

Mr. Munirathnam described the findings as a landmark, as the inscription is rare and explicitly documents the human toll of drought. Inscriptions such as the one at Guttala provide an insight



into the socio-economic conditions that prevailed during historical periods, and these are often absent in literary texts. Through comparative studies, it may even be possible to understand how communities coped with such calamities, he said.

A broader study of similar inscriptions across regions and periods can deepen our understanding of the historical impact of natural calamities and the responses they evoked, according to Mr. Munirathnam.

He said it could also help researchers trace climatic patterns, while scholars might uncover details of administrative action or demographic changes based on such records.

The epigraphy branch of the ASI, discovered and copied over 1,000 inscriptions from the length and breadth of India, including in deep jungles during 2024-25. This year, more than 100 inscriptions have been discovered so far.

STORIES FROM THE HEART

The marginalised have come to the fore with Banu Mushtaq winning the International Booker Prize for 2025. In a first for Kannada, Mushtaq and her translator Deepa Bhashti walked away with the top honours on Tuesday night in London for Heart Lamp. This is also the first time in the history of the prize that a collection of short stories has won. Breaching walls, breaking ceilings, and enduring angry outbursts, Mushtaq chronicles the lives of Muslim women and their anxieties. Her stories are also peopled by clueless husbands, children who are like “monkeys without tails”, loving and, sometimes overbearing, grandmothers, muscular brothers and maulvis. But as Mushtaq has said in interviews, the narratives are primarily about women and how “religion, society, and politics demand unquestioning obedience from them, and in doing so, inflict inhumane cruelty upon them”. She writes with candour and wry humour, even as the women are often struggling to stay afloat with their backs against the wall. In her moving acceptance speech, Mushtaq harped on the power of words to “create a world where every voice is heard, every story matters, and every person belongs”.

Showering praise on Kannada, she said that it is a language that sings of resilience and nuance — “to write in Kannada is to inherit a legacy of cosmic wonder and earthly wisdom”. The 77-year-old Mushtaq hails from Hassan in Karnataka, like another illustrious writer, Raja Rao, who wrote in Kannada, English and French. Mushtaq, a lawyer and activist, was inspired to write after hearing of the “pain, suffering, and helpless lives” of the women she interacted with. The “radical translation” by Bhashti was praised by the Jury chair Max Porter who said it “ruffles language to create new textures in a plurality of Englishes”. Heart Lamp’s Booker, just three years after Geetanjali Shree won for Tomb of Sand, should open doors for India’s rich regional languages to gain a wider readership. Mushtaq follows a trail of writers such as Perumal Murugan, Vivek Shanbhag, Bama, Jayant Kaikini, M. Mukundan and S. Hareesh who observe the human condition in a socio-political context with their translators ensuring the rhythms of the original language are not lost. In a world that often tries to divide people, Mushtaq said that literature remains one of the “last sacred spaces where we can live inside each other’s minds if only for a few pages”. It is the only place that can embrace stories from unheard corners and translations that defy borders.

Do You Know:

— First awarded in 1969, the Booker Prize is one of the prestigious awards in English fiction. In 2005, the Booker Foundation instituted the International Booker Prize for translated works.



— The International Booker Prize began in 2005. A biennial prize initially, it was then awarded for a body of work available in English, including translations, with Alice Munro, Lydia Davis and Philip Roth becoming some of the early winners.

— In 2015, the rules of the International prize changed to make it an annual affair. The new rules stipulated that it will be awarded annually for a single book, written in another language and translated into English. The £50,000 prize money is divided equally between the author and translator each year

— This is the first time a Kannada writer has won a Booker Prize. For a language with centuries of rich storytelling, this recognition is long overdue. That it comes via one slender volume rather than a lifetime's work — like U R Ananthamurthy's 2013 nomination — signals a shift: global readers are finally heeding voices that whisper.

— This recognition is, in no small part, due to the quality of the English translation by Deepa Bhashi. Having worked with Mushtaq since 2022, Bhashi preserves the original's rhythms by retaining key Kannada words and cadences, letting the readers breathe the stories in their native air.

M R SRINIVASAN, WHO BUILT INDIA'S N-POWER PLANTS, DIES; PRESIDENT, PRIME MINISTER PAY TRIBUTE

At 95, he was fit and active enough to be re-inducted as member of Atomic Energy Commission (AEC) earlier this year. But age finally caught up with M R Srinivasan on Tuesday.

— Among the first generation of nuclear technologists in India, Srinivasan was one of the key people who built the country's nuclear power programme.

— Joining the Department of Atomic Energy (DAE) in 1955 at the age of 25, Srinivasan rose to become its Chairman in 1987 and also headed the AEC. A mechanical engineer, his most important contribution was in the refinement and adaptation of Pressurised Heavy Water Reactors, which went on to become the backbone of nuclear power in India.

— Srinivasan was part of the team that built Apsara, India's first research reactor in the 1950s, and was involved with every nuclear power plant built thereafter.

— Srinivasan had become the head of the Nuclear Energy Board in 1984. The Board managed and operated all nuclear power plants before it was transformed into the Nuclear Power Corporation of India Limited (NPCIL) in 1987. Srinivasan was the obvious choice for the position of its founder-director.

— "Picked by Homi Bhabha himself, he played a pivotal role in the setting up of India's very first nuclear power plant at Tarapur in the late 60s. Later he led the team that established India's extensive nuclear power complex at Kalpakkam."

Do You Know:

Three-stage nuclear programme

→ STAGE 1: Pressurised Heavy Water Reactors (PHWRs) use natural uranium-based fuels to generate electricity, while producing fissile plutonium (Pu239), which can be extracted by reprocessing the spent fuel. It uses heavy water (deuterium oxide) both as a coolant and

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



moderator. The programme has been supplemented by the construction of imported Light Water Reactors (LWRs).

→ STAGE 2: It involves setting up Fast Breeder Reactors (FBRs) of the kind at Kalpakkam, using plutonium-based fuels, which can enhance nuclear power capacity, and convert fertile thorium into fissile uranium (U233). Reprocessing of the spent fuel is vital for efficient utilisation of the plutonium inventory.

→ STAGE 3: The third stage will be based on the ThU233 cycle. U233 produced in the second stage can be used for the third stage of the power programme, which consists of advanced thermal and fast breeder reactors, for long-term energy security. The Advanced Heavy Water Reactor (AHWR) is proposed for this. Now, the use of molten salt reactors is also seen as an option.

THE NORTH STAR IN INDIAN ASTROPHYSICS, HE WAS AHEAD OF HIS TIME — AND SPACE

Jayant Narlikar, who had contributed immensely to the development of an alternative model of the universe along with his mentor Fred Hoyle, passed away Tuesday morning in Pune. He was 87. Ailing for some time, he had had a fall two weeks ago and had to be operated upon last week.

— The Big Bang theory suggests that the universe has a definite beginning, and a possible end. In contrast, the steady state theory, which was the mainstream theory in the 1950s and 1960s, maintains that the universe has always been the way it is, without any beginning or an end.

— The idea has become less popular over time, with mounting evidence that supports the Big Bang theory. But Narlikar remained unconvinced.

— Acknowledging that he was in a small minority, he argued in his autobiography 'A Tale of Four Cities' that there was still enough evidence to "re-examine the situation".

— The Hoyle-Narlikar theory, as it came to be known, on the steady state universe was just one such idea. In the process of formulating their model, the two also came up with an alternative theory of gravity, by modifying Einstein's general relativity.

— Then there was their work on cosmological red-shifts, the fact that light coming from far-away objects appears shifted towards longer wavelengths, corresponding to the red end of the visible spectrum. Narlikar questioned the accepted understanding that the red-shifting was caused mainly by the relative motion of the source.

— Narlikar did, eventually, return to India after a few years, where he trained several generations of astrophysicists and built institutions like IUCAA.

— He delved into science fiction, writing short and long stories in Marathi and English, many of which became part of the school curriculum. He pursued science popularisation, and campaigned against superstition and pseudo-science.

Do You Know:

— Unlike the Big Bang theory that suggests a definite beginning, and possibly an end, to the universe, the steady-state theory maintains that the universe has always been, and would continue to be, the way it is — infinite in extent, without a beginning or an end. It acknowledged an expanding universe, which was experimentally verifiable, but proposed that the universe was able to maintain a constant density by continuously creating new matter.



— Born in 1938 in Kolhapur, Maharashtra, Narlikar was a young PhD student at Cambridge University in the early 1960s, when he produced a series of influential works in cosmology. He did so under the guidance of Hoyle, who had come up with the steady-state theory of the universe in collaboration with Hermann Bondi and Thomas Gold.

— Incidentally, Hoyle is also the one who coined the term 'Big Bang', referring to that theory in a rather dismissive manner in a radio interview in 1948.

— Hoyle and Narlikar instead worked to explain the steady-state theory. One of their key ideas in their hypotheses was the constant creation of new matter in the universe. This was important for the model of the universe that they proposed.

— Despite the elegant mathematics that Narlikar had produced, the steady-state theory slowly lost out, with the emergence of new observations that fit the Big Bang model better. One of the most prominent discoveries in this regard was that of cosmic microwave background (CMB) radiation in 1965.

— Narlikar, while acknowledging the growing evidence in favour of the Big Bang, maintained that the evidence was still not unambiguous, and was based on several unproven assumptions that were open for challenge. He considered himself amongst the minority that believed that sufficient evidence existed to re-examine the situation.

SHORT NEWS

WHAT IS TRUMP'S 'GOLDEN DOME' FUTURISTIC US MISSILE DEFENCE

Trump said that the system will comprise, among other things, space-based sensors and interceptors. If this were to be true, this would make the Golden Dome the very first truly space-based weapon system.

MOHMAND DAM IN PAKISTAN

— Amid India-Pakistan tensions, China is accelerating the pace of work on the Mohmand dam in Pakistan's northwestern Khyber Pakhtunkhwa province.

— The Mohmand dam is being constructed on the Swat river, which originates from the glaciers of the Hindu Kush mountains. It is a perennial river, flowing through picturesque valleys and mountains, and later joining the Indus.

GREAT INDIAN BUSTARD (GIB)

— Radheshyam Pemani Bishnoi, a wildlife conservationist and animal rescuer from Rajasthan's Jaisalmer district, died in a road accident. He is celebrated for his efforts to protect the critically endangered Great Indian Bustard (GIB).

— Scientific name: *Ardeotis nigriceps*

— IUCN Red List status of Great Indian Bustard: Critically Endangered

— Indian Wildlife Protection Act: Schedule I



- Convention on the Conservation of Migratory Species of Wild Animals (CMS): Appendix I
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): Appendix 1
- Plans to recover the species first started in 2013 under the National Bustard Recovery Plan, which later gave way to the Bustard Recovery Project in 2016. Later, in July 2018, a tripartite agreement was signed between MoEFCC, Rajasthan forest department and WII.
- As part of the project run by the three parties, two GIB conservation breeding centres and one Lesser Florican centre are functioning in Rajasthan's Sam, Ramdevra, and Sorsan, respectively.

KARNI MATA TEMPLE IN BIKANER, RAJASTHAN

- On May 24, Prime Minister Narendra Modi visited the Karni Mata temple in Deshnok, a small town about 30 km from Bikaner, Rajasthan.
- Dubbed the "rat temple", this historical place of worship is famous for being the home to tens of thousands of kabas (rats), which are considered sacred and protected.
- Karni Mata, also known as Ridhi Kanwar or Ridhu Bai, is believed to have been a 14th–15th sage, and an incarnation of Goddess Durga. She is said to have been born in 1387 CE in the village of Suwap near Phalodi, about 100 km from Deshnok, into a Charan family.

SHIRUI LILY FESTIVAL

- After a two-year pause, the Shirui Lily festival returns in Manipur. It is the first major tourism festival to be hosted by the state since the start of the conflict in May 2023.
- The Shirui Lily Festival is organised by the Manipur government's Department of Tourism. It is one of the two major tourism festivals organised by the state. The other one is the Sangai festival, named after the Manipur brow-antlered deer.
- The Shirui Lily festival is named after the Shirui Lily, or the *Lilium mackliniae*, recognised as the state flower of Manipur. It was first held in 2017. The festival coincides with the blooming season of this rare flower.
- It is held in Manipur's Ukhrul district, which is home to the Tangkhul Naga community. The event is designed as an eco-tourism festival to raise awareness about the Shirui Lily and to promote tourism to the hills of Ukhrul.
- The Shirui Lily is endemic to the upper reaches of the Shirui Hill range in Ukhrul district at an elevation of 2,673 m above sea level.
- The locals had long been familiar with the plant — calling it the 'Kashsong Timrawon' after Timrawon, the daughter of mythical goddess Philava who resides and protects the hills of Shirui.
- It was in 1946, botanist Frank Kingdon-Ward identified it and gave it its scientific name. The name, *Lilium mackliniae*, draws from his wife Jean Macklin's name.

**ECONOMICS AND BUSINESS****SUEZ CANAL OFFERS 15% DISCOUNT TO CARGO SHIPS: WILL VESSELS RETURN TO THE RED SEA ROUTE?**

Egypt's Suez Canal Authority (SCA) is offering a 15 per cent discount from May 15 on transit fee to cargo ships of minimum 130,000 mt capacity, underscoring the impact that the Red Sea security crisis has had on the waterway critical to the shortest maritime route to the Mediterranean Sea and beyond from the Arab Peninsula, North-East Africa, and the Arabian Sea.

- “The SCA has issued incentives and reductions of 15 per cent on the transit tolls of container ships of 130 thousand tonnes or more in net tonnage (loaded or in ballast) for 90 days,” said Admiral Ossama Rabiee, SCA chairman and MD after a meeting with the Italian Ambassador to Egypt, Michele Quaroni.
- Earlier, Rabiee also reached out to 25 major shipping line operators and maritime agencies, urging them to gradually return their vessels to the Suez Canal citing the positive development “towards the return of navigation in the Red Sea”. This came three days after US President Donald Trump announced that Iran-backed Houthi militia had agreed to a ceasefire in the Red Sea. The Houthis maintained that Israel-flagged and -linked ships are not part of the agreement with the US, and they will continue to be targeted .
- In November 2023, Yemen-based Houthi rebels, backed by Iran, began targeting commercial vessels that they believed were linked to Israel and its key allies in response to its military offensive in Gaza. This crisis prompted the world's major container lines to divert their ships from the Red Sea route and navigate around the Cape of Good Hope. With much of the cargo movement rerouting away from the Suez Canal, its revenue crashed to around \$4 billion in 2024 from \$10.3 billion in 2023.

Do You Know:

- The Suez Canal accounts for nearly 12-15 per cent of global trade, according to IMF data. Nearly 30 per cent of global container traffic flowed through the Suez Canal before the Houthi attacks began. It is also a key passage for 8-9 per cent of global energy flows.
- As of May 11, 2025, Suez Canal's daily transit trade volume (TTV) stood at 484,137 mt, compared with 1,349,086 mt a year ago, shows data from PortWatch, a live conflict tracker maintained by the IMF and Oxford University. TTV denotes the total volume of goods transported through a shipping route. Daily TTV stood at 11,052,600 mt as of May 11, 2025 at the Bab el-Mandeb Strait, compared with 1,192,116 mt a year ago, according to PortWatch data.
- According to an analysis by the Federal Reserve Bank of St Louis, ports in East Asia and the Pacific, Europe and Central Asia, the Middle East and North Africa witnessed a decline in the amount of trade between October 20, 2023 and January 28, 2024 compared to the year-ago period.
- While the Red Sea security crisis hit traffic and revenue for the Suez Canal, it also led to higher shipping costs as vessels go around Africa, extending voyage durations—by 10-14 days—and fuel burn significantly, leading to higher freight rates. The longer voyages also made vessel availability



tighter, again having an inflationary impact on freight rates. And for vessels still looking to transit the Red Sea, war risk insurance premiums skyrocketed, making the route unviable for most.

- The Red Sea crisis has also hit liquefied natural gas (LNG) flows via Suez Canal which plummeted to 4.15 million tonnes in 2024 from 32.36 million tonnes in 2023 and 34.94 million tonnes in 2022 according to Kpler data. Meanwhile, LNG volumes going via the Cape of Good Hope increased by a little over five-fold from 11.76 million tonnes in 2022 to 59.37 million tonnes in 2024.

MOODY'S DOWNGRADE INTENSIFIES INVESTOR WORRY ABOUT U.S. FISCAL PATH

A U.S. sovereign downgrade by Moody's has exacerbated investor worries about a looming debt time-bomb that could spur bond market vigilantes who want to see more fiscal restraint from Washington.

The ratings agency cut America's pristine sovereign credit rating by one notch on Friday, the last of the major ratings agencies to downgrade the country, citing concerns about the nation's growing \$36 trillion debt pile.

Moody's said on Friday successive administrations have failed to reverse the trend of higher fiscal deficits and interest costs, and it did not believe that material reductions in deficits will result from proposals under consideration.

A recent increase in the 10-year Treasury term premium - a measure of the return investors demand for the risk of holding long-dated debt - is partly a sign of underlying fiscal worry in the market, said Anthony Woodside, head of fixed income strategy at Legal & General Investment Management America.

HOW THE TRUMP ADMINISTRATION AIMS TO CONTAIN CHINA'S AI INDUSTRY

Artificial Intelligence (AI) and tariffs have become pivotal battlegrounds in the escalating rivalry between the United States and China. Last week, the U.S. Department of Commerce (DOC) redrew a significant line of engagement by formally rescinding the Biden administration's 'Artificial Intelligence Diffusion Rule', mere days before its May 15 effective date. The rescission signals a strategic pivot in how the U.S. intends to wage this high-stakes tech war.

This manoeuvre, set against the persistent drumbeat of the U.S.-China tariff disputes, casts a long shadow of uncertainty and opportunity over tech companies and global supply chains desperately trying to navigate the fight for AI supremacy.

Direct intervention

The now-axed 'Artificial Intelligence Diffusion Rule', introduced under former President Joe Biden in January, was a complex attempt to manage the global proliferation of advanced AI chips and, by extension, AI capabilities.

The stated aim, according to a White House press release, was to "provide clarity to allied and partner nations" and streamline chip licensing. Critically, however, it established new, widespread restrictions on exporting U.S.-made AI chips.

Mr. Biden's framework was essentially a global triage system. Closest allies like Japan and South Korea were largely spared. Adversaries, notably China and Russia, already under tight restrictions



for advanced AI chips, faced even tougher limitations, especially concerning sophisticated “closed” AI models. The most significant impact was on a vast third tier of nations like Israel and Mexico. These nations would have faced caps on AI chip imports (reportedly around 50,000 GPUs each, with avenues for increase), a measure explicitly designed to prevent China and Russia from sourcing critical technology through them. Industry giants like Nvidia voiced strong opposition, calling the proposed rules “unprecedented and misguided” and warning they would “derail” global innovation. This regulatory structure was intended to build on previous guidance from October 2022 and October 2023.

The Trump administration has decisively swept this tiered system aside. The DOC’s announcement of the revocation included plans for a “replacement rule in the future, likely focusing on direct negotiations with countries as opposed to blanket restrictions,” according to a Bloomberg report. This reflects a different philosophy of engagement as the U.S. Secretary of Commerce for Industry and Security, Jeffrey Kessler, declared, “The Trump Administration will pursue a bold, inclusive strategy to American AI technology with trusted foreign countries around the world, while keeping the technology out of the hands of our adversaries.” He didn’t mince words, labelling Mr. Biden’s approach an “ill-conceived and counterproductive” imposition.

Instead of Mr. Biden’s broad rulebook, the DOC issued immediate, pointed guidance: a stark reminder that using Huawei’s Ascend AI chips anywhere globally violates U.S. export rules; a caution about the dire consequences of allowing U.S. AI chips to be used in training AI models within China; and recommendations for fortifying chip supply chains against diversion tactics. This indicates a preference for direct, forceful interventions and targeting specific entities and practices rather than implementing a complex, universal regulatory scheme.

New battle tactics

This shift in AI export control is more a change in battlefield tactics than a retreat from strategic objectives. Both administrations share the core goal: cementing U.S. dominance in AI and critically, preventing China from leveraging advanced technology to surpass U.S. military and economic power. Mr. Biden’s strategy aimed to manage AI diffusion through a systematic, if cumbersome, international framework. The Trump administration seems to be gearing up for a more flexible, arguably more aggressive and transactional engagement, relying on bespoke agreements and sharp, punitive actions against those, like Huawei, deemed central to the adversary’s capabilities. The explicit condemnation of using U.S. AI chips to train models in China underscores this direct confrontational stance.

The rhetoric of a “bold, inclusive strategy with trusted foreign countries” hints at a different approach to alliance-building in this tech conflict, but the unwavering focus on keeping advanced tech from “adversaries” shows that underlying contest with China remains paramount.

The economic front in the AI war

This recalibration of AI export controls cannot be viewed in isolation. It is intrinsically linked to the ongoing tariff war, another major front in the U.S.-China battle. Significant tariffs, initiated under the previous Trump administration and largely continued by Mr. Biden, were already a defining feature of the economic landscape.

U.S. tariffs on Chinese goods, and retaliatory Chinese tariffs on U.S. products, have directly impacted the tech sector by increasing the cost of components, servers, and finished goods essential for AI development and infrastructure.



In the current term, Mr. Trump has further solidified the hard line on China, deploying tariffs as a coercive tool in trade and technology negotiations. Apart from tariffs, the current administration has increased compliance on chipmakers. Most recently, Nvidia was required to go through a licensing route to ship its H20 GPUs to China. The AI chip was a dumbed-down version of the powerful H100 and H200 GPUs that were tailor-made for China.

This type of policy shift creates a dual pressure point for the tech industry: restricted access to and movement of AI technology, compounded by the increased financial burden of tariffs. Tech companies are, in essence, navigating a minefield where both AI know-how and the hardware it runs on are subject to intense geopolitical manoeuvring and economic warfare.

Navigating the new battleground

For tech companies and their global supply chains, this integrated battlefield of AI controls and tariffs signal continued, if not amplified, turbulence.

In the near term, adapting to ambiguity will be important as geopolitics moves from a defined set of rules to a future that is based on direct negotiations. While some may find new avenues through bespoke agreements, the lack of a clear, universal framework makes strategic planning challenging.

Secondly, countries previously in Mr. Biden's "third tier" might perceive an opening, but they will also likely face intensified diplomatic and economic pressure as the U.S. prosecutes its "trusted partner" strategy in the shadow of the overarching U.S.-China rivalry.

Looking to the long term, the intertwined forces of AI export controls and tariffs will likely compel companies to de-risk and diversify their supply chains. "Friend-shoring" and regionalisation efforts will intensify as businesses seek to insulate themselves from the fallout of this battle. This could lead to increasingly separate tech ecosystems and a more splintered technological world.

As these ecosystems evolve, China will only accelerate its already massive investment in domestic AI capabilities — from semiconductor design and manufacturing to foundational AI models. U.S. trade policies are acting as a catalyst for China's self-reliance drive, even as a U.S. foreign policy increasingly built on direct deals for technology access will likely trigger a more dynamic and competitive scramble among nations to align themselves strategically, caught between the technological gravity of Washington and Beijing.

This shift in U.S. AI export policy is not a standalone event but a tactical adjustment on this sprawling battlefield. While the objective of ensuring U.S. AI leadership and containing China's technological advance remains unchanged, for the global tech industry, this means bracing for continued geopolitical turbulence where innovation, market access, and supply chain integrity are all caught in the crosshairs of this superpower contest.

THE ONGOING OIL PRICE TENSIONS

Just when you had your surfeit of headlines screaming of blood and gore, come the drumbeats of a new conflict. However, in this new one, the belligerents do not swap bullets but barrels. Yet, this incipient conflict is shaping to be a "mother of all battles" perhaps with a more universal impact than the destruction being wrecked in various corners of the world.



This prognosis may surprise observers who not only missed the weeks of its run-up skirmishes but also the bugle of war, when on May 3, the Organization of the Petroleum Exporting Countries Plus (OPEC+) decided to go ahead with a collective output increase of 4,11,000 barrels per day (bpd) from next month (June). This was the third month in a row that the oil cartel decided to raise crude production, cumulatively undoing the 9,60,000 bpd or nearly half of the 2.2 million bpd “voluntary” output cuts eight of its members undertook in 2023, to increase global oil prices in an oversupplied market. There are hints that the full 2.2 million bpd cut would be unwound by October 2025. Though the announced production rise was less than half a per cent of global daily production, the oil market was so jittery that the Brent crude price plummeted by almost 2% to \$60.23/barrel, the lowest since the pandemic. It has since recovered to \$65/barrel with support from the U.S.-China stopgap trade deal and reports of stalemate in the U.S.-Iran nuclear talks.

Saudi’s strategy

The oil market is still gutted and crude price is nowhere near the triple dollar mark that OPEC+ aimed for. Why, then, has this 23-member producer clique decided to reverse its tactic from reducing supplies to raising production? To find the reasons, we need to deep dive into the oil market of the post-COVID era.

Despite the expectation of a quick turnaround, global post-COVID economic recovery was mostly K-shaped leading to an anaemic growth in oil demand. Meanwhile, oil producers were desperate to ramp up their outputs to make up for lost revenue. It also did not help that several new producers, from the Shale oilers to non-OPEC+ countries, such as Brazil and Guyana, also wanted a piece of the shrunken demand. To square the circle, OPEC+ decided to take a collective production cut of five million bpd, nearly 10% of its total pre-pandemic output. When even this move did not shore up the oil price, a further “voluntary” cut of 2.2 million bpd was taken by eight members. This rope trick also failed to raise oil prices which continued to slide downwards.

While these processes were ongoing, Saudi Arabia, OPEC+’s largest producer, which took nearly three million bpd or 40% of the total production cuts, got increasingly infuriated by endemic OPEC+ overproducers, such as Kazakhstan, Iraq, the UAE and Nigeria. The Kingdom, often called a “swing producer” for its large spare production capacity, prefers stable and moderately high oil prices to ensure a steady oil revenue. However, it has made exceptions in 1985-86, 1998, 2014-16, and 2020 to pursue a market share chasing strategy to punish perceived overproducers. In the past, this market flooding strategy of Saudi enabled Riyadh to eventually impose production discipline among its peers, allowing prices to return to Riyadh’s desired levels.

Now, when repeated pleas failed to stop overproducers, and when Saudi Arabia’s average production fell below nine million bpd in 2024, its lowest level since 2011, Riyadh decided to repeat the playbook: an oil price war in the guise of accelerated restoration of voluntary production cuts.

An oversupplied oil market

However, many observers are less sanguine about the outcome of the Saudi campaign this time owing to several unique and different fundamentals. To begin with, this time the Saudis do not have the usual deep pockets needed to prevail. The oil market is more fragmented with large flocks of freelancing producers. High Capex has been sunk in ultra-deep offshore fields and other difficult geographies which need recovering, even at marginal costs, to avoid adverse political and economic consequences. Moreover, the crude exports by major oil producers such as Russia, Iran and Venezuela are currently hobbled by U.S. economic sanctions which may not last long.



The global oil demand is approaching a plateau and the International Energy Agency (IEA) expects it to grow only by 0.73% in 2025 despite sharply lower prices. The controversial “peak demand” theory does not appear as outlandish now as it did only two years ago when the IEA predicted that global oil consumption would peak before 2030. The signs in that direction are ubiquitous — from the global economic slowdown to the growing popularity of non-internal combustion engine vehicles, particularly in China, the largest oil importer, and growing climate change mitigation. These pessimistic projections are likely to be further compounded by the huge disruption unleashed by U.S. President Trump’s tariff war. The S&P Global agency lowered its global GDP forecasts to 2.2% for 2025 and 2.4% for 2026 — historically weak levels since the 2008-09 recession except for the pandemic period. The World Trade Organization recently predicted a 0.2% annual decline in world trade in 2025 unless other influences intervene. The aforementioned bearish factors can create an inelastic situation causing oil prices to not return to previous levels even after supply-side impetuses are reversed.

All this background begets the question: why has Riyadh picked this moment to unleash the oil war? To some observers, the likely rationale lies in a mix of economic and political factors. To begin with, faced with the inevitable long-term prospects of a buyers’ market for the foreseeable future, Saudi Arabia may be trying to frontload and maximise their oil revenue. They may also be aiming at positioning themselves at the lower end of the oil price spectrum in anticipation of sanctions being removed from Iran, Russia and Venezuela, three of the biggest producers as well as the full rollout of Mr. Trump’s “Drill, Baby, Drill” campaign. Last, but not least, the move was probably intended as a curtain raiser for President Trump’s high-profile state visit to the Kingdom with Al-Saud wishing to be seen as heeding Mr. Trump’s call for lower oil prices to help contain U.S. domestic inflation despite his higher import tariffs hurting consumers. With defence guarantees, a nuclear agreement and over \$100 billion in American weapon sales lined up, the Saudis have a lot to gain from the U.S. President’s successful visit.

The impact on India

Although the low-intensity oil war may not hit the headlines the way shooting wars do, it is arguably far more consequential. It is particularly true for India, the world’s third-largest crude importer, which shelled out \$137 billion in 2024-25 for crude. India’s crude demand rose by 3.2% or nearly four times the global growth. A U.S. study last year predicted that in 2025, nearly a quarter of global crude consumption growth would come from India. Even further down the line, India’s oil demand is widely expected to be the single largest driver for the commodity till 2040. Consequently, although we may not be a combatant in the oil war, we have high stakes, with a one-dollar decline in oil price yielding an annual saving of roughly \$1.5 billion.

While the downward drift of crude prices in the short run due to the ongoing “oil war” may be in our interest, the picture is not entirely linear. Lower oil revenue hurts our economic interests in several ways. It causes a general economic decline of oil exporters which are among our largest economic partners, affecting bilateral trade, project exports, inbound investments and tourism. Lower crude prices also affect the value of our refined petroleum exports, often the largest item in our export basket, and could push down refinery margins. Moreover, the lower unit price of oil and gas reduces our pro rata tax revenues. The Gulf economies sustain over nine million of our expatriates, many of whom may lose their jobs. Their annual remittances, estimated at over \$50 billion, may suffer, hurting our balance of payments. Irrespective of the outcome of the ongoing oil war, unless we find a new set of drivers to replace hydrocarbons, the lower synergy may become the “new normal” across the Arabian Sea.



BANGLADESHI MIGRANT WORKERS SEEK UNPAID WAGES FROM MALAYSIA COMPANY

Around 280 Bangladeshi migrant workers in Malaysia are demanding hundreds of thousands of dollars in back wages and other money owed to them after their former employer, a plastic parts supplier to big Japanese companies, closed down.

The workers at Kawaguchi Manufacturing's factory in Port Klang, Malaysia's largest port city, were left stranded when the company withheld their wages for up to eight months before shutting down late last year. The workers have filed complaints in Malaysia and back home in Bangladesh.

Such disputes have become a diplomatic sore point between Bangladesh and Malaysia, drawing scrutiny on a small but powerful group of recruitment agencies and middlemen who monopolise such jobs.

Asif Nazrul, an adviser to Bangladesh's expatriate welfare ministry, met with Malaysia's Home Minister Steven Sim Chee Keong in Kuala Lumpur last week. Officials were due to meet again on Wednesday in Dhaka.

The interim government that took over in Bangladesh after the ouster of former Prime Minister Sheikh Hasina has placed a higher priority on the plight of migrant workers who often get trapped in debt after paying exorbitant recruitment fees to work in dismal conditions for little pay.

Worsening situation

Labour advocates say the situation is worsening as more people from across South Asia, sometimes losing their livelihoods due to climate change, seek work in Southeast Asia. Trade tensions between the U.S. and China have accelerated that trend as factories move from China to places in Malaysia, Thailand, Vietnam and elsewhere.

The workers have received just 251,000 ringgit (\$58,101) of the more than three million ringgit (\$694,444) in back wages that a Malaysian labour tribunal ordered Kawaguchi to pay. Many have found new jobs but still have heavy debts after borrowing money to pay hefty recruitment fees.

The workers allege they were sometimes required to work without breaks for 24-hour shifts and on holidays with no paid overtime, making plastic casings for televisions and air conditioners. They say Kawaguchi confiscated their passports, provided inadequate housing and delayed their visa renewals.

The factory shut down in December, soon after Sony Group and Panasonic Holdings Corp., two of Kawaguchi's main customers, halted their orders in response to the allegations against their supplier.

After the factory closed, the workers say Malaysian officials forcibly sent many of them to another city some 360 km away to toil in new factory jobs without giving them any information. They were kept in filthy shipping containers converted into dormitories. Another 80 workers were told to work in palm oil plantations.

Dismal conditions

Most made their way back to Port Klang to seek work and chip away at the debts that have been accumulating. It took nearly three months for them to get permission from the Malaysian government to switch jobs.



Factories in Malaysia and other countries in Southeast Asia rely on migrant workers, often from Bangladesh, Myanmar and Nepal, to fill labour-intensive jobs in manufacturing, plantations, or construction that local workers won't perform for the wages offered. The cost of recruitment and migration from Bangladesh to Malaysia is among the most expensive in the world, according to the International Labor Organisation's office in Bangladesh. The official recruitment fee is about \$650 per worker. But all the workers at Kawaguchi said they paid nearly \$5,000. The loans they took to pay such sums has pushed them into debt bondage as they labour to pay off ever mounting debts.

'Modern slavery'

In 2023, Malaysian Prime Minister Anwar Ibrahim said Malaysia should end use of recruitment agents, describing the system as "modern slavery." But a 2024 study of Bangladeshi workers in Malaysia found that more than 70% had spent at least half of their wages to pay off recruitment debts. Most have at least two loans and many said they were misled about their wages.

Nearly everyone who migrates overseas from Bangladesh has suffered at least one form of modern slavery, like withholding of wages or physical violence, according to a study by the London-based think tank International Institute for Environment and Development.

Among migrant workers, Bangladeshis often end up in the riskiest jobs, such as plantation work where they can catch mosquito-borne diseases, or physically demanding factory or construction roles, where the likelihood of accidents is higher, said Shariful Islam Hasan of BRAC. "Despite the high risk and the high migration cost, salaries are too low."

IMF CONFIRMS PAK. FUNDING ISSUE DIDN'T COME UP FOR VOTING

The International Monetary Fund (IMF) has officially confirmed the May 9 decision by its Executive Board to provide additional funds to Pakistan did not come up for vote and was instead a unanimous decision. India abstained from this unanimous decision, citing Pakistan's "poor track record" in utilising funds.

The IMF's statement, made as part of a press conference by its director of communications Julie Kozack in Washington on May 22, confirms the May 10 report of The Hindu, which explained the matter did not come up for a vote because it was a continuation of an earlier pact and was not a fresh loan.

The IMF board on May 9 approved a total of \$2.4 billion in funding to Pakistan.

The Hindu also learnt that, in the run up to this decision, Finance Minister Nirmala Sitharaman and officials of the government went considerable lengths to garner support over the issue of funding to Pakistan. As there was no vote, the loan was still granted.

India will also send a dossier to the Financial Action Task Force (FATF) before its plenary in June to push for the re-inclusion of Pakistan in its 'grey list' of countries subject to increased scrutiny. It will also lobby with the World Bank to prevent it from providing Pakistan additional funding.

During her press conference, Ms. Kozack explained the IMF Executive Board approved Pakistan's Extended Fund Facility ((EFF) programme in September 2024 and the first review was planned for the first quarter of 2025. In keeping with that timeline, the IMF staff and the Pakistani authorities on March 25 reached a staff-level pact after first review.



“That staff-level agreement was then presented to our Executive Board, and our Executive Board completed the review on May 9,” Ms. Kozack said. “As a result of the completion of that review, Pakistan received the disbursement at that time.”

She emphasised the Executive Board, while conducting such reviews, examined if the programme was on track, whether conditions under the programme have been met and if any policy changes were needed to bring the programme back on track.

“And in the case of Pakistan, our Board found Pakistan had indeed met all of the targets,” she explained. “It made progress on some of the reforms, and for that reason, the Board went ahead and approved the programme.”

US FARMERS CAN OFFER NON-GM SOYBEAN PRODUCTS TO INDIA: USSEC CHIEF JIM SUTTER

A US-India trade deal could resolve several trade issues between the two countries, helping the Indian poultry industry gain access to ‘sustainably verified’ US soybean feed products, while allowing the US to partially offset potential losses arising from trade tensions with China, CEO of the US Soybean Export Council (USSEC), Jim Sutter, told The Indian Express.

— Sutter said he does not view regulatory challenges in India around genetically modified (GM) products as a non-tariff barrier, as US soy farmers have both GM and non-GM products to supply to India and elsewhere.

— This comes amid regulatory restrictions in India concerning GM seeds and products, which have been described by the United States Trade Representative (USTR) as barriers to trade.

— “China began importing soybeans from the US in 1995. Within 10 years, China became the largest importer, but its total [soybean oil] exports also doubled, benefiting from US soybean imports,” Sutter noted.

— Highlighting the need for sustainable choices, USSEC said in a statement that customers are willing to pay 9.7 per cent more for sustainable or sustainably sourced goods. This market shift proves that sustainability is here to stay, and corporations that adapt will increase market share, mitigate risks, and continue to build brand preference.

Do You Know:

— Genetically modified organisms (GMOs) are organisms that have altered DNA to change their properties. Genetically modified crops can improve yield, build resistances to pests, frost or drought, or add nutrients. Crops can also be modified to reduce carbon emissions and boost the sustainability of food production. While widespread, GM crop production uses only about 10% of the land non-GM crop production uses.

— “GM is nothing more than a breeding technique, much like crossing that we’ve been doing for thousands of years. But it’s more sophisticated, so we can make very precise changes, very rapidly,” said David Spencer, a phytopathologist and spokesperson for Replanet, an alliance of NGOs advocating for science-based solutions to climate change and the loss of biodiversity. It’s campaign Reboot Food focuses on sustainable food production.

— GMOs were first introduced in the US in 1994, with modified tomato plants that ripened more slowly to prolong their shelf life. Since then, a wide range of crops, such as soybeans, wheat and



rice have been approved for agricultural use, along with GM bacteria grown to produce large amounts of protein.

— Scientists in India have also developed strains of Sub-1 rice, which are much more resistant to flooding. Flooding is a major issue in rice-growing regions of northern India and Bangladesh, set to become worse as the climate crises develops, and now 6 million farmers in the region are using Sub-1 rice to safeguard their crops against inundation.

— Golden rice, on the other hand, is a GM strain modified to contain vitamin A, designed to combat the shortage of dietary vitamin A in parts of Asia and Africa.

WHY IS INDIA SEEKING TO IMPOSE RETALIATORY TARIFFS ON THE U.S.?

Retaliating to U.S. imposing 25% tariffs on import of steel and aluminium earlier in March, India notified the World Trade Organisation (WTO) last week of its intent to place tariffs on \$7.6 billion worth of imports from the country across the Atlantic. New Delhi held the measure estimated to rack up \$1.91 billion in duties would mirror the impact on their exports of steel and aluminium because of Washington's tariffs. The development transpired days before the two countries informed about having expedited progress towards the first tranche of the bilateral trade agreement.

Recent past

Into his second term, U.S. President Donald Trump this March reinstated 25% tariffs on all steel and aluminium being imported.

This was alongside eliminating all country and product-specific exemptions.

He argued the move meant to protect domestic industries being "harmed by unfair trade practices and excess capacity".

Mr. Trump had earlier instituted tariffs on the two commodities in March 2018 during his first term. Steel was subject to 25% tariffs whilst aluminium 10%.

India first moved for retaliatory measures only in June 2019 when Washington removed it from their Generalised System of Preferences (GSP) citing unresolved issues.

For perspective, GSPs are unilateral, non-reciprocal and non-discriminatory benefits extended by better-off economies to developing countries.

Disapproving of the exclusion as "unfortunate", India imposed retaliatory tariffs on 28 items of import (from U.S.) as apples, walnuts and almonds, among others.

The trade-related headwinds only sought to ease when Democrat leader Joe Biden assumed the top administrative office in 2021.

The formal steps were carved later during Indian Prime Minister Narendra Modi's visit to U.S. in September 2023. Reciprocating India's gesture to withdraw the duties imposed in 2019, the U.S. Dept of Commerce committed to ensuring greater market access to steel and aluminium.

Things however reverted to the 2019 order with Mr. Trump's return to the Oval Office this year. This time around both aluminium and steel find themselves subjected to the same rate, that is, 25%.



Highlighted issues

United States has maintained at the WTO that their measures are not safeguards but intended to pursue a “national security statute”.

It argues that the tariff regime is in accordance with the General Agreement on Tariffs and Trade (GATT), and Agreement on Safeguards (AoS), citing the redeemable exception for pursuing security interests in the covenant.

However, as indicated in a WTO communication, the European Union, India, China and UK disagree to the “characterisation of these measures, asserting that they are safeguards”.

Further, India in its notice also stated that the mandatory consultations prior to attaining an acceptance of AoS had not taken place. Thus, it contended about reserving the right to “suspend concessions or other obligations” that are “substantially equivalent to the adverse effects of the measure to India’s trade”.

Industry reactions

The tariff revisions in 2018 had prompted concerns about Indian exports becoming “costlier and uncompetitive” at the U.S. market. Back then, the trade dynamics that pitted India against countries accorded an exemption to the paradigm. The present regime however does not accord any exemption.

Furthermore, in response to a question on the same subject in 2020, Commerce Minister Piyush Goyal told the house that the share of US in India’s steel exports came down to 2.5% in 2018-19 from 3.3% in 2017-18.

In the now concluded financial year 2024-25, provisional data indicated exports having increased 44.21% until February compared to a decline of 42.3% in FY 2023-24.

Though the impact of the latest set of measures is to be ascertained, steel manufacturers seek caution.

“The imposition of tariff by U.S. has also led to increased volatility in the global market. While U.S. steel market stock has surged in anticipation of gaining a competitive advantage, global producers are experiencing decline,” said the Steel Authority of India Limited (SAIL).

Poignant to note, however, is that the protectionist policy of 2018 ironically did not cause much enthusiasm in Washington as well. An analysis by the U.S.’ Federal Reserve Board in December 2019 concluded the regime to have given a “small boost” to employment in the realm of manufacturing which was although offset by “larger drags” of rising input costs and retaliatory tariffs.

Broader implications

Ajay Srivastava, founder of the Global Trade Research Initiative (GTRI) held India’s latest WTO action could potentially cast a shadow over negotiations.

He added that notwithstanding the same India’s “calibrated, rules-based approach” contrasts with U.S.’ “unilateralism”, thus, positioning India as a “staunch defender of multilateral trade norms”.



Naveen Pant, Head of the Secretariat at the Aluminium Secondary Manufacturers Association (ASMA) told The Hindu that the step was necessary to protect the interests of the domestic industries.

He further stated that being at par on the negotiation table would also help soften the impact on tariffs on steel and aluminium.

What happens next though, according to Mr. Srivastava, would depend on Washington's response. He observes should the U.S. engage in consultations or withdraws the contested measures, a solution could be attained.

"Either way, India's move reflects a broader shift: a willingness to assert itself within global trade rules to protect its economic interests," he argues.

CHINA CURBS ON RARE EARTH MAGNETS: ELECTRIC VEHICLE MAKERS FACE SHORTAGE, APPROACH GOVT

New restrictions on rare earth magnets and related materials imposed by China, as a direct response to US imposing tariffs that kicked in from April 4, are beginning to impact automakers across the world, including electric vehicle manufacturers in India.

— EV makers here are staring at a potential shortage of the critical components, which raises concerns of price hikes and production delays in a nascent, cost-sensitive segment of the auto market.

— The Indian car industry is learnt to have initiated a conversation with the government to smoothen the process for procuring the rare earth magnets from Beijing.

— Rare earth magnets, especially neodymium-iron-boron (NdFeB) magnets, are crucial for EV manufacturing, particularly in electric motors. They provide the strong magnetic fields needed for efficient and powerful electric motors, including traction motors that drive EVs.

— These magnets also play a major role in other EV components like power steering systems, wiper motors, and braking systems. China has a near monopoly over these rare earth magnets.

— While the availability of rare earth metals is not limited to China, it is in the efficient processing of these critical elements where Beijing has a substantial lead, which was once enjoyed by the US and Japan.

— In recent years, Japan has been able to restart some of its minerals' processing industry owing to government policies, but countries like the US and India are heavily dependent on Chinese exports of these metals

Do You Know:

— India imported 2,270 tonnes of REEs in 2023-24, up 23 per cent from 1,848 tonnes in 2019-20, according to a recent press release from the Ministry of Mines. Imports from China accounted for 65 per cent, and another 10 per cent came from Hong Kong.

— The 17 rare earth elements (REE) include the 15 Lanthanides (atomic numbers 57 — which is Lanthanum — to 71 in the periodic table) plus Scandium (atomic number 21) and Yttrium (39). REEs are classified as light RE elements (LREE) and heavy RE elements (HREE).



— Some REEs are available in India — such as Lanthanum, Cerium, Neodymium, Praseodymium and Samarium, etc. Others such as Dysprosium, Terbium, and Europium, which are classified as HREEs, are not available in Indian deposits in extractable quantities. Hence, there is a dependence on countries such as China for HREEs, which is one of the leading producers of REEs, with an estimated 70 per cent share of the global production.

— Despite the name – rare earth elements – these elements are not so rare. They are found in abundance in the Earth's crust. However, they're rarely found in concentrations that are economically viable for mining. Therefore, extracting and processing REEs is complex and expensive, requiring high-end techniques and specialised labour to isolate and purify them.

FROM PYRAMIDS TO HOURGLASSES: HOW AI CAN CHANGE INDIAN WORKPLACES

Artificial Intelligence (AI) has outgrown its role as a mere task automator — it's now reshaping how Indian companies are built and run. The old pyramid model, with its top tier of bosses, a thick layer of middle managers, and broad base of workers, is giving way to something new — an hourglass. In this setup, AI shrinks the middle by taking over coordination and decision-making, letting leaders at the top focus on strategy while the bottom diversifies into a mix of people and smart tools.

For India, this shift is a double-edged sword, brimming with potential yet fraught with hurdles. Getting it right could propel Indian businesses onto the global stage while getting it wrong could leave them trailing.

The hourglass model

Imagine a company where top executives plan for the future without worrying about the nitty-gritties of the everyday workspace because AI now handles schedules, tracks performance, and crunches data for decisions. The middle level, once crowded with managers, thins out as AI steps in, cutting the need for human oversight. At the base, frontline workers, specialists, and AI systems team up using real-time insights to get the job done more efficiently. It's a sleeker and quicker way to work, and is powered by AI's ability to sync operations, adapt on the fly, and pair human ingenuity with machine precision. McKinsey estimates that AI could pump trillions into the global economy, with firms seeing productivity rise by up to 25% when they embrace it. Small and Medium-sized Enterprises (SMEs), India's economic spine, stand to gain big from that 25% productivity lift. That's the lure that AI promises — efficiency and flexibility.

In European countries as well as the U.S., the hourglass model is taking hold fast. A Gartner report forecasts that by 2026, one in five companies there will use AI to slash over half their middle managers, saving costs while boosting output. High wages — around \$35 an hour in the U.S. versus \$1-\$2 in India, according to the International Labour Organization — make automation a smart bet. Big players use AI to monitor workers or streamline onboarding, pushing for flatter, tech-savvy setups.

Is India adapting?

India's path is its own. Cities like Bengaluru and Hyderabad pulse with AI innovation, yet India ranks 72nd on the International Monetary Fund's AI Preparedness Index with a score of 0.49, far behind the U.S. (0.77) or Singapore (0.80). The lag stems from uneven infrastructure — rural areas lack the connectivity urban hubs enjoy — and a cultural lean towards hierarchy that's hard to shake.



Indian firms aren't diving fully into the hourglass; they're testing it with a hybrid spin. E-commerce leaders like Flipkart and Reliance Jio use AI to predict buying trends or iron out delivery kinks, but they keep layers of managers to tackle India's diverse, multilingual markets. Lower labour costs ease the pressure to cut middle roles, and our respect for authority slows the shift to flatter organisational structures. A report by World Business Culture highlights how Indian businesses echo our society's top-down ways, making big change a tough sell. This hybrid tack isn't a retreat — it's a strategic play, blending AI's perks with what already works.

The perks of such blending are real and enticing. Efficiency tops the list. A Surat textile maker could use AI to forecast fabric demand, slashing waste and boosting profits. Innovation follows close behind. AI tools speed up coding for tech firms, freeing staff to come up with new solutions. The NNG Group found that generative AI boosts task performance by 66%, a hint of what it could do for the Indian IT sector. Flexibility's another win — pharmaceutical companies leaned on AI during the pandemic to navigate supply chain chaos, showing its value in difficult times. Add in better customer and employee experiences — banks roll out 24/7 chatbots, payroll automation frees up staff duties — and you've got a compelling case. Additionally, it also brings in an array of new roles, such as AI experts and data ethicists, with demand set to hit 1.25 million by 2027, per Deloitte and Nasscom.

Myriad challenges

But the road's not all rosy. Jobs hang in the balance, especially for middle managers and the less skilled. Pew Research pegs 19% of U.S. workers with high exposure to AI, and globally, up to 800 million jobs could shift by 2030. In India, where steady work props up millions, this could widen gaps — non-graduates and older workers would face the brunt. While LinkedIn states 94% of Indian firms plan to reskill their workers, it's going to be a tall order.

Ethics throw up another snag. AI can stumble with bad data, a worry in our diverse nation — think skewed loan calls or hiring picks. Another worry is transparency; 79% of Indians dislike their data being sold off, as per ISACA. While the Digital Personal Data Protection Act, 2023 aims to curb this, it's still finding its feet.

Infrastructure's a sticking point too. With 65% of Indians in rural areas and many offline, AI's reach is cramped. Moreover, bringing in AI infrastructure isn't cheap, and not every firm will be able to afford it. Culture adds a twist. Our love for hierarchy, especially in family businesses, jars with the hourglass push. Flattening things risks pushback from workers and bosses wedded to the old ways. It's not just technology — it's people as well.

What should be done?

Start with reskilling — train staff in AI basics, data skills, and problem-solving; Skill India's digital courses are a launchpad. Next, adopt a hybrid model — use AI for analytics or customer chats, and keep humans for the big decisions. Then, lay down ethical guidelines — set rules for fair, open AI, with checks to dodge bias and build trust, as per the OECD guidelines. Team up with Western firms for know-how, tailoring it to India's needs, like affordable tech for SMEs. Additionally, know that AI is a journey, and not a fix; track cyber risks and regulatory shifts to keep ahead.

India's hourglass won't ape the West — it'll be our own blend, fusing AI's power with our economic and cultural roots. By doing so, we could lead in AI-driven business. A Centre for Economic Policy Research study flags a 0.5-0.6% productivity bump from AI in Japan — India could see the same. It's about time we start syncing tech with human grit and India's unique



rhythm. For our firms, this should not be just a trend — it's a chance to rethink work, value, and how 1.4 billion of us shape the future.

THE 'CORE' OF INFLATION, AND RBI'S RATE CUTTING DECISIONS

Between February 8, 2023 and February 6, 2025, the Reserve Bank of India (RBI) kept its key short-term 'repo' lending rate for banks unchanged at 6.5%.

This roughly two-year period (February 2023 to January 2025) saw inflation based on the official consumer price index (CPI) average 5.2% year-on-year. It was even higher, at 7.6%, for the consumer food price index (CFPI).

— At the same time, the so-called core inflation rate – which excludes food and fuel items from the CPI to compute the annual price increase – was only 4.1%. The relatively low 'core' inflation was cited by many, then, as reason enough for the RBI's monetary policy committee to cut interest rates.

— Food and fuel inflation are largely driven by supply-side factors – such as rainfall, temperature and other weather-related phenomena affecting crop output or geopolitical developments and production policies of major petroleum exporting nations.

— Given the inherently volatile nature of food and fuel inflation – which monetary policy cannot effectively address, as interest rates primarily work by influencing borrowing costs and aggregate demand in the economy – the RBI, it was argued, should focus on 'core' than the headline 'general' CPI inflation.

— While RBI has since reduced its repo rate, by 0.25 percentage points each on February 7 and April 9 to 6%, the pressure to do so came earlier. Union Commerce and Industry Minister Piyush Goyal had, on November 14, stated that it was an "absolutely flawed theory" to consider food inflation while deciding on interest rates.

— India experienced two major episodes of food inflation in the last three years. Both were courtesy of supply-side shocks. The first was Russia's invasion of Ukraine in late-February 2022 that pushed up international agri-commodity prices.

— Even as the global supply disruptions from 'war', causing imported food inflation, eased towards early 2023, there came a second shock. This one had to do with 'weather', more specifically an El Niño event from around April 2023 to May 2024.

Do You Know:

— Inflation refers to the rate at which the general price level for goods and services increases over a period of time, causing a decrease in purchasing power of money or real income. In other words, as inflation rises, each unit of currency can buy fewer goods and services than before.

— Rising inflation affects the financial well-being of households, especially those with lower incomes or fixed incomes. As the cost of goods and services increases, it reduces the quantity of goods and services that can be purchased with the same nominal income, thereby affecting households' cost of living.



— There are different methods for measuring inflation such as Consumer Price Index (CPI), Wholesale Price Index (WPI), GDP deflator, Producer Price Index (PPI), and wage inflation, with each focusing on a specific aspect of price changes.

— Typically, inflation relates to consumer prices of all goods purchased by the consumer which may be either domestically produced or imported. The government publishes CPI each month. CPI measures changes over time in the general level of prices of goods and services that households purchase for consumption.

The formula for calculating inflation is $((CPI_{x+1} - CPI_x) / CPI_x) * 100$.

CPI_x = the value of the CPI in the initial/base year x .

— The government releases the annual inflation rate figures every year. The annual inflation rate is calculated by measuring a year-on-year change in CPI, that is, the current month CPI over the CPI of the same month in the previous year. The percentage increase in this index over 12 months indicates the rate at which prices have risen.

— The Ministry of Statistics and Programme Implementation (MoSPI) calculates and publishes the CPI for the entire country as well as for the individual states.

RBI SOLD NEARLY \$400 BILLION OF FOREIGN CURRENCY IN FY25

The Reserve Bank of India sold a record \$398.71 billion of foreign currency in 2024-25 on a gross basis as the Indian central bank stepped up its defence of the rupee amid a volatile global environment.

- The RBI's sale of foreign currency in the spot market in the last financial year was sharply higher than the \$153.03 billion it had sold in 2023-24 and the previous record of \$212.57 billion in 2022-23, data released late Wednesday by the central bank showed.
- To be sure, the RBI also bought foreign currency heavily last year, resulting in a net sale of \$34.51 billion for the 12 months ended March 2025. However, this was only the seventh time in the last three decades – data for which is available – that the central bank sold more foreign currency in a year than what it bought. Further, the \$34.51 sold on a net basis in 2024-25 is second only to the \$34.92 billion sold in 2008-09 during the global financial crisis.
- After a fairly stable couple of years, the rupee began weakening sharply in the second half of 2024-25 as it became increasingly likely Donald Trump would return to the White House as president of the US for a second term. The RBI's interventions in the currency market peaked in December 2024 when it sold a massive \$69.05 billion – the most it has ever sold in a month.
- All in all, the RBI sold \$291.03 billion – or 73 per cent of its full-year gross sales – in the second half of 2024-25 as the panic caused by Trump's protectionist trade policies pushed the rupee to an all-time low of 87.95 per dollar in early February 2025.

Do You Know:

- The RBI's defence of the rupee was not without its cost, with India's foreign exchange reserves slumping by around \$80 billion between late September 2024 and mid-January 2025 to under \$625 billion. To attract more capital inflows, the then RBI governor, Shaktikanta Das, announced in December 2024 that the ceiling on interest rates banks can offer on so-called Foreign Currency



Non-Resident (Bank) – or FCNR(B) – deposits was being raised by 150 basis points until March 2025. One basis point is a hundredth of a percentage point.

- However, data released Wednesday by the RBI showed the relaxation seems to have made very little difference, with total inflows in the aforementioned FCNR(B) deposit scheme in 2024-25 amounting to \$7.08 billion compared to \$6.37 billion in 2023-24.

EIGHT KEY INFRA SECTORS' GROWTH SLIDE MAY HAVE CASCADING IMPACT ON IIP

India's key infrastructure-linked industries in April showed a sharp deceleration, with their output rising just 0.5 per cent from a year ago, the commerce ministry said on Tuesday.

— At 0.5 per cent in April, the growth of the eight core sectors — coal, crude oil, natural gas, refinery products, fertilisers, steel, cement, and electricity — was not only well below 4.6 per cent in March, but was the lowest in eight months.

— Vagaries of the base effect apart, there are real concerns about the weak infrastructure output growth. Of the eight sectors, the performance of six weakened in April compared to March, with refinery products faring the worst after their production was down 4.5 per cent, the poorest showing since November 2022.

— The bad start to the new financial year seems to have been partially driven by the “unprecedented economic uncertainty” caused by the US’ ‘tariff tantrums’, according to Paras Jasrai, economist and associate director, India Ratings and Research.

— Next week on May 28, the statistics ministry will release industrial production data for April. After edging up marginally to 3.0 per cent in March, industrial growth may have more than halved last month, going by the performance of the eight core sectors which make up 40 per cent of the Index of Industrial Production.

Do You Know:

— The Index of Industrial Production (IIP) maps the change in the volume of production in Indian industries. More formally, it chooses a basket of industrial products — ranging from the manufacturing sector to mining to energy, creates an index by giving different weight to each sector and then tracks the production every month.

— Finally, the index value is compared to the value it had in the same month last year to figure out the economy's industrial health.

REPORT REVEALS DELAYED WAGES ARE A KEY FACTOR TO MISMATCH BETWEEN MGNREGS COVERAGE, DELIVERY

A review of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) for the financial year 2024-25 reveals that while the coverage has increased, with an 8.6% rise in number of registered households under the programme, the delivery of promised employment has gone down, with person days having dropped by 7.1%. This was revealed in a report released by LibTech India, a consortium of academics and activists on Monday.

Person days under the MGNREGS is defined as the total number of workdays by a person registered under the scheme in a financial year.



The LibTech study revealed that only 7% of households got 100 days of work. The MGNREG Act promises guaranteed employment up to 100 days. The report highlights that total registered households under the programme have gone up by 8.6% from 13.80 crore in FY 2023-24 to 14.98 crore in 2024-25. At the same time, average days of employment per household fell by 4.3%, from 52.42 person days in FY 2023-24 it went down to 50.18 person days in FY 2024-25. This, the LibTech report states, reflects a mismatch between the scheme's coverage and its delivery. "This trend raises questions about systemic and implementation-level challenges that continue to constrain the programme's effectiveness," the report said.

Also, the persistent problem with the programme of regional variations continues. Odisha (34.8%) Tamil Nadu (25.1%) and Rajasthan (15.9%) saw the sharpest decline in person days, while Maharashtra (39.7%), Himachal Pradesh (14.8%), and Bihar (13.3%) recorded increases.

Inadequate allocation

Among the key factors leading to an overall employment drop are the inadequate allocation of budget and extraordinary delay in wage payments reported from across the country. Both issues have been highlighted on various platforms. The parliamentary Standing Committee on Rural Development in the past has raised concerns over reduction in budget allocation by the Union government and its effect on the progress of the scheme. People's Action for Employment Guarantee (PAEG) had recommended a budget allocation of ₹2.64 lakh crore for the MGNREGS for FY 2022-23 itself. However, the Union government has allocated only ₹86,000 crore for FY 2024-25. There was no revision in the MGNREGS budget for FY 2024-25.

The LibTech report also notes that the deletions of MGNREGS workers across the country have been arrested at least partially. Between 2022 and 2024, 7.8 crore workers were deleted.

The Ministry maintained that both deletions and additions are part of a regular process. But the rate of deletions far exceeded the rate of additions. In the corresponding period, only 1.92 crore workers were added. For the first time in FY 2024-25, this trend has been reversed, the report notes. So, while 99 lakh workers were deleted, 2.22 crore were added.

APEX COURT REFUSES TO ENTERTAIN TELCOS' PLEAS FOR AGR RELIEF

The Supreme Court (SC) on Monday rejected pleas by telecom majors Bharti Airtel, Vodafone Idea and Tata Teleservices for relief in the payments of their adjusted gross revenue (AGR) liabilities.

A Bench of Justices J.B. Pardiwala and R. Mahadevan termed the petitions "misconceived."

The telcos had wanted relief in the payment of their interest on the dues, penalty and interest on the penalty. They appealed to the SC's sense of equity, saying they were under severe financial strain owing to a series of court rulings on AGR over the years.

The companies sought a waiver of more than ₹40,000 crore in liabilities related to the AGR, invoking the fundamental right to equality under Article 14 of the Constitution to afford all players an equal opportunity and level field. The companies had argued that waiver was the need of the hour to ensure the stability of the sector.

In September last year, the apex court had dismissed curative petitions filed by the telecom service providers (TSPs) against an October 2019 judgment upholding the Department of Telecom's (DoT) move to recover AGR dues to the tune of about ₹92,000 crore from them.



The October 2019 verdict had said the telecom sector had long reaped the fruits of the Centre's liberalised mode of payment by revenue sharing regime with the government. Under this mechanism, the operators had to pay a certain licensing fee and spectrum usage fee to the DoT. The DoT calculated the fee as a percentage of the AGR.

The dispute between private telecom players and the government over the calculation of the AGR has spanned two decades.

"The sector has benefited immensely under the scheme as apparent from the gross revenue trend from 2004 to 2015... The telecom service providers in spite of the financial benefits of the package started to ensure that they do not pay the licence fee to the public exchequer based on an agreed AGR," the SC had observed in its 2019 judgment. The court had dismissed the TSPs' objection to the government's formulation of AGR.

Following the dismissal of the review plea, the TSPs had moved a curative petition alleging errors in computation of AGR dues.

This was despite a July 2020 order, which had said that applications filed by the telecom majors to "correct" math mistakes, which at "first blush" look "innocuous", was a roundabout way to recompute their AGR debts — a path expressly forbidden by the SC in an earlier order. The July 2020 order had made it clear that "no dispute could be raised in respect of AGR dues that had been arrived at, on the basis of calculations made by the Union of India".

KEY INITIATIVES TO ENABLE MAKE IN INDIA INITIATIVE

Production linked Incentive (PLI) Schemes: The primary goals of the PLI Schemes are to attract substantial investments, incorporate advanced technology, and ensure operational efficiency. These schemes cover 14 key sectors aimed at fostering investment in cutting-edge technology and promoting global competitiveness.

PM GatiShakti: It is a strategic initiative aimed at achieving Aatmanirbhar Bharat and a US \$5 trillion economy by 2025 through the creation of multimodal and last-mile connectivity infrastructure. PM GatiShakti is a transformative approach for economic growth and sustainable development.

Semiconductor Ecosystem Development: It encompasses four key schemes:

1. Modified Scheme for Setting Up Semiconductor Fabs in India
2. Modified Scheme for Setting Up Display Fabs in India
3. Modified Scheme for Setting Up Compound Semiconductors, Silicon Photonics, Sensors Fabs, and Discrete Semiconductors, along with Semiconductor Assembly, Testing, Marking, and Packaging (ATMP) / OSAT Facilities in India
4. Design Linked Incentive (DLI) Scheme

— It aims to foster the development of a sustainable semiconductor and display ecosystem in the country.

— The Semicon India Programme aims to provide a significant impetus to semiconductor and display manufacturing by facilitating capital support and promoting technological collaborations.

**LIFE AND SCIENCE****ISRO'S 101ST MISSION FAILS AS PSLV DEVELOPS SNAG MINUTES AFTER LIFT-OFF**

In a rare failure, India's main rocket PSLV developed problems a few minutes after take-off and failed to place earth observation satellite EOS-09 into the intended orbit in an early morning launch on Sunday.

- This was the 101st mission launched by ISRO, and the 63rd one using the PSLV rocket, which is the most successful launch vehicle developed by India's space agency. PSLV has failed on only two earlier occasions, the first time during its inaugural flight in 1993 and then in 2017 when the C-39 mission had been unsuccessful.
- Sunday's launch involved the XL-version of PSLV which was on its 27th flight. This rocket has four stages. Around six minutes after the lift-off, after the third stage of the rocket took over, the launch trajectory started deviating from the calculated trajectory. The altitude of the vehicle was lower than what it should be.
- After the first signs of trouble, the graphics and sound for the live video was cut-off. It was later announced that the outcome of the mission will be communicated by the space agency later.
- Members of the parliamentary committee on science and technology were present at Sriharikota for the launch.
- This is the second back-to-back failure for the space agency after its GSLV could not place NVS-02 satellite in the correct orbit during the space agency's 100th mission. After being placed in an incorrect elliptical orbit, the space agency started looking for alternative ways to utilise NVS-02 that has a mission life of 15 years. Both failures took place in the term of the new ISRO chief V Narayanan.
- This was also the second mission, after December's Spadex launch, where the PSLV was integrated at the newly built Payload Integration Facility (PIF) instead of the launch pad. The facility was designed to free-up launch pad while a mission was being put together in order to increase the frequency of launches.
- The space agency was to put the 1,700-kg earth observation satellite at an altitude of about 597 km in a sun-synchronous polar orbit — meaning the satellite was to pass over a given place at the same time every day. The EOS-09 satellite carried a Synthetic Aperture Radar (SAR) payload, capable of providing images of the earth in all weather conditions. The satellite was meant to work in tandem with the EOS-04 satellite launched in 2022, ensuring seamless continuity and increasing the observation frequency.

Do You Know:

- Satellites deployed for navigation, mapping, or other purposes must be carried to Space by launch vehicles, or rockets, like the PSLV. The rockets have powerful propulsion systems that generate a huge amount of energy, required to lift heavy objects like satellites into Space, overcoming the Earth's gravitational pull.
- Satellites, or payloads as they are often called, sit inside the rocket and are ejected once they reach near their intended orbit in Space.



- ISRO has three main types of launchers: the PSLV, the Geosynchronous Satellite Launch Vehicle (GSLV), and the Geosynchronous Satellite Launch Vehicle Mk-III (LVM3). Variants are chosen based on the payload weights and the orbit they are to reach.
- The ISRO website notes that PSLV has been a “versatile launch vehicle deployed for launching all the three types of payloads viz. Earth Observation, Geo-stationary and Navigation. It has got highest success rate and considered as work horse of ISRO.” Further, it has launched two spacecraft, Chandrayaan-1 in 2008 and Mars Orbiter Spacecraft in 2013.
- The PSLV has four parts — PS1, a solid rocket motor augmented by 6 solid strap-on boosters; PS2, a storable liquid rocket engine, known as the Vikas engine; PS3, a solid rocket motor that provides the upper stages high thrust after the atmospheric phase of the launch; and PS4, the uppermost stage consisting of two Earth storable liquid engines.
- ISRO planned to put the 1,700-kg Earth observation satellite at an altitude of about 597 km in a sun-synchronous polar orbit — meaning the satellite was to pass over a given place at the same time every day.
- The EOS-09 satellite carried a Synthetic Aperture Radar (SAR) payload, capable of providing images of the Earth in all weather conditions. This was the second consecutive failure for the Space agency after its GSLV could not place the NVS-02 satellite in the correct orbit during ISRO’s 100th mission in February this year.

PSLV: CENTRE OF ATTENTION

At 5.59 am on May 18, the Indian Space Research Organisation (ISRO) launched a PSLV rocket in its XL configuration. It was carrying a satellite called EOS-09, which it planned to deposit into a sun-synchronous polar orbit (SSPO) around the earth. The mission was designated C61. But a few minutes after liftoff, the rocket suffered a problem in its third stage and the PSLV-C61 mission ended in a failure.

PSLV stands for ‘Polar Satellite Launch Vehicle.’ It was originally built to launch satellites into SSPOs. It’s a four-stage rocket. Each stage is defined by a set of engines that often fire together. Once they are done, the rocket jettisons that stage so that the remaining stages have less mass to lift.

PSLV’s first stage engine burns hydroxyl-terminated polybutadiene-bound (HTPB) propellant to generate a peak thrust of 4.8 MN. (In its XL configuration, six strap-on boosters augment the first stage.)

The second stage is powered by a Vikas engine, which uses unsymmetrical dimethylhydrazine as fuel and nitrogen tetroxide as oxidiser to develop a thrust of 0.8 MN. The third stage is back to using HTPB as fuel whereas the fourth burns a combination of monomethylhydrazine and mixed oxides of nitrogen in two engines.

After the failure of PSLV-C61 became clear, ISRO chairman V. Narayanan said the chamber pressure in the casing that contained the third-stage motor fell during the flight, leading to the unfortunate outcome. ISRO will assess the reasons for the loss of pressure in the coming days and subsequently reattempt the mission to launch (another copy of) EOS-09.



THE WORKINGS OF AN ATOMISER AND ITS MYRIAD APPLICATIONS

All of us have had this experience at some point: you wake up, find out you're late for a class or meeting, clean up, put on some nice clothes, and run. When you finally get to where you need to be, you're sweating. You pull out a small deodorant bottle from your bag, give yourself a spray, and you're set. Wasn't that handy? The spray nozzle, also known as an atomiser, is a nifty piece of technology that creates a mist of particles from a liquid on demand. Liquids are easier to store whereas a spray spreads better. Thus some enterprising engineers invented the atomiser to allow you, and in fact many industries in the world, to make the best of both worlds.

What is an atomiser?

An atomiser is a device that creates a spray. A spray is in turn a collection of drops that disperses as gas. There are different kinds of atomisers based on the kind of spray required. Since there are many hundreds of scenarios where sprays are required — including injecting fuel into internal combustion engines, manufacturing steel, and to irrigate gardens and quench small fires — atomisers are also expected to have different abilities.

Some simple ways in which sprays differ are in the drop size, spray pattern, and angle of application.

There are at least two ways to measure spray drop sizes: by the drops' average surface area or average volume. Some use a statistical figure called the Relative Span Factor (RSF). It denotes the distribution of drop sizes as a ratio of the size difference between the largest and smallest drops to the median size. If the RSF is close to 1, it means the spray is close to being very evenly sized.

There are also many ways to measure the drop sizes. For example, the greater the angle at which light is scattered by a drop, the smaller it is. So scientists can shine a laser light at a spray and assess drop sizes using a detector to record the scattered light.

Spray pattern refers to the distribution of the spray's drops once they hit the target surface. While the spray on a deodorant may want to deliver drops to a wide area on skin, a spray in a coal mine may need to deliver a ring of drops spreading in a conical shape through the air to quickly trap as many coal-dust particles as possible (devices that can achieve the latter are good at preventing clogging and can create sprays at low pressure.)

Similarly, the angle of application matters to keep a spray from striking surfaces that shouldn't be sprayed or, conversely, to cover a given area as efficiently as possible.

There are many more spray characteristics that matter.

How does an atomiser work?

There are many applications, so there are many atomisers. Perhaps the one mechanism they all share is that they create sprays by blowing up some liquid. In one simple implementation, liquid flowing through a wider channel is suddenly forced into a much narrower channel. A sufficiently high pressure drop will cause the liquid to break up into small drops. If the narrower channel has a notched opening at the other end, the spray emerges as a flat fan — of the kind used in spray painting.



If the narrower channel opens after a short distance to an upward ramp, the fluid hits the ramp in a sheet and then shatters into drops — an output that's useful when a thin coating is required, like an insecticide on a plant.

Another design called a pressure-swirl atomiser works similarly to when you're cradling a glass of chai in your hand. To help it cool, you might move the glass with your hand such that the liquid swirls inside, flowing more along the sides than in the centre. The atomiser does the same thing while allowing air to push through at the centre, keeping the fluid flowing along the walls. As gravity pulls the fluid down, a small opening allows it to flow out in a conical pattern.

More complicated designs cater to specific applications. For example, an atomiser can also deliver an aerosol — which is a spray where the drops are so small (typically 10 micro metre or smaller) that they can stay airborne for many hours instead of settling down. To do this the shear, or tearing, force acting on the liquid at the liquid-gas interface should be much higher than in, say, an atomiser used to spray cleaning liquid on a household surface.

Pressure-swirl atomisers can achieve this if the liquid is already at high pressure when entering the swirling chamber. Other techniques include ultrasonic nebulisation, where high-frequency vibrations induced on the liquid surface can cause small drops to break off, and air-assisted atomisers, where compressed air rips through the liquid as it flows out.

Where are atomisers used?

Aside from the applications mentioned thus far, atomisers are used everywhere where a liquid needs to be distributed in a specific and efficient way across a surface or through a space. In power plants, coolants are sprayed on spinning turbine blades and lubricants are often sprayed on machines with high-contact moving parts — in both cases to prevent heat build-up.

A method called spray drying is used to make milk powder by creating a spray and passing it through hot gas to quickly dry it. In the automobile and aerospace sectors, fuel injectors spray pressurised fuel into engines.

Firefighters' only option for putting out fires involving flammable solids is often foam sprays.

In addition to pesticides and fertilizers, farmers use spray-based irrigation systems when planting in soils that have poor percolation.

Atomisers are ubiquitous in medicine: nasal sprays deliver drugs to the lungs, pain-relief sprays can quickly soothe aching muscles, antiseptics are sprayed on wounds, and disinfectants are used to keep air and hospital surfaces clean.

In the early days of COVID-19 pandemic, there was some confusion over how far the virus could spread by air, leaving many scientists trying to model the pathogen as an aerosol. Climate scientists also study aerosols because of their cooling effects in the atmosphere, to subtract them and estimate the actual level of warming.

Within a household itself, atomisers serve cooking oils, mirror cleaners, and fragrances for hair and perfumes. In the end, let's not forget the humble deodorant itself that allows people to be around each other despite India's increasingly hot summers without stuffing their noses.



WHAT IS THE NEED OF THE HOUR IN AUTISM CARE?

The story so far:

Last month, U.S. Health Secretary Robert F. Kennedy Jr. announced a massive testing and research effort to identify the “environmental toxins” that he said were behind the growing “epidemic” of autism in the U.S. He said the Department of Health and Human Services would launch a series of new studies focusing on environmental substances. Calling autism “preventable”, he said there would be some answers by September this year. Some of Mr. Kennedy’s remarks came following the release of a new report from the Centers for Disease Control and Prevention showing that rates of autism had increased from 1 in 36 children in 2020 to 1 in 31 in 2022.

What is autism?

Autism Spectrum Disorders (ASD), according to the World Health Organization (WHO), are a diverse group of conditions. They are characterised by some degree of difficulty with social interaction and communication. Other characteristics are atypical patterns of activities and behaviours. Characteristics of autism may be detected in early childhood, but autism is often not diagnosed until much later.

What does the existing research say?

Existing research points to multiple factors, possibly both genetic and environmental factors. Research has also shown that the MMR vaccine, that was linked to autism in a now widely debunked study, does not cause autism, nor do other childhood vaccines increase the risk of autism.

Is it preventable?

Prevention strategies may be complex, says Sheffali Gulati, child neurologist, Department of Paediatrics, AIIMS New Delhi, due to the interplay of multiple factors, many of which remain unknown as yet; autism is not caused by one specific gene or one specific environmental factor. “In general, in healthcare, prevention consists of primary, secondary, and tertiary prevention. Here, if primary prevention may not be fully possible as of yet, as more research is needed to understand what is causing autism, it is important to focus on secondary and tertiary prevention, which consists of early diagnosis and picking up of cases as well as interventions to help,” she said.

“We’ve come a long way in understanding autism, and what we know from decades of research is that genetics plays a role, with heritability estimates as high as 91% in some studies (Tick et al., JAMA, 2016). While certain environmental exposures may influence development in utero, such as advanced parental age or prenatal exposure to air pollutants, there is no single environmental toxin scientifically proven to cause autism (Sandin et al., JAMA, 2014; Becerra et al., EHP, 2013). Autism is not a disease in the classical form. It is a developmental difference shaped by a complex interplay of biology and environment. While some individual risk factors have been identified, none offer a path to broad prevention. Framing autism in this way is scientifically inaccurate and socially irresponsible. This kind of language risks placing blame on parents and caregivers, particularly mothers, for outcomes far beyond their control. It reinforces stigma and creates shame where there should be support,” says (via email) Tyler Evans, Adjunct Associate Professor, University of Southern California Keck School of Medicine, Department of Population and Public Health Sciences.



Is autism on the rise?

“The prevalence of ASD is growing,” says Ennapadam S. Krishnamoorthy, neuropsychiatrist and founder, Buddhi Clinic, Chennai, “and this is attributed to several factors, including recognition of the condition, as well as the criteria becoming more inclusive — the focus in the early years was on the more severe cases, but today, many of the less severe cases also fall under the autism framework.” Also, he said, apart from genetic propagation, there are a number of environmental factors today that could also be contributing to the rise, triggers that could be making ASD manifest.

Overall, says Gita Sankaran, founder, WeCAN, a resource centre for autism in Chennai, there has been an increase in the number of diagnoses of individuals on the mild end of the spectrum, primarily because of increased awareness and access to information about ASD. As the population increases, however, there has been a proportionate increase in the total number of cases.

What should be done for ASD care and support?

At this point, says Dr. Krishnamoorthy, we are far from diagnosing every case early and intervening early, and so, this should still be the priority.

More psycho-education for families across the board, and a more realistic approach to interventions based on the needs of each child, are also vital, said Dr. Sankaran.

Dr. Krishnamoorthy also raised the importance of combating misinformation, particularly related to autism being caused by vaccines, which, he said, had led to a drop in vaccination rates and could precipitate epidemics. “But crucially, more focus has to be given to maternal health during pregnancy. A lot of our current efforts in this direction are to do with communicable diseases, but non-communicable diseases, especially mental health, are not talked about enough. What can mothers and families do to ensure optimal environments for the growing foetus and for infants and toddlers? There has to be more awareness and more attention given to this area.”

DreamIAS