



# CURRENT AFFAIRS for UPSC

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## DreamIAS



## INTERNATIONAL

### IN LOS ANGELES, TRUMP IS ESCALATING A CRISIS OF HIS OWN MAKING

Los Angeles, in America's largest blue state where over one-third of the population is born outside the country, is no stranger to protest. During the 2006 immigration reform demonstrations, more than 500,000 people marched in LA alone. In 1992, violent unrest erupted after a jury acquitted four LAPD officers charged with using excessive force against Rodney King, an African American man. The Watts Riots of 1965 were similarly rooted in longstanding racism and poverty faced by African Americans. The city's residents have once again taken to the streets — this time in response to a wave of brutal crackdowns on immigrant communities by Immigration and Customs Enforcement (ICE). In response to the protests, President Donald Trump initially deployed 2,000 California National Guard troops to the city. On Monday, he authorised an additional 2,000 troops, along with 700 Marines mobilised by Defence Secretary Pete Hegseth.

Trump invoked Title 10 of the US Code, which permits the President to federalise National Guard units if the country is invaded, if there is a "rebellion or danger of rebellion", or if the President is "unable with the regular forces to execute the laws of the US". There is, however, little evidence of such an emergency. By bypassing California's Governor Gavin Newsom, Trump's move constitutes an unprecedented federal overreach. The friction between Trump and Newsom is well known — earlier this year, when California sought federal assistance during the devastating wildfires, the President turned it into a political standoff. Now, California has sued the Trump administration over what it calls the unlawful deployment of the National Guard.

Trump's claims — LA "has been invaded and occupied by illegal aliens and criminals", and is being overwhelmed by "violent, insurrectionist mobs" — are not supported by facts. The US is currently seeing the lowest levels of undocumented border crossings in decades, and violent crime has declined nationwide, including in California and LA. To project himself as tough on immigration, Trump is escalating a crisis of his own making. ICE has reportedly been given a daily arrest quota of 3,000 — a figure with no clear justification. This is not the first time Trump has resorted to the National Guard: In 2020, he deployed troops against demonstrators during the George Floyd protests in Washington, DC. Now, Trump hasn't ruled out invoking the Insurrection Act, which would provide him unchecked emergency powers. The US President would do well to douse the fire instead of stoking it.

### IN GERMAN CHANCELLOR'S GIFT TO TRUMP, A STORY OF SUCCESS THAT US NO LONGER HAS ROOM FOR

Most people, pushed far enough to defend an absolute moral principle, end up either in hypocrisy or irony and absurdity. Take Immanuel Kant, an extremist when it came to the universality of ethical principles. His categorical imperative would, taken to its logical conclusion, leave no room for any form of lie (even, for example, to protect a person hiding from a murderer) or violence (self-defence). But Kant has nothing on Donald Trump, who can wear, without a qualm, contradictions and hypocrisy on his sleeve.

The White House meeting between the US President and German Chancellor Friedrich Merz was warm, unlike those with the Ukrainian and South African presidents. Merz gifted the American President his grandfather, Frederick Trump's, birth certificate. Trump, visibly moved, thanked him profusely. This scene played out as Trump's government imposed travel bans on several



Muslim countries, and just before the National Guard was deployed in California to quell protests against the detention of migrants suspected of being “illegal”.

No country can allow completely open borders, and 1885 (when the President’s grandfather migrated to the US) is not 2025. But that doesn’t mean there is no room for empathy. America, under Trump, is closing its universities and its borders even to those already in. The harsh anti-migrant rhetoric that paints those searching for a better life with the same brush as criminals, and student protesters as security threats, seems to have forgotten that almost every American, except for the marginalised Native Americans, has roots elsewhere. Trump can appreciate his grandfather’s journey and has had the advantage of the fortune that Frederick built. He can be sentimental about a birth certificate because it represents a cross-generational ambition for prosperity and success — if only that came with a measure of understanding for those who want to repeat that tale.

## POLARISED POLAND

When Donald Tusk’s diverse coalition came to power in Poland in 2023, ending the eight-year rule of the right-wing Law and Justice Party (PiS), the veteran centrist promised “to chase away the darkness”. Two years on, with the Tusk government still struggling to deliver on key reforms, Polish voters have elected a conservative backed by PiS as the country’s next President. Karol Nawrocki, a 42-year-old historian and former boxer with little political experience, won the June 1 presidential run-off with 50.89% votes, narrowly defeating the liberal Mayor of Warsaw, Rafal Trzaskowski, who secured 49.11%. Mr. Nawrocki, endorsed by Donald Trump and his MAGA movement, presented himself as an outsider populist, and promised a ‘Poland first’ approach that echoed Trumpian rhetoric. During its rule (2015–23), the PiS had implemented sweeping reforms that were aimed at tightening its control over state institutions and media, and recasting the Polish society along its ideological lines. It curbed abortion rights, overhauled education and filled the judiciary with party loyalists, often clashing with the European Union. Mr. Tusk attempted to roll back some of these measures, but met with strong opposition from the outgoing President, Andrzej Duda, also a PiS ally. As legislative logjam derailed Mr. Tusk’s reform agenda, Mr. Nawrocki capitalised on public resentment, attacking the Polish establishment and Brussels.

While Poland’s presidency is largely ceremonial, Mr. Nawrocki’s victory could significantly impact its politics. First, the President can veto laws passed by Parliament or send them to the constitutional court, now packed with judges appointed by the PiS government. In a post-election rally, Mr. Nawrocki said the Tusk government was trying to achieve a “monopoly” of power and vowed to prevent it, in a sign of what is to come. As the government does not have the three-fifths majority in Parliament to override presidential vetoes, Mr. Tusk could face further gridlock. Second, Mr. Nawrocki’s victory is a morale boost for Poland’s Eurosceptic right and may strengthen the alliance between the populist movements across the Atlantic. Despite his campaign rhetoric to oppose Ukraine joining NATO, he is unlikely to change Poland’s foreign policy core — be it its political and security alliance with the West or its opposition to Russia. But on social and economic policies, he is likely to follow the PiS’s right-wing conservatism. Third, the election result could exacerbate internal tensions within Mr. Tusk’s ideologically broad coalition which threaten to reduce Mr. Tusk to being a lame duck Prime Minister. All this points to a turbulent phase for Poland, where a politically polarised and socially divided nation braces for a prolonged tug of war between the pro-European centrists and ascendant populist conservatives.



## A LIBERAL IN THE BLUE HOUSE

Lee Jae-myung, South Korea's newly elected President, rose from a child laborer in a poor rural family to the nation's highest office, assuming leadership after Yoon Suk-yeol's impeachment amid a 2024 constitutional crisis triggered by Yoon's martial law declaration. Born in 1963 in Andong, Lee worked in factories from age 13, later self-studying to earn a law degree and pass the bar exam in 1986. His legal career focused on defending laborers and tenants in Seongnam, shaping his anti-elitist, reformist, and populist political identity.

Entering politics as Seongnam's Mayor in 2010, Lee introduced youth dividends, free school uniforms, and a local hospital for low-income residents. As Gyeonggi Province Governor from 2018, he expanded housing welfare and piloted universal basic income, though faced legal scrutiny over land development and abuse of power allegations, which he denies as politically motivated. After narrowly losing the 2022 presidential race to Yoon, Lee capitalized on the 2024 crisis to win the 2025 snap election with nearly 50% of the vote, campaigning as a defender of democracy.

As President, Lee faces challenges including youth unemployment, housing issues, and stagnant wages, promising a "fair and inclusive" growth agenda with welfare, price relief, and small business support. Internationally, he aims to maintain U.S. ties while pursuing inter-Korean dialogue. His biggest task is uniting a divided electorate and stabilizing South Korea's democracy.

## COLOMBIAN PRESIDENTIAL CONTENDER INJURED IN SHOOTING

Colombian Senator Miguel Uribe Turbay, a 39-year-old potential presidential candidate for the 2026 election, was critically injured after being shot during a campaign rally in Bogotá's Fontibón neighborhood on June 7, 2025. The attack, carried out by a 15-year-old suspect armed with a 9mm Glock pistol, involved Uribe being shot twice in the head and once in the leg. The minor was arrested at the scene, and authorities are investigating potential masterminds behind the attack, with President Gustavo Petro ordering a probe into both the perpetrators and security protocol failures. Uribe, a member of the conservative Democratic Centre party, underwent emergency surgery but remains in critical condition, with little response to treatment as of June 10, 2025. His wife, Maria Claudia Tarazona, has called for prayers, stating he is "fighting for his life."

The attack has sparked widespread condemnation, with Colombia's government, Spain, Venezuela, and U.S. Secretary of State Marco Rubio denouncing it as a threat to democracy. Rubio attributed the violence to Petro's "inflammatory rhetoric," while Petro rejected such claims and urged unity. Candlelight vigils and marches have been held in support of Uribe, whose prominent political family includes his grandfather, former President Julio César Turbay (1978–1982), and his mother, journalist Diana Turbay, killed in 1991 after being kidnapped by Pablo Escobar's cartel. The incident, the first high-profile political assassination attempt in Colombia in decades, has raised fears of a return to the country's violent past, amid ongoing political polarization and security challenges. A reward of approximately \$730,000 is offered for information on the case.

## ERDOGAN'S NEO-OTTOMAN FOREIGN POLICY

Türkiye, a long-standing Cold War ally of the West, has significantly expanded its presence and influence across West Asia and the Caucasus in recent years. Under President Recep Tayyip Erdogan, Ankara has pursued an Islamist-leaning foreign policy aimed at building stronger ties



with Muslim-majority countries and repositioning Türkiye as a regional power — all while maintaining its alliance with the Western bloc. The rise to power of the Islamist Hayat Tahrir al-Sham (HTS) in Syria has helped Ankara expand its reach close to the Israeli border. Türkiye already maintains a military presence in Qatar, the rich Sunni Gulf kingdom, underscoring its growing strategic footprint in the region.

During the recent flare-up between India and Pakistan, Türkiye stood by Islamabad. Is this blend of Islamism with a pro-Western tint helping Türkiye remake itself in a volatile world?

### **Erdogan's era**

When the Republic of Turkey was established in 1923 on the remains of the Ottoman Empire, the country's new rulers adopted sweeping reforms aimed at democratising polity, secularising society and conciliating foreign policy. Mustafa Kemal Atatürk, founder of modern Türkiye, adopted a 'peace at home, peace in the world' foreign policy. After the Second World War, Türkiye joined the western bloc. Its geographical location as a Black Sea basin country with access to West Asia, the Mediterranean and the Caucasus made Türkiye a strategically important ally for NATO. All Turkish leaders, both military dictators and elected leaders, followed this establishment consensus on foreign policy — until the rise of the Islamists.

Mr. Erdogan's AK Party (Adalet ve Kalkınma Partisi) that came to power in 2002 also followed this path in the initial years. The AKP came to power after years of political and economic instability, and Mr. Erdogan's immediate focus was to stabilise the economy. Mr. Erdogan, then Prime Minister, sought close cooperation with the U.S. and integration with the European Union. In the immediate aftermath of the U.S.'s illegal invasion of Iraq in March 2003, Mr. Erdogan wrote in The Wall Street Journal that "My country is your faithful ally and friend".

Türkiye would take a more ambitious foreign policy turn in the early 2010s — with the onset of the Arab Spring protests to be precise.

### **Ideological and historical roots**

Ittihad-i Islam (Unity of Islam) was a declared foreign policy doctrine of the Ottoman Sultan Hamid II who reigned from 1876-1909. During this period, Constantinople sought Muslim unity against enemies in the West. The Islamists in Kemal's Türkiye, who were more or less politically marginalised until the rise of the AKP, had always advocated for stronger ties with Muslim nations. Before Mr. Erdogan's rise, perhaps the most influential Islamist voice in Türkiye's politics was that of Necmettin Erbakan (1926-2011). Erbakan, who had served as Prime Minister briefly in 1996-97 and was later banned from politics by the Constitutional Court for violating the country's secular laws, argued that Türkiye should protect its religious values, build closer relations with Muslim countries and combat western imperialism. For him, the European Union was "a Christian club". Erbakan formed different political parties (of which the Welfare Party was the most prominent one) but never managed to break through Türkiye's political and foreign policy consensus.

When the Welfare Party was banned, Islamist politicians formed the Virtue Party in 1997. One of the leaders of the Virtue Party was Recep Tayyip Erdogan. The AKP was formed in 2001 after the Virtue Party was found unconstitutional. In the 2002 election, Mr. Erdogan did what Erbakan couldn't — he brought the Islamists to power. It was only a matter of time before the AKP turned to Erbakan's foreign policy doctrine.



### From theory to practice

“The people’s calls and their most humane demands” must be paid attention to, Mr. Erdogan said in February 2011 amid a mass uprising in Egypt against the rule of Hosni Mubarak. By openly backing the protesters, Mr. Erdogan risked unsettling Türkiye’s relationship with Arab countries. But when the Mubarak regime fell, Türkiye suddenly found strategic depth in its new approach, and it started seeing street protests in Arab countries as a vehicle for ittihad-i Islam. Then Foreign Minister Ahmet Davutoglu put this policy tilt in a historical perspective in March 2011, saying the mass protests could break “the template drawn by Sykes-Picot” (the Sykes-Picot Agreement was a treaty between the U.K. and France in 1916 where it was decided to divide the territories of the Ottoman Empire following World War I) and bring power to the parties “that truly represent the people” of the region. Türkiye started backing these parties, hoping that their revolutionary ascent could open corridors of influence for Ankara in a region which was ruled by the Ottomans for hundreds of years.

When the Muslim Brotherhood, another Islamist party with which the AKP shares ideological and political similarities, came to power in Egypt, Mr. Erdogan’s doctrine was put to practice. When protests broke out in Syria in 2011 against the regime of President Bashar al-Assad, Türkiye backed anti-Assad groups — first the Free Syrian Army and then different Islamist outfits. In Libya, which was divided between two governments — one based in Tripoli in the west and the other in Tobruk in the east — Türkiye supported the Tripoli government dominated by Islamist groups, including the Muslim Brotherhood, after the Gaddafi regime was toppled by a NATO invasion in 2011.

### Assertive yet pragmatic

Mr. Erdogan did not blindly follow ittihad-i Islam. He mixed his Islamist ideology with pragmatism. He was aware of Türkiye’s limitations.

It is no longer the Caliphate and doesn’t enjoy any politico-religious command over the Muslim world. Geographically, it is only a fraction of what used to be the Ottoman Empire. It is also a treaty ally of NATO. It hosts several Western military bases, including U.S. nuclear weapons at Incirlik. While Mr. Erdogan was ready to risk some friction in Türkiye’s ties with the West, he was cautious not to lead those frictions to a break. At the same time, he saw Türkiye’s support for Islamist groups as an opportunity to rebuild the country’s influence in the Islamic world.

Syria is a case in point. When Mr. Assad, backed by Russia and Iran, started turning the tide of the civil war in 2016, Türkiye offered protection to the HTS, the anti-Assad Islamist group that had taken over Idlib. HTS was formerly Syria’s al-Qaeda branch. But Türkiye strongly opposed any military action against HTS. It entered into an agreement with Russia to maintain order on the Turkish-Syrian border. It carved territories on the border, creating a buffer between the Turkish Kurdish regions and the Syrian Kurdish province. And in November 2024, when the Syrian regime was reeling under repeated Israeli strikes, HTS launched an offensive and captured Damascus within 12 days. This further raised Türkiye’s profile in West Asia.

Azerbaijan is yet another example. When Armenia and Azerbaijan went to war in 2023, Türkiye backed Azerbaijan against Armenia, a Russian treaty ally. When Russia, preoccupied with its own war in Ukraine, was unable to help Armenia, Azerbaijan, with Turkish support and Turkish-made drones, made quick gains. Türkiye supplied drones to Ukraine, but refused to enforce sanctions on Russia. Its decision to buy Russia’s S400 missile defence system had irked Washington. But Mr.



Erdogan managed to reset ties and extract concessions from the U.S. when he supported the accession of Sweden and Finland into NATO.

Mr. Erdogan has thus been playing a tricky game — balancing between the West and its rivals through traditional diplomacy, while at the same time reasserting itself in the Muslim world using Islamist foreign policy.

### **Formidable challenges**

While Türkiye's geographical location, its membership in NATO and its Islamist foreign policy allow the country to portray itself as a major force, its Achilles heel is the economy. Mr. Erdogan, who delivered on the economic front in the first decade of his rule, has ever since struggled to keep the ship afloat. Türkiye has experienced a prolonged period of hyperinflation, and the Turkish lira has depreciated significantly in recent years. Amid high inflation and high unemployment, social unrest has spread, frequently leading to violent crackdowns. Mr. Erdogan, who changed the Constitution turning Türkiye's political system into an executive presidency from parliamentary democracy, has amassed huge powers in his own hands. He has suppressed political opponents, independent media, and other voices of dissent. Earlier this year, Turkish authorities arrested Ekrem Imamoglu, the popular Mayor of Istanbul, who is the opposition's candidate for the 2028 presidential election, which Mr. Erdogan can't contest under the current Constitution.

While on the foreign policy front, Mr. Erdogan's bets have paid tactical results as of now, it is to be seen how Türkiye is going to build on these gains for long-term strategic dividends. True, the regime change in Syria is a huge advantage for Ankara, but Syria is far from being stable. So is Libya, where violence resurfaces frequently. In the Gulf, Qatar is Türkiye's powerhouse partner. While Ankara has improved ties with Saudi Arabia and the UAE in recent years, old mistrust still lingers. And in the Caucasus and the Black Sea, Türkiye will have to take Western and Russian sensitives into consideration in its foreign policy decisions. Its support for Pakistan provides Ankara some legroom in South Asia, but Türkiye remains an insignificant player in the subcontinent.

While Türkiye seeks to expand its strategic footprint in different directions, with a neo-Ottoman tilt and within the framework of the western security umbrella, it also risks turning itself into an authoritarian Islamist regime with a weak economy and political instability.

## **ISRAEL SEIZES GAZA-BOUND AID BOAT WITH THUNBERG, ACTIVISTS**

Israeli forces seized a Gaza-bound aid boat and detained Greta Thunberg and other activists who were on board early on Monday, enforcing a long-standing blockade of the Palestinian territory that has been tightened during the war with Hamas.

The activists had set out to protest against Israel's ongoing military campaign in the Gaza Strip, which is among the deadliest and most destructive since the Second World War, and its restrictions on the entry of humanitarian aid, both of which have put the besieged territory of some two million Palestinians at risk of famine.

### **'Kidnapped by Israel'**

The Freedom Flotilla Coalition, which had organised the voyage, said the activists were "kidnapped by Israeli forces" while trying to deliver desperately needed aid to the territory.



“The ship was unlawfully boarded, its unarmed civilian crew abducted, and its life-saving cargo — including baby formula, food and medical supplies — confiscated,” it said in a statement. It said the ship was seized in international waters some 200 km from Gaza.

Israel’s Foreign Ministry portrayed the voyage as a public relations stunt.

Ms. Thunberg, a climate campaigner, was among 12 activists aboard the Madleen, which set sail from Sicily a week ago.

Adalah, a rights group in Israel that said it was representing the activists, said Israel had “no legal authority” to take over the ship because it was in international waters and because it was headed not to Israel but to the “territorial waters of the state of Palestine.”

#### OPERATION RISING LION TESTS KHAMENEI, RAISES QUESTIONS ON REGIME

Israel’s unprecedented attack on Iran’s nuclear infrastructure — including its scientists, negotiators, missile bases, and military leadership — marks a dramatic escalation in the long-simmering conflict between these two sworn enemies in the Middle East, with far-reaching implications for regional stability.

- C. Raja Mohan writes: Unlike previous military exchanges, Israel insists that Operation Rising Lion is not a one-off show of force. Declaring that Israel stands at a “decisive moment” in its history, Prime Minister Benjamin Netanyahu vowed the attacks would continue “for as many days as it takes to remove” Iran’s nuclear weapons programme.
- Israel appears determined to roll back Iran’s nuclear and missile capabilities, ignoring global warnings that such an offensive could plunge the Middle East into a wider conflict.
- Despite its remarkable economic and military resilience over the past five decades — and Tehran’s proven ability to retaliate against Israel — it remains uncertain whether Iran’s Supreme Leader, Ayatollah Ali Khamenei, can emerge unscathed from this latest confrontation.
- Iran also finds itself politically isolated in the region. Despite its vocal support for Arab and Islamic causes, few stood by Iran when it mattered most — last Thursday, at the International Atomic Energy Agency’s board of governors meeting.
- Amid mounting speculation of imminent Israeli military action, the 35-member board voted 19-3 in favour of a resolution declaring Iran in violation of its legal obligations under the Nuclear Nonproliferation Treaty and dangerously close to acquiring nuclear weapons.
- Caught between Israel’s efforts to involve the US and the MAGA movement’s pressure to keep America out of another Middle Eastern war, Washington quickly distanced itself from the Israeli strikes and warned Tehran not to target US assets in the region.
- Iran faces a stark choice: Escalate by attacking the US and its Arab neighbours, unleash its non-state assets in the region, risking an all-out regional war that could spell the end of the Islamic Republic, or calibrate its response through a mix of force and diplomacy.
- In its attack on Friday early morning, Israel claims to have deployed 200 aircraft — around a third of its active fleet — to hit more than 100 targets across Iran, including both strategic infrastructure and key personnel.



- Natanz nuclear facility: This is Iran's main uranium enrichment facility, where the country produces most of its nuclear fuel. Located in the central province of Isfahan, the Natanz facility is "the beating heart of the Iranian nuclear programme," analysts say.
- It is still unclear whether these strikes damaged the all-important centrifuge halls, where uranium is enriched, that are buried deep under the Persian desert and protected by metres of reinforced concrete.

**Do You Know:**

- Enrichment is the process through which uranium-235, which is used for producing nuclear weapons, is extracted from naturally occurring uranium which is primarily of the uranium-238 variety.
- Established in 1957, the IAEA was created in response to the deep fears and expectations generated by the increased use of nuclear technology. It was the result of U.S. President Eisenhower's "Atoms for Peace" address to the General Assembly of the United Nations on 8 December 1953.
- According to the IAEA, there are three types of safeguard agreements and each may be complemented with the Additional Protocol (AP).
  - (a) comprehensive safeguards agreements with non-nuclear-weapon State parties to the Nuclear Non-Proliferation Treaty (NPT);
  - (b) voluntary offer safeguards agreements with the nuclear-weapon State parties to the NPT; and
  - (c) item-specific safeguards agreements with non-NPT States.

— In what is its most ambitious military operation in recent years, Israel launched a series of air strikes against Iran, targeting nuclear sites, missile facilities and other military infrastructure.

— The Natanz nuclear facility has been attacked. Located roughly 135 miles southeast of Tehran, Natanz is Iran's primary uranium enrichment site. Partially built underground to withstand airstrikes, the facility houses cascades of centrifuges used to enrich uranium more efficiently. Iran has also been tunnelling into a nearby mountain known as Kūh-e Kolang Gaz Lā (Pickax Mountain) — an effort seen as an attempt to fortify and expand the site.

— Isfahan Nuclear Technology Centre: Roughly 215 miles southeast of Tehran, Isfahan is a hub of nuclear research and development. It hosts three Chinese-built research reactors and employs thousands of Iranian scientists. The site plays a crucial role in training and infrastructure for Iran's atomic programme.

— Arak Heavy Water Reactor: Located 155 miles southwest of Tehran, Arak is designed to use heavy water as a coolant, a process that can produce plutonium as a byproduct. While Iran has not pursued plutonium-based weapons, Arak theoretically offers a second pathway to a nuclear bomb. As part of the 2015 nuclear deal with world powers, Iran agreed to redesign Arak to reduce proliferation risks.



## NATIONAL

### MEETING INTERLOCUTORS

The seven Indian delegations of mostly Members of Parliament and some former diplomats, tasked by the government to carry diplomatic messages after Operation Sindoor, have completed their travels. The 59 members visited 32 countries to convey the country's position on the outrage felt over the Pahalgam terror attack and its links to Pakistan, the restrained and precise nature of Indian strikes on Pakistan's terrorist infrastructure, and the "new normal" the government has adopted for terrorist strikes. The message was meant not just for foreign governments but also for lawmakers, the foreign media and the general public, especially in countries where New Delhi has felt it has not found the expected support. Many of the countries visited are members of the UN Security Council (UNSC), and include those which are elected non-permanent members or will join next year. This is important as India faced a diplomatic setback when Pakistan, an elected UNSC member for 2025-26, was able to amend the UNSC statement to omit references to The Resistance Front (TRF) that had claimed responsibility for the Pahalgam attack. That Pakistan managed to be chosen Chair of the Taliban Sanctions committee and Vice-Chair of the UN Counter-terrorism Committee will make India's task of holding the terrorists responsible for the attack accountable through UN designations and at the Financial Action Task Force more difficult. Another area of focus was the membership of the Organisation of Islamic Cooperation that has been particularly critical of India. Finally, the focus on the U.S. was pointed, where the delegation visited New York and Washington. This may have stemmed from the appearance that ties with Washington are strained over President Donald Trump's persistent claim that he had mediated the ceasefire between India and Pakistan, using trade ties as a leverage to avert a "nuclear conflict".

It remains to be seen just how successful these tours of political diplomacy have been, given criticism in India that more time was spent speaking to the Indian diaspora, and giving interviews to the accompanying Indian media rather than in influencing interlocutors abroad. The delegations also had to contend with a copy-cat move from Pakistan to counter the Indian narrative. However, the overarching message of the delegations, comprising representatives from a number of Indian States, faiths and political parties, is a powerful one — of Indian unity and consensus on the issue of national security. At a time when the Modi government is under criticism internationally for "democratic decline" and increasing majoritarianism, New Delhi chose its messengers wisely, with a view to projecting abroad a positive and pluralistic image of a country that was resolute against terrorism.

### BAD BLOOD

Ten years after he last visited Canada, Prime Minister Narendra Modi will travel to Kananaskis, Alberta, as a special invitee to the G-7 summit outreach (June 15-17), with some hopes that the invitation from Prime Minister Mark Carney will give the two countries a chance to reset bilateral ties. Mr. Carney's call to Mr. Modi last Friday took many by surprise, as it appeared to come at the last-minute, and possibly after some back-channel calls to ensure neither side would be embarrassed by the outcome. Under fire for the invitation despite a pending trial against Indian government agents in Canada, Mr. Carney said, quite rightly, that India, as a major world economic force, deserves to be part of the G-7 outreach deliberations. Regardless of the reasoning, both the invitation and its acceptance indicate a desire on both sides to take India-Canada ties out of the present lows. In the past two years, after former Canadian Prime Minister Justin Trudeau went

4<sup>TH</sup> FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



public with thus far unsubstantiated allegations that India was behind the assassination of Khalistani activist Hardeep Singh Nijjar, and was targeting other Canadian nationals, and RCMP officials even named Home Minister Amit Shah in the conspiracy, both countries have cut mission strengths down to a third. Canada suspended talks for a free trade agreement, while India temporarily stopped issuing visas to Canadians, citing persistent threats to Indian diplomats. Apart from considerable trade and investment, India and Canada are inextricably bound by their people — over 1.86 million are settled in Canada, but remain connected to India.

Given the tough task ahead, teams preparing for the Carney-Modi meeting must work with the utmost sensitivity. While ties have nosedived since 2023, they have had a history of bad blood dating back to the 1970s, primarily over the Khalistan issue. It would be naive to imagine that these issues can be resolved in a summit, but a considered decision by both leaders to publicly show respect for each other's positions is necessary. Returning the high commissioners and other diplomats to their posts is an imperative, along with a possible timeline for the restoration of trade talks. Speaking in Parliament, Mr. Carney said that Mr. Modi has agreed to a "law enforcement dialogue" where, no doubt, the Nijjar case and issues over Khalistani threats to Indian diplomats and community centres will come up, and the public messaging from the meeting will be the most important part of ensuring a path to improved relations. "Summit-level meetings" such as the one planned in Kananaskis can only open a door toward bettering ties; it is the necessarily tedious and painstaking talks behind the scenes that will actually allow the two countries to step through those doors and essay a different way of engaging each other.

#### INDIA, FRANCE AGREE TO INTENSIFY DEFENCE, SPACE, N-COOPERATION

External Affairs Minister S Jaishankar on Friday held wide-ranging discussions with French counterpart Jean-Noël Barrot on a range of issues and the two sides agreed to intensify bilateral cooperation in areas like defence, security, space and civilian-nuclear collaboration.

- Jaishankar also expressed India's "deep appreciation" to France for strong condemnation of the cross-border terrorist attack in Pahalgam and thanked Paris for its "steadfast support for India's right to defend itself against terrorism".

- He said the two sides also discussed global and regional issues like the situation in the Indian subcontinent, the Ukraine conflict, the Middle East and the Indo-Pacific.

- "Defence, security, space, civilian nuclear cooperation, I think we agreed to intensify all of these through very concrete measures and projects in the time to come," he added. Jaishankar said his conversations with Barrot also covered the IMEEC, and "our triangular development cooperation, how do we take forward some of our trilateral mechanisms, we have one with the UAE, and with Australia".

#### Do You Know:

- For New Delhi, trust also stems from the fact that France was among the few Western nations that refrained from imposing sanctions on India following the Pokhran-II nuclear tests of 1998. Since then, the two countries have collaborated closely at nearly all multilateral forums, including the UN Security Council. There has also been convergence in security and economic interests in the Indo-Pacific.

- France is a pioneer in civil nuclear energy, with around 70% of its electricity being derived from nuclear power.



- Both leaders stressed that nuclear energy is an “essential part of the energy mix” to enhance energy security and transition towards a low-carbon economy. France has offered to build nuclear power reactors in Jaitapur, Maharashtra.
- The India-Middle East-Europe Economic Corridor (IMEC) is a connectivity project that seeks to develop a seamless infrastructure of ports, railways, roads, sea lines and pipelines to enhance trade among India, the Arabian Peninsula, the Mediterranean region and Europe.

### RVNL IN TALKS WITH RUSSIA’S ROSATOM TO BUILD NUCLEAR REACTORS FOR ITS 4 BIG RAILWAY PROJECTS

Rail Vikas Nigam Ltd (RVNL), a public sector undertaking (PSU) of the Ministry of Railways, is in discussion with Russia’s state-owned atomic energy company Rosatom to build Small Modular Reactors (SMRs) to fulfill the energy requirements of its four ongoing mega projects, including the Rishikesh-Karnaprayag line.

- A senior RVNL official said that a meeting was held on Thursday with the Russian company in this regard. He further said that push towards nuclear energy is part of this year’s Budget announcement to develop SMRs to reduce dependency on fossil fuels and Indian Railways’ target to achieve net-zero by 2030.
- SMRs are advanced nuclear reactors with a power capacity of up to 300 MW per unit and require less area for installation. The official said SMRs are also part of RVNL’s plan to expand its interest and work in the energy sector.
- “If everything works out, we have decided to build SMRs for the Rishikesh-Karnaprayag line, Bhanupali-Bilaspur railway line, Yavatmal-Nanded railway line and Indore-Budni Railway line” said, the official.
- Union Budget 2025-26 launched a Nuclear Energy Mission, which is focused on research and development (R&D) of Small Modular Reactors (SMRs). The government has allocated Rs. 20,000 crore for this initiative, aiming to develop at least five indigenously designed and operational SMRs by 2033. 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.

#### Do You Know:

- India owes the vision of the three-phase programme of nuclear power to ensure energy security to Dr Homi J Bhabha, the father of India’s nuclear programme, and Dr Vikram Sarabhai, who recognised the need for developing FBRs, as these reactors generate more nuclear fuel than they consume due to the gainful conversion of fertile isotopes into fissile material.

→ 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 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.

## DEFENCE PRODUCTION IN INDIA RECEIVES A FILLIP

In the weeks following Operation Sindoor, there have been discussions on the efficacy of India's home-grown defence capabilities, and confidence in them. As India's defence production and exports have hit record highs in the past financial year, contributions from private defence companies and MSMEs have increased.

The stocks of various defence companies rose significantly in the week of Operation Sindoor and even beat the performance of the largest 50 companies on the National Stock Exchange. For the purpose of this analysis, the stocks of 18 companies included in the Nifty Defence Index were considered for comparison. These include state-run companies such as Hindustan Aeronautics Limited as well as prominent private companies such as Paras Defence and Space Technologies Limited. Defence stocks increased by almost 21% in the week India conducted its first military strikes against Pakistan in May, far exceeding the 3.1% rise seen in the Nifty50 index in the same period. In the following week, defence stocks rose by 5.4% compared to a 0.5% drop in the Nifty50 index. Operation Sindoor seems to have provided a fillip to the performance of defence companies which were otherwise outperformed by Nifty50 companies in the weeks preceding the strikes.

While India continues to import a large share of its defence equipment and weapons, government data shows that domestic manufacturing has picked up. India's defence production touched a record high in 2023-24 (FY24) at ₹1.3 lakh crore, growing at 17% compared to the previous year and exceeding the ₹1 lakh crore mark for the second year in a row. In fact, defence production has been seeing double-digit growth since FY22. Production had contracted by 2.5% in FY20, the year before the pandemic began. While the complete figures for FY25 are not yet in, government data as of December 2024 shows that production is touching ₹90,000 crore against a target of ₹1.6 lakh crore for the year.

Similarly, India's defence exports have picked up and exceeded ₹20,000 crore in the past two financial years. These figures are twice those of what was seen before FY20. India's defence exports include small arms, protective gear, and artillery. The export target set for the current fiscal is ₹30,000 crore.

While public sector companies account for a majority of the total defence production, private companies are steadily carving out a larger share for themselves. They accounted for about 20% of the total defence production in FY17; this continued till FY24. In FY25, their share has increased to almost 24%. Similarly private defence companies also account for a majority of the share of defence exports on account of export authorisations.

MSMEs have also emerged in the defence production story by providing components to the defence industry. The government has set mandatory targets of public procurement from MSMEs to ensure state support to such units.



Goods worth ₹13,000 crore were procured from MSMEs in FY25, which is more than double the target set for the fiscal. Small businesses contributed goods worth up to ₹3,000 crore to the Defence Ministry between FY18 and FY20. In the years after FY20, larger orders were taken from MSMEs.

An increase in the value of defence production and exports notwithstanding, the share of defence in overall government expenditure has been declining. But India still spends more on its military (relative to GDP) than many other emerging market economies.

## DRONE WARFARE & INDIA

Ukraine's Operation Spider's Web and the recent India-Pakistan hostilities in the wake of Operation Sindoor underline the salience of drones — specifically ones sent out in swarms — in modern warfare. Relatively low-cost, low-tech drones pose significant challenges to traditional militaries, one which countries, including India, are racing to overcome.

- Unmanned aerial vehicles (UAVs) date back to World War II and the Korean War, where they were used for training anti-aircraft gunners and in specific offensive missions. Their modern military usage took off in the 1990s, after being successfully deployed in the Gulf War of 1991.
- The Nagorno-Karabakh conflict of 2020 marked a turning point in drone warfare: Azerbaijan's use of Turkish Bayraktar TB2 and Israeli Harop drones devastated Armenian defences, decisively shifting the conflict's dynamics in favour of Baku.
- Ukraine has notably used "first-person view" (FPV) racing drones to target tanks, chase individual soldiers and small units, and, most notably, bomb Russian air bases.

### Do You Know:

- Since 2020, India has ramped up its counter-drone infrastructure, deploying a layered defence that blends indigenous technology, EW, and air defence systems. Key systems include:
  - Akashteer Air Defence Control System: Developed by Bharat Electronics Ltd, it integrates with the Indian Air Force's integrated command network for real-time tracking;
  - Bhargavastra: Solar Defence and Aerospace Ltd's weapon system fires 64 micro-rockets in salvos to eliminate drone swarms;
  - DRDO's Anti-Drone System: It offers 360-degree radar coverage, with both jamming (soft kill) and laser (hard kill) capabilities. Drones can be detected up to 4 km away, and neutralised within a 1 km radius; and
  - Indrajaal: An AI-powered grid from a Hyderabad startup that combines jammers, spoofers, and intelligence to protect areas up to 4,000 sq km. Already deployed at naval sites in Gujarat and Karnataka.
- During the May 2025 swarm attacks, the IAF activated its Integrated Counter-UAS Grid, alongside conventional radars, guns, and missiles, neutralising attempted strikes on 15 military bases and several urban targets.



## FROM ASHES, THEY RISE

The border regions such as Uri and Poonch along the Line of Control in Jammu and Kashmir endured a devastating wave of cross-border shelling in May during the India-Pakistan conflict, causing significant loss of life and property. The violence escalated in the second week of May, during which several civilians were killed.

The shelling damaged critical infrastructure, including homes and schools, displacing hundreds of residents. While the Jammu and Kashmir administration responded by establishing makeshift camps in safer zones, providing emergency healthcare, food, and water to the affected populations, many affected people resided in the underground community bunkers constructed by the government in the forward areas for critical times like these. Both locals and officials feel that the current bunkers will no longer be sufficient going forward, and are asking for many more, including individual bunkers for families. In many villages, houses are scattered and few and far between, and this becomes challenging for people to reach the community bunkers.

Despite the immense challenges, the resilience of the local communities has been evident. Efforts are under way to rebuild homes and restore normalcy. Top political leaders from across the spectrum visited the border areas and assured the people of compensation. While the scars of the conflict remain, the determination of the people of Uri and Poonch to rebuild their lives reflects their enduring spirit in the face of adversity.

The markets and schools have reopened, people are rebuilding their homes, and many have returned to clear the debris and start afresh, hoping that this was a nightmare never to be seen again.

## ECHOES FROM COURTROOM NO. 24: VERDICT UNSEATED PM, SHE STRUCK BACK AT NATION

On June 12, 1975, the ruling by Justice Jagmohan Lal Sinha of Allahabad High Court set aside Indira Gandhi's 1971 election, triggering a chain of events that led to the imposition of Emergency.

- At 10 am on June 12, 1975, Justice Jagmohan Lal Sinha reached Courtroom Number 24 of the Allahabad High Court and took his seat in the jam-packed courtroom. And then, he pronounced a judgment that would go on to have epochal consequences for then Prime Minister Indira Gandhi — and India.
- Allowing the petition of Raj Narain, who, following his loss to Indira Gandhi in the 1971 election, had moved court alleging electoral malpractices by the Prime Minister, Justice Sinha said, "This petition is allowed and the election of Smt. Indira Nehru Gandhi, Respondent No. 1, to the Lok Sabha is declared void... (Indira Gandhi) accordingly stands disqualified for a period of six years from the date of this order."
- For the first time in the history of independent India, a Prime Minister's election had been set aside. Months earlier, the courtroom had witnessed another first — the Prime Minister being cross-examined for two consecutive days.
- Justice Sinha then signed on the order, one that would set off a spiral of events that culminated in Indira Gandhi invoking Constitutional provisions to impose an internal Emergency – a 21-



month period that witnessed an unprecedented suspension of fundamental rights and the suppression of dissent across the country.

- It was on April 24, 1971, that Raj Narain, a socialist who lost the Rae Bareilly Lok Sabha seat to Indira Gandhi that year as a joint Opposition candidate of the Samyukta Socialist Party, challenged the election result alleging electoral malpractices and misuse of government machinery by the then Prime Minister. When the petition was filed, no one gave it a chance.
- In his book *The Case That Shook India: The Verdict That Led to the Emergency*, Prashant Bhushan, whose father Shanti Bhushan was counsel for Raj Narain and later became Union Law Minister, wrote of the many pressures Justice Sinha faced after May 23, when the arguments were wrapped up and the verdict awaited.

**Do You Know:**

- The Emergency refers to the period from June 25, 1975 to March 21, 1977, during which the government of Prime Minister Indira Gandhi used special provisions in the Constitution to impose sweeping executive and legislative consequences on the country.
- The declaration of Emergency converts the federal structure into a de facto unitary one, as the Union acquires the right to give any direction to state governments, which, though not suspended, come under the complete control of the Centre.
- Parliament may by law extend the (five-year) term of Lok Sabha one year at a time, make laws on subjects in the State List, and extend the Union's executive powers to the states. The President can modify, with parliamentary approval, constitutional provisions on the allocation of financial resources between the Union and states.
- Under Article 352 of the Constitution, the President may, on the advice of the Cabinet headed by the Prime Minister, issue a proclamation of emergency if the security of India or any part of the country is threatened by "war or external aggression or armed rebellion".
- In 1975, instead of armed rebellion, the ground of "internal disturbance" was available to the government to proclaim an emergency. In its press note, the government said certain persons were inciting the police and armed forces to not discharge their duties — an apparent reference to Jayaprakash Narayan's call to police not to follow orders that were "immoral".
- This was the only instance of proclamation of emergency due to "internal disturbance". The two occasions in which an emergency was proclaimed earlier, on October 26, 1962, and December 3, 1971, were both on grounds of war.

**DON'T WITHHOLD TAMIL NADU'S RTE FUNDS OVER NEP DISPUTE: HC TO UNION MINISTRY**

The Madras High Court on Tuesday directed the Union Ministry of Education to consider splitting the disbursement of funds to the Tamil Nadu government under its flagship Samagra Shiksha scheme, so that money needed to reimburse private schools under the Right of Children to Free and Compulsory Education (RTE) Act can be disbursed.

The RTE component amounts to about ₹200 crore, while the total amount pending to Tamil Nadu under the SSS amounts to ₹2,151.59 crore, amidst a row over the State's refusal to implement the National Education Policy, 2020.

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The court also told the State government that non-receipt of funds from the Centre cannot be used as a “reason to wriggle out” of its own obligation to pay the private schools.

#### **Independent obligation**

A Division Bench of Justices G.R. Swaminathan and V. Lakshminarayanan noted that the Centre had some issues in releasing SSS funds as the State government has not adopted the NEP. However, it has an independent obligation under the RTE Act of 2009, which has nothing to do with non-adoption of NEP, the judges said. “Section 7 of the RTE Act states that the Central government and the State governments have concurrent responsibility for providing funds for carrying out the provisions of the Act...” the Division Bench observed.

“Therefore, funds payable to the State Government representing the Central Government’s share towards discharging the RTE obligations need not be linked to NEP 2020,” it said.

Since the Tamil Nadu government had already filed a civil suit before the Supreme Court demanding release of SSS funds of ₹2,151.59 crore, the judges said: “We are not in a position to issue any binding direction in this regard,” and stopped with issuing a direction to the Centre to merely “consider” delinking the RTE component from the SSS funds and disbursing the amount accordingly.

On the other hand, the Division Bench directed the State government to reimburse the private schools which make admissions under the RTE Act. “The State government has an obligation to reimburse private unaided schools,” the court observed.

### **JUDICIAL SENSITIVITY TO SENTIMENTS IS A SIGN OF REGRESSION**

Indian courts today are not defending free speech. They are managing it. And in this curious inversion of constitutional values, we are witnessing a quiet retreat from the principle that animated Article 19(1)(a) of the Constitution: that speech, even provocative, offensive, or unsettling, is the citizen’s shield against tyranny — not its tool.

Once envisioned as the counter-majoritarian bulwark of our democracy, the judiciary now increasingly resembles an arbiter of decorum, demanding apologies and deference in the name of civility, sensitivity, or national pride. But when courts focus on what was said rather than why the right to say it must be protected, the Republic is left vulnerable to a new tyranny: that of sentiment, outrage, and the lowest tolerance denominator.

Let us begin with a chillingly ordinary example: a social media post by a 24-year-old man criticising Prime Minister Narendra Modi. after the ceasefire with Pakistan following Operation Sindoor in May 2025. Was this tasteless? Perhaps. But taste is not a constitutional metric. The Allahabad High Court thought otherwise. In rejecting the plea to quash the first information report (FIR), the Bench declared that “emotions cannot be permitted to overflow to an extent that constitutional authorities of the country are dragged into disrepute”. That is a remarkable formulation. It subtly inverts the constitutional design: the citizen is no longer the source of power holding the state to account, but a child to be reprimanded for speaking too freely.

#### **A validation of outrage**

Instead of interpreting Article 19(1)(a) as a liberty that limits state power, courts have begun treating it as a licence that comes with behavioural conditions — conditions defined not by law



but by the perceived dignity of public figures and institutions. Take the Kamal Haasan controversy in connection with his film, Thug Life. The actor made a remark about Kannada being a daughter of Tamil. The Karnataka High Court responded not by evaluating whether the actor's statement met the threshold of incitement, defamation, or hate, but by advising him to apologise to the "sentiments of the masses". This advice is corrosive. When courts suggest apologies for lawful speech, they set a precedent that expression must pass a popularity test. They validate the very outrage that threatens free speech, rather than shielding expression from it. An apology does not close the loop but only widens it, inviting further claims of offence. In Ranveer Gautam Allahabadia vs Union Of India, the 'digital content creator and podcaster' was confronted with judicial comments bordering on cultural supervision for his use of explicit language in a podcast. The court directed the Union to clarify whether such "vulgar" language fell outside constitutional protection. Here again, the concern was not whether the speech incited harm, but on whether it offended prevailing norms of taste and modesty — a dangerously subjective threshold. Similarly, historian and a professor, Ali Khan Mahmudabad, was dragged into proceedings after sharing critical views on the optics of India using a woman soldier to explain its war situation with Pakistan. The argument was that his comments hurt sentiments. That it even reached court underscores the problem: invoking hurt feelings is now sufficient to invite judicial scrutiny of constitutionally protected speech. The professor's scholarly critique became a matter for judicial assessment and a special investigation to assess whether there was any dog whistle intent that played on the fragility of the audience.

#### **A misreading**

Two disturbing patterns emerge from these cases.

First, the judiciary is increasingly equating speech that provokes emotional reactions with legally actionable harm. This misreads the Constitution and the rationale of a democracy. The test for restricting speech under Article 19(2) is not whether it angers, irritates, or offends but whether it incites violence, hatred or disrupts public order. Second, by encouraging apologies and moral policing of language, courts create a perverse incentive. The more outrage a comment generates, the more likely it is to be litigated. This does not protect society. It emboldens mobs and serial litigants. It creates a market for offence.

This shift is starkly evident in cases that involve the armed forces. In a recent judgment, the Allahabad High Court denied the Leader of the Opposition, Rahul Gandhi, relief in a defamation case on his alleged derogatory remarks about the Indian Army. The High Court said that the freedom of speech does not include the freedom to "defame" the military. But defamation, as a legal standard, must be carefully assessed particularly when invoked by or on behalf of state institutions by busy-bodies.

Likewise, in a previous first information report against a man using the word "coward" to describe the Prime Minister after the recent military stand-down, the court saw no issue with Sections 152 and 353(2) of the Bharatiya Nyaya Sanhita being invoked — laws meant for threats to sovereignty and public mischief. These laws, meant for sedition-like scenarios, are being contorted to punish sarcasm and satire. It is telling that courts will routinely deny the quashing of FIRs in such cases, claiming that it is too early to interfere and that police investigations must run their course. But this abdication is neither neutral nor passive. For the citizen facing criminal prosecution, the process itself is the punishment. The system does not need a conviction to chill speech. A summons and a charge sheet do the job. The Madras High Court has occasionally resisted this drift. But this was more about narrative correction than structural protection of speech.



Courts in India must return to a principle-centric model of speech protection. Instead of obsessing over what was said, they must ask whether the speaker's right was violated, and not someone else's sentiment. Apologies should not be judicial recommendations. They should be individual choices. Otherwise, courts become confessional booths where speech is absolved not by legal reasoning but by remorse. And remorse demanded is remorse devalued — it empowers the outraged, not the rational.

### The signal to the citizen

Moreover, as long as laws such as sedition or the ever-morphing public order clauses remain vague, courts must lean toward liberty. The doctrine of “chilling effect” that is robust in American and European jurisprudence, has been acknowledged in India's courts but seldom enforced with spine. This is not just about high-profile speech or celebrities. It is about the slow attrition of constitutional confidence. When a YouTuber is told to bleep a joke, or a professor is dragged to court for a tweet, or a film-maker is told to grovel for linguistic pride the signal to the ordinary citizen is clear: express only what is safe, bland and agreeable.

But democracies are not built on agreeable speech. They thrive on disagreement — noisy, rude, even reckless at times. The test of a society's strength is not how well it tolerates politeness, but how it handles provocation. Free speech is not just about giving offence, but about withstanding it. If India is to preserve its democratic soul, it must restore the dignity of dissent. It must not demand the dignity of institutions at the cost of liberty.

Judges are the guardians of the Constitution, and not the curators of culture. They must protect the right to speak and not the comfort of the listener. Because when speech is chilled in courtrooms, freedom dies not with a bang, but with a sigh of deference.. The new age of judicial sensitivity to sentiments is not a sign of progress. It is a sign of regression. It confuses harmony with homogeneity, and respect with restraint. Apologies should never be a legal strategy. And speech should not need blessings to be legitimate. Let our courts not forget that the Republic was not born from politeness but from protest. The Constitution came from the pen of a Dr. B.R. Ambedkar, who also wrote, “...the world owes much to rebels who would dare to argue in the face of the pontiff and insist that he is not infallible”.

## PREVENTIVE DETENTION MUST BE SPARINGLY: SC

Preventive detention is an extraordinary power in the hands of the state that must be used sparingly, said the Supreme Court as it set aside an order to detain a man indulging in money lending in Kerala.

- A bench of justices Sanjay Karol and Manmohan said the circumstances pointed out in the order by the detaining authority may be ground enough for the state to approach the competent courts for cancellation of bail in cases against him, but it cannot be said that the same warranted his preventive detention.
- Noting that the power of preventive detention finds recognition in the Constitution under Article 22(3)(b), the bench said, “The provision for preventive detention is an extraordinary power in the hands of the state that must be used sparingly. It curtails the liberty of an individual in anticipation of the commission of further offence(s), and therefore, must not be used in the ordinary course of nature.”



**Do You Know:**

- Article 22 of Constitution of India prescribes protection against arrest and detention but has a major exception. It says in Article 22 (3) (b) that none of those safeguards apply “to any person who is arrested or detained under any law providing for preventive detention.” The remaining clauses — Article 22(4)-(7) — deal with how preventive detention operationalises.
- First, the state, which would be the district magistrate, would issue an order to detain a person when it is necessary to maintain “public order.” The state can delegate this power to the police as well.
- If the detention ordered is for more than three months, under Article 22(4), such a detention requires the approval of an Advisory Board. These Boards are set up by states and normally consist of retired judges and bureaucrats. A detainee is generally not allowed legal representation before the Board. If the Board confirms the detention, the detainee can move Court challenging the detention order.
- Article 22(5) of the Constitution mandates that the state is required “as soon as maybe,” to communicate to the detainee the grounds of detention and “shall afford him the earliest opportunity of making a representation against the order.”
- A basic set of facts that are the grounds for detention are required to be communicated in one instalment, and the state cannot then add fresh, new or additional grounds to strengthen its original detention order. The grounds have to be read in a language that the detainee understands.
- However, even this safeguard is diluted to a certain extent by Article 22(6), which says that nothing in clause 5 shall require the state to “disclose facts that the state considers to be “ against the public interest to disclose.”

**THE DIVERSITY OF FAMILIES: KERALA HC DOES WELL TO BACK TRANSGENDER CO-PARENTING**

In a reassuring affirmation of dignity and equality, the Kerala High Court has recognised a transgender couple from Kozhikode as the legal “parents” of their biological child. The transgender man who gave birth in 2023, and his partner, had sought recognition as co-parents without gender-binary labels so that their child’s future — especially with regard to identification documents and school admission — is not impeded. While the Court declined to read down the format mentioned in the Registration of Births and Deaths Rules, 1999, saying that this was a “rare and exceptional” case, it has directed authorities to issue a birth certificate that reflects the gender-neutral term instead of the conventional “father” and “mother”. In its observation, the Court emphasised that in certain instances, “social justice adjudication” must take precedence over an “adversarial approach”. In doing so, it broadened the legal imagination around family, gender, and parenthood.

In August 2022, granting maternity leave to a central government employee who had previously availed it for the care of her step-children, a bench comprising Justices D Y Chandrachud and A S Bopanna had observed that “atypical” families are equally deserving of legal protections and social welfare benefits. “The black letter of the law must not be relied upon to disadvantage families which are different from traditional ones,” they had held. The apex court’s refusal to extend civil union or joint adoption rights to LGBTQIA+ couples and its deferral of substantive rights to legislative reform — despite acknowledging queer love and lived discrimination — however, has

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come as a setback after years of progressive milestones, such as the 2014 NALSA verdict recognising the rights of transgender persons and the 2018 Navtej Johar ruling that decriminalised same-sex relations. In such circumstances, the Kerala High Court’s verdict offers a template for affirming queer parenthood within the existing legal framework — and places the child at the centre of that empathetic recognition. It asserts that constitutional dignity cannot wait for political consensus.

Days after the Kerala HC verdict, the Madras High Court, while ruling on a habeas corpus petition by a woman forcibly estranged from her lesbian partner, upheld her right to “find a family”. “The concept of a ‘chosen family’ is now well-settled and acknowledged in LGBTQIA+ jurisprudence,” the division bench said. In a country grappling with entrenched social prejudices, these affirmations of diversity reflect a welcome judicial sensitivity to the complexities and plurality of lived experience. They validate, with quiet strength, the right to belong — not as a privilege granted conditionally by tradition, but a truth that embraces every identity, even those that challenge convention.

#### ASPIRATION, CHOICE, DEMOGRAPHY

The United Nations Population Fund (UNFPA) has released its State of the World Population Report 2025, which focuses on “Real fertility crises: The pursuit of reproductive agency in a changing world”. As fertility rates decline worldwide, the crisis lies not in population numbers but in unmet reproductive aspirations of women and couples.

- It specifically refers to the gap between an individual’s or couple’s desires regarding children and family size and the social, cultural, or policy-driven expectations placed on them. Concerns about population shifts are driving demographic anxiety that is undermining the reproductive autonomy of women globally, including in India.
- The global fertility rate has decreased from around 5 in 1960 to 3.3 in 1990 and 2.2 in 2024, though significant regional variations exist. Fertility rates less than 2 are becoming the norm, with more than half of the world’s countries — accounting for more than two-thirds of the global population — having a fertility rate below 2.1 births per woman (World Fertility Report 2024). Globally, it is projected that all countries will have a fertility level less than 4 by 2054.
- In India, the national fertility rate declined from 2.9 in 2005 to 2.0 in 2020 (SRS, 2020) although large inter-state variations exist. The overall population of children under five peaked in 2004, followed by a peak in the number of children and adolescents under 15 in 2009.
- A central finding was widespread unmet reproductive aspirations: Many individuals face obstacles both in avoiding unintended pregnancies and in having children when they want to.
- In India, over 36 per cent of respondents reported an unintended pregnancy, while over 30 per cent were unable to have a child when they wished to. This reflects a dual challenge: Underachieved fertility, where people have fewer children than desired, and overachieved fertility, where they have more children than they intended.
- Increasingly, women report difficulty in finding a suitable partner and negotiating equitable division of household and caregiving responsibilities. Marriage in India continues to place a burden on women, who are expected to manage cooking, child-rearing, and other domestic duties.



- The lack of supportive workplace policies such as paid parental leave, flexible hours, and childcare facilities further discourages women from balancing careers with family life. There is also the fear of career setbacks or discrimination due to pregnancy.
- It is important to address infertility, an issue stigmatised in India, where marriage is often equated with childbearing. Despite advances in healthcare, many women still face barriers in accessing maternal care and reproductive health information.
- It is important to address infertility, an issue stigmatised in India, where marriage is often equated with childbearing. Despite advances in healthcare, many women still face barriers in accessing maternal care and reproductive health information.
- According to NFHS-5, 4 per cent of currently married women aged 15–49 report unmet needs for spacing. This is shaped by social norms that discourage contraceptive use and a preference for male children.
- The moment calls for a proactive perspective to engage women, families and communities around their reproductive autonomy through informed choices. The future lies in building a country's capacity to anticipate, adapt to, and take advantage of demographic changes within a human rights framework.

**Do You Know:**

- Replacement-level fertility is commonly defined as 2.1 births per woman, which is the rate at which a population size remains the same from one generation to the next. India has reached the replacement-level fertility of 2.0, but the report pointed out that many people, especially women, still face significant barriers to making free and informed decisions about their reproductive lives and significant disparities persist across regions and states. These barriers create what the report identifies as India's "high fertility and low fertility duality."
- Fertility has fallen below the replacement level (2.1) in 31 states/UTs, but remains high in Bihar (3.0), Meghalaya (2.9), and Uttar Pradesh (2.7). Urban-rural gaps persist, and seven states have yet to reach replacement TFR in rural areas. In Tamil Nadu, Kerala, and Delhi, many couples delay or skip childbirth due to costs and work-life conflict, especially among educated middle-class women. This duality reflects differences in economic opportunities, access to healthcare, education levels, and prevailing gender and social norms.

**CENSUS OPENS THE DOOR FOR NATIONAL POPULATION REGISTER UPDATE**

Deeptiman Tiwary writes- "The announcement of Census, to be conducted in two phases in 2026 and 2027, opens the doors to not only delimitation and the implementation of the Women's Reservation Bill but also paves the way for the National Population Register (NPR) to be updated and the National Register of Citizens (NRC) exercise."

- "Sources said that while the NPR would likely be updated during the house listing phase of the Census next year, taking it forward to the NRC remains the government's decision."
- "While the government's announcement on Wednesday made no mention of either NPR or NRC, Census enumeration and updating the NPR were cleared back in December 2019 by the Cabinet. It was then supposed to happen in 2020 along with the housing listing phase of the Census, but



was postponed due to the Covid-19 pandemic. The government has already allocated a budget of close to Rs 4000 crore for the exercise.”

- “The NPR is the precursor to the NRC and the same stands enshrined in law. The NPR, which is an enumeration of the “usual residents” of the country and is a data collection exercise based on voluntary disclosure of information by people, is governed by the Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2003. The rules were framed under sub-sections (1) and (3) of Section 18 of the Citizenship Act, 1955.”
- “Under Rule 3, which provides for NRC, sub-rule (4), says, “The Central Government may, by an order issued in this regard, decide a date by which the Population Register shall be prepared by collecting information relating to all persons who are usually residing within the jurisdiction of Local Registrar.”
- “Sub-rule (5) of the Rule then says, “ The Local Register of Indian citizens shall contain details of persons after due verification made from the Population Register.”
- Under Rule 4, titled “Preparation of the National Register of Indian Citizens”, sub-rule 4 says, “During the verification process, particulars of such individuals, whose Citizenship is doubtful, shall be entered by the Local Registrar with appropriate remark in the Population Register for further enquiry and in case of doubtful Citizenship, the individual or the family shall be informed in a specified proforma immediately after the verification process is over.”
- “The data for NPR was first collected in 2010 along with the house listing phase of the 2011 Census. In 2015, this data was further updated in a door-to-door survey.”
- “Conducting the NRC had been inserted in the Citizenship Act of 1955 through an amendment in 2003 under the Atal Bihari Vajpayee government. The government at the time, among other amendments, inserted Section 14A into the principal Act that says, “The Central Government may compulsorily register every citizen of India and issue national identity card to him ... The Central Government may maintain a National Register of Indian Citizens and for that purpose establish a National Registration Authority ... On and from the date of commencement of the Citizenship (Amendment) Act, 2003, the Registrar General, India, appointed under sub-section (1) of section 3 of the Registration of Births and Deaths Act, 1969 (18 of 1969) shall act as the National Registration Authority and he shall function as the Registrar General of Citizen Registration.”

**Do You Know:**

- The Government recently said the process of data collection for the Census, along with caste enumeration, would commence early next year and give the snapshot of the country’s population as on March 1, 2027. The last Census provided population data as on March 1, 2011. The next Census was due in 2020-2021, but was delayed due to Covid pandemic.
- The exercise this year will officially begin with a notification announcing the government’s intent of conducting the Population Census to be published in an official gazette tentatively on June 16 this year.
- The Census would be conducted in two phases — house listing and population count. House listing, the first phase, is expected to take about 5-6 months and the population count, which is the second phase, sources said, is expected to start in February 2027 and will be completed in a month.



- The reference date for hilly areas, including the Union Territory of Ladakh, and snow-bound areas of Jammu and Kashmir, Himachal Pradesh and Uttarakhand, is October 1, 2026. For the rest of India, it is March 1, 2027. The reference date is the specific point of time for which the data on population is collected.

#### WHY THE CENSUS 2027 IS CRITICAL FOR INDIA'S ECONOMIC GROWTH & DEVELOPMENT

The Government of India has announced that the next Census will be conducted in two phases over 2026 and 2027. The effective date for which it will provide all the data will be March 1, 2027.

- India has undergone a Census once every decade since 1881; regardless of who ruled over the country and any calamity. However, the link was broken when India failed to conduct the Census for 2021 in the wake of the Covid pandemic. It is noteworthy that the delay in India's case — 6 years — is much longer than in most other countries (including India's neighbours such as Pakistan, Bangladesh and Sri Lanka).

- Explaining the delay, the Ministry of Home Affairs (MHA) spokesperson posted the following on X: "Covid disrupted all sectors, including education. Around 30 lakh enumerators are needed for the Census and most of them are primary school teachers. Conducting the Census post-Covid could have disrupted primary education immensely."

- One, the caste census, or the collection of caste data along with all the other data. Two, the possible usage of Census 2027 data for the purposes of delimitation, which is essentially an exercise that will entail rebalancing the state-wise share of Lok Sabha seats based on population. Most of the southern states, which were more effective in population control over the past 50 years, stand to lose electoral representation relative to northern states, which failed to control their population growth as effectively.

- At one level, the fact that caste and delimitation are heavily politicised, warn some demographers, may vitiate the quality and credibility of the Census data. This may happen as people attempt to tweak their answers on questions (such as caste and language etc.) in a manner that, in their view, suits their politics instead of providing an unbiased response capturing the reality.

- The national Census provides the fundamental statistical basis for all other types of surveys and analysis in the country. The Census isn't just the complete enumeration of all Indians. Rather, it is as complete an image of India as possible, as it collects data on age, gender, family status, economic status, unemployment, language, education, disability, migration — the list is pretty long.

- In other words, the Census is a reality check for the country — a look in the mirror without which a self-portrait is not possible. In providing all this information for each Indian, the Census not only tells the story of how India changed in the past 10 years — in this case, the past 16 years — but also gives clues to how it might change in the next decade.

#### Do You Know:

The Census forms the basis of all future surveys and policymaking.

- Inflation control and Interest rates-To be sure, retail inflation rate captures the rate at which the general price level in the economy went up from one year to the next. This rate, in turn, is based on the Consumer Price Index (CPI) and how much it rose over the past year. The CPI is essentially



a basket of goods and services that retail consumers “consume”. The index allocates different weights to different goods and services and then maps how prices of these components move in a weighted fashion. Food articles, for instance, have a weight of 46% in the total index. This is another way of saying that 46% of all the money spent by a common Indian is spent on food items.

- A Census — say Census 2011 — provides one clear image of India at one specific point in time. That distribution of people — quality of their lives, their economic status, their migration patterns etc. — provides the base for all future surveys such as the consumption survey for government or the many of the market surveys done by private companies trying to figure out whether there is going to be more demand for cars ( and if so, what kind of cars) in rural India in the next 5 to 10 years.
- Migration, Urbanisation and Governance-Migration, for instance, is one of the least understood variables. Often, population projections are based on fertility (birth rate) and mortality (death rate) assumptions. But there is a third variable that can, and often does, change the population of a village, city or state — that’s internal migration in the country.

#### BIHAR SEX RATIO DROPS FROM 964 TO 891 IN TWO YEARS: CRS DATA

Bihar has recorded the lowest sex ratio at birth for 2022 among all States and Union Territories, reporting just 891 girls born for every 1,000 boys, according to the Civil Registration System (CRS) vital statistics report, released this week by the Office of the Registrar- General of India (RGI).

Bihar is the only State that has seen its sex ratio at birth (SRB) declining consistently since 2020, the year from which this data is available for the State. In 2020, the State reported an SRB of 964, which reduced to 908 in 2021, before further dipping to 891 in 2022.

The next Assembly election will be held in Bihar later this year.

Other States in the lower SRB bracket for 2022 were Maharashtra (906), Telangana (907), and Gujarat (908). On the other hand, Nagaland was the State with the highest SRB at 1,068, followed by Arunachal Pradesh (1,036), Ladakh (1,027), Meghalaya (972), and Kerala (971). Assam, which had reported the lowest SRB for 2021 at 863, showed a spike in 2022, reporting 933.

#### Delayed reports

A month after the Office of the RGI released the CRS, Sample Registration System (SRS) and Medical Cause of Certification of Causes of Deaths (MCCD) reports for 2021 after a four-year delay, the government this week released the data from CRS and MCCD for 2022. However, the Sample Registration System statistical report for 2022 has not yet been put out in public.

The SRS is the largest demographic survey in the country, meant to provide annual estimates on fertility and mortality indicators such as birth rates and death rates. The CRS report and MCCD report provide data on registered births and deaths and causes of medically certified registered deaths respectively.

#### COVID undercount

While the 2021 CRS report registered a total of 102.2 lakh deaths for the year, suggesting that the initial government reporting of COVID-19 deaths for the year was an under-estimate, the 2022 data registered a total of 86.5 lakh deaths closer to the total for 2019, the year before the pandemic struck.



The CRS 2022 data further showed that the number of registered births had seen an increase across the country, with a total of 254.4 lakh births registered compared with the 242 lakh registrations the previous year.

The State-level birth registration data tables in the vital statistics report for 2022 showed that since 2013, States such as Uttar Pradesh, Bihar, Madhya Pradesh, Telangana, and Uttarakhand have seen a general trend of registered births rising despite occasional dips.

On the other hand, States and Union Territories such as Tamil Nadu, Kerala, Himachal Pradesh, Punjab, and Delhi saw a general trend of registered births declining despite fluctuations.

Of the total registered births, the share of males was 52.4% whereas the share of females was 47.6%, the CRS report for 2022 said. It added that while about 43% of the births were registered in rural areas, 56.5% were registered in urban areas. The report said the number of still births in 2022 had reduced to 1.15 lakh from 1.24 lakh the previous year.

Of the total registered deaths in 2022, the shares of men and women were 60.4% and 39.6% respectively. The report showed that 59.5% of the deaths were in rural India while 40.5% were in urban areas.

## WHAT IS THE SIGNIFICANCE OF THE CENSUS?

### The story so far:

The Union Home Ministry has announced the next Census will be conducted in two phases and that the reference date for Census enumeration would be March 1, 2027.

### What is the history of Census?

Census is the process of collecting, compiling and analysing the population of the country. Right from Kautilya's Arthashastra to the administrative report 'Ain-i-Akbari' during the reign of Mughal emperor Akbar, there have been references to population census.

A synchronous census is where population data is collected simultaneously across the country. This kind of census was started in 1881 during the British period with W. C. Plowden being the first Census Commissioner of India. The details were collected in census schedules till Independence. The questions in the schedule underwent changes with each census but broadly contained questions relating to age, sex, mother tongue, literacy status, religion, caste etc. The last census where caste was enumerated for Hindus was in 1931.

### How is the Census conducted?

The Census is a Union list subject while The Census Act, 1948 is the key legislation governing the Census process. It authorises the Central government to undertake Census operations and appoint a Census Commissioner to supervise the entire exercise. The Centre also appoints Directors of Census Operations to supervise the Census within several States, while the State governments may appoint Census officers. The staff for conducting the Census is provided by the local authorities of a State, which predominantly consists of teachers.

Since 1971, Census operations have been carried out in two phases. The first phase is the 'house listing' phase that collects information on housing data. This usually spreads over a period of 5-6 months. In the last Census of 2011, the house listing schedule contained 35 questions that



included details like type of house, main source of drinking water, type of latrine facility, availability of kitchen and fuel used for cooking, whether the house has a television/computer/telephone, type of vehicle available etc.

The second phase is the 'population enumeration' phase that is usually conducted during the month of February of the Census year as the usual reference date for population count is fixed as March 1 of the Census year. This captures individual details like name, sex, age, religion, whether belonging to Scheduled Caste or Scheduled Tribe (SC or ST), mother tongue, literacy status, educational qualification, occupation etc. These details are then compiled and provisional data from the Census is released. In 2011, this data was released by the end of March. The final report with a detailed analysis of the demographic, religious, linguistic profile etc. was released in April 2013.

#### **What is the significance?**

The decennial Census had happened from 1881 till 2011 without a break in India. However, due to the COVID-19 pandemic, the 2021 Census was postponed. While the exercise could have been conducted any time after 2022, it has been continuously postponed.

The present Census can be considered the most significant in Independent Indian history due to three reasons. First, the Central government has decided to enumerate the caste details of all Hindus. All Censuses after Independence have captured only SC and ST details. The decision follows wide spread demand from Opposition parties and civil society groups to include caste details in the Census. One of the reasons for the postponement of the Census to 2027 is to undertake the preparatory work for caste enumeration. Second, since this Census would be the first one after 2026, it can be used for the delimitation exercise of determining the revised number of seats in Lok Sabha and State Assemblies.

Third, this Census would also form the basis for reserving one-third of seats for women in Lok Sabha and State Assemblies.

#### **What should be the way forward?**

The enumeration of caste details needs to be done in a systematic and flawless manner. This data will have to be used for decisions on affirmative action with respect to backward classes. Hence, adequate time for its preparatory work is necessary. However, genuine apprehensions of southern States, some of the smaller States of north India and the northeast States, about losing political significance if the proposed delimitation and consequent revision of number of seats in Lok Sabha is carried out on the basis of population as per the 2027 Census, must be heeded. Many of these States have demanded a freeze on Lok Sabha seats at the existing level. There has to be a wide-spread consensus among all the States on the formula for proportionate increase in Lok Sabha seats. Hence, this exercise of delimitation should not be rushed through before the 2029 general elections. The one-third reservation of seats for women should be implemented based on this Census from the 2029 elections.

### **DELIMITING BY ELECTORS RATHER THAN POPULATION OFFERS A FAIRER APPROACH**

Several recent articles in the mainstream media suggest that a delimitation exercise — if carried out with population as the primary criterion for allocating parliamentary constituencies (PCs) — would disproportionately disadvantage the southern States. Proponents of this view argue that the southern States, having adhered more rigorously to family planning norms than their northern



counterparts, would either receive comparatively fewer PC seats or could even be left with less seats than what they have currently.

But the broader question that has not been adequately discussed is: what is the most rational criterion for allocation of PCs: population or the number of electors?

Electors in a constituency are not always a subset of the population. Many electors may live outside their registered PCs, or may have failed to register. Census records are sensitive to migration, as they are based merely on a stay of six months or more (or even an intention to stay), without even requiring any proof of residence or registration in the voter list. Migrants also generally avoid/delay transferring their voter registration for various reasons. Furthermore, variations in the age structure — such as a higher proportion of under-18s — may also lead to large differences in elector numbers between PCs with similar populations. Importantly, the principle of ‘one person, one vote, one value’ aligns more closely with electors than the population. Using elector data avoids the wait for a Census and offers a more accurate measure of representation.

### **Elector disparity**

The value of a vote can be considered inversely proportional to the number of electors in a PC. Data shows that vote value has varied significantly across regions and over time. Union Territories (UTs), hilly States, and north-eastern States have consistently had a disproportionately high vote value from 1951 to 2024, due to geographical considerations and the minimum representation requirement from each State.

When comparing the southern States with other States, we find that they started with a higher vote value in 1951. However, this trend reversed, and they recorded a lower vote value in 1961, 1971, 1980, 1991, and 1999. The trend reversed once again, with the southern States registering a higher vote value in 2009, 2019, and 2024. It shows a mixed pattern, with the percentage difference in the average number of electors between the southern States and other States ranging from -10.5% to +5%.

Importantly, the southern States began with a higher vote value per parliamentary constituency when the first Parliament was formed in 1951. This initial advantage may have potential long-term implications for government policies and initiatives, development outcomes, and more.

Moreover, among the five largest and five smallest PCs (excluding hilly/UTs/north-east) in terms of electors, four in each group are from the southern States. The value of a vote in Idukki is 4.5 times higher than in Malkajgiri and 2.6 times higher than in Bangalore North. This indicates that rationalisation of PCs is more needed in the southern States.

### **Rajya Sabha representation**

According to the elector data for 2024, the southern States account for just 22.45% of India’s electors, yet they hold 23.8% of Lok Sabha seats. Their representation in the Rajya Sabha is even more skewed, at 24.4%, exceeding both their share of electors and their Lok Sabha seat share. The pattern is reversed for the other States. Although they comprise 71.2% of India’s electors, they hold only 67.4% of Lok Sabha seats and just 64.4% of Rajya Sabha seats. In particular, Tamil Nadu has 39 Lok Sabha seats which is lower than Bihar’s 40 or West Bengal’s 42; but it has 18 Rajya Sabha seats, which is more than the 16 seats allotted to both Bihar and West Bengal.



The fairer approach is to allocate seats based on electors. In the table, column 4 shows the proposed PC seats if the total number of seats is raised to 800. To avoid penalising smaller States and UTs, their current seat count is preserved, which results in a total of 810. The table shows that among the large States, Rajasthan (76%), Karnataka (60.7%), and Telangana (58.8%) would see the highest percentage gains in seats.

The current narratives — that PCs are allocated solely on the basis of population, and that the potential reduction in seats in southern States is primarily due to their strict adherence to family planning policies — are not entirely accurate. First, constituency allocation has never been based purely on population. Other considerations, i.e., geographical challenges and minimum representation, have always played a role. Second, linking political representation to population control sets a dangerous precedent. By that logic, similar claims could be made for representation based on religion or caste. For instance, Jains, among all religious groups, and upper castes, among all social groups, have the highest adherence to population control, while Muslims and Scheduled Tribes have comparatively higher fertility rates. Third, when the criterion of using population for the formation of PCs was originally adopted, the consequences of the population enumeration method and the impact of large-scale migration were not anticipated. Therefore, the principle of ‘one person, one vote, one value’ in a true sense is more closely aligned with the number of electors rather than the population across PCs.

#### TIGHTEN THE PROCESS

The Leader of the Opposition in the Lok Sabha, Rahul Gandhi, has raised troubling questions about the conduct of elections based on what transpired in the 2024 Assembly elections in Maharashtra. There are specific issues: the abnormal increase in voters listed in electoral rolls between the general election and Assembly elections, higher turnout numbers after 5 p.m. on voting day, and the Centre amending the Conduct of Election Rules, 1961 to restrict access to CCTV footage of the polling process. Mr. Gandhi has also questioned the process of appointing Election Commissioners, with the Union government refusing to implement a Supreme Court judgment in 2023 that recommended having the Chief Justice of India as a part of the selection panel. While political parties, including the BJP and the Congress, have raised complaints about Electronic Voting Machines in the past, many did not stand scrutiny considering the administrative and technological safeguards. The Congress has now focused on the electoral process, raising more fundamental issues that need to be unpacked separately.

A preliminary analysis by The Hindu of registered voters in States where the general election and Assembly elections were proximate showed that there were precedents of sharp increases in the electorate before Assembly elections. While the number of new voters added before the Assembly elections was high — more than 39 lakh voters in just six months following the general election — similar increases were observed in 2014 as well. The increase of nearly four million voters is a large number and the ECI should proactively release machine-readable data on the rolls for verification. Regarding the allegation that turnout increases were abnormal after 5 p.m., the argument does not hold water. This is based on provisional turnout figures, and Election Commission of India (ECI) data show that there was no significant increase in voting after 5 p.m. in Maharashtra. Provisional turnout figures shared via an app by the ECI are not entirely accurate as these are dependent on the manual entry of numbers during elections and may have discrepancies when compared to the accurate machine count. As final figures via Form 17C data from each booth are released only after a lag, it would be incorrect to rely on provisional turnout figures. However, there is another contention that merits the ECI’s response: retaining CCTV



footage and providing parties and their nominees access to it to scrutinise complaints. The process of updating electoral rolls must be more transparent and involve political parties for scrutiny and verification. It is also incumbent upon parties to show alacrity during this process than cry foul after the results are out. Ultimately, the onus lies on the ECI to enhance transparency in the electoral process and, specifically, in providing electoral rolls and retaining CCTV footage for scrutiny.

#### IN ASSAM, DEPORTATION SHOULDN'T BE WIELDED FOR NARROW ENDS

The Assam government's decision to operationalise the Immigrants (Expulsion from Assam) Act, 1950, to deport individuals identified as "foreigners" by district collectors — without reference to Foreigners Tribunals (FTs) — raises urgent questions about the rule of law, institutional checks, and the rights of the vulnerable. While Chief Minister Himanta Biswa Sarma has referred to the Supreme Court's October 2024 judgment upholding Section 6A of the Citizenship Act to justify the move, citing legality cannot mask the moral and constitutional peril of bypassing due process. Illegal immigration poses a clear and present danger. But as Opposition MLAs have rightly pointed out, the state government's move risks arbitrariness and the possibility of communal profiling, bracketing innocent people, especially those from vulnerable communities, alongside the undocumented.

In recent weeks, Assam has, by Sarma's own estimate, deported 330 people to Bangladesh. The resurrection of the 1950 Act would, the CM said, aid in scaling up his government's pushback against outsiders in the state. The SC's 2024 judgment did affirm that the 1950 Act could be read alongside Section 6A to strengthen the identification of and action against illegal immigrants. But it did so within the architecture of existing laws and procedures. It did not dismantle the existing framework of FTs, nor did it authorise summary expulsions on the basis of a bureaucrat's suspicions, even if the person is listed in the NRC. This distinction is crucial because any other interpretation reduces justice to executive discretion and threatens the foundational right of every individual to be heard. The Northeast, particularly Assam, sits at the heart of a complex and emotionally charged border history. Since Partition and the subsequent creation of Bangladesh, waves of migration have triggered identity anxieties and fuelled political movements, including the Assam agitation of the 1980s. The porous border has served as a conduit not only for desperate people fleeing hardship and persecution, but also for elements that threaten security and communal harmony. These realities, however, demand vigilance, and should be addressed with deliberation, not shortcuts. Even with the institutional mechanism of FTs, there have been disquieting stories of administrative failures. Sarma's polarising rhetoric of flood jihad and land jihad in reference to the migrant crisis, too, has often served to deepen communal divides. With elections coming up in Assam in a year's time, it becomes even more imperative to ensure that deportation is not wielded for ideological or electoral ends.

Security threats, whether from foreign or domestic elements or geopolitical pressures, remain a priority that must be addressed with due seriousness. The Union Ministry of Home Affairs' order to crack down on undocumented foreigners, especially those from Bangladesh and Myanmar, has seen heightened action across several parts of the country. But in a region scarred by displacement, suspicion, and historical trauma, the government must distinguish between genuine security action and sweeping administrative moves that could serve political narratives more than public safety. The rule of law demands that the vulnerable — those without voice, power, or access to legal recourse — not be made collateral damage in the name of internal security.



## LAWFUL MEASURES

Ethnic conflicts, unlike other variants of strife, are more difficult to end because of the nature and the level of grievances of the communities hostile to each other. This persecution complex is fed by those who drive passions to such an extent that taking a position on reconciliation through mutual compromises and peace-building becomes difficult even if a silent majority are in favour of it. Using threats by brandishing arms, chauvinist sections try to drown out voices of reason by drilling in fear and ideas of further vengeance. That seems to be the case with Manipur too, where, after months of dilly-dallying over taking on the patrons of violence, the Bharatiya Janata Party-led Union government has finally decided to isolate such elements and subject them to the long arm of the law. That the Imphal valley has again erupted in protest over the arrest of leaders of the extremist identitarian outfit, Arambai Tenggol, highlights the necessity and the difficulty of implementing law enforcement measures in an ethnic conflict. This group had engaged in acts of wanton lawlessness with impunity, targeting those who did not agree with its militant agenda with violence and threats. It had also coerced MLAs into signing pledges for its chauvinist cause. Shockingly, the then BJP-led State government looked the other way – a consequence of Chief Minister N. Biren Singh's inability to rise above his partisanship. The security forces were also unable to act because of public protection for the violent offenders. Soon, such groups went to become a major threat to peace and it was only after implementing President's Rule that the government managed to get the group, among others, to return most of the weapons looted from police constabularies

The arrests have coincided with similar actions against other militant volunteers in the hills who were allegedly involved in violence against law enforcement officers. The government of Manipur, which is currently under President's Rule, must make a clear case of the involvement of those arrested in crimes and bring them to justice. It should not give in to the threats made by those stoking communal passions, and must convince the people – across ethnic lines – that these are lawful actions against malefactors. It must simultaneously engage in talks with other stakeholders, also asserting that such steps will coincide with peace-building and rehabilitation measures. It must use devices such as convening all-party meetings and involving civil society representatives from across all ethnic lines to reinforce this message, and must not give in to pressure to reverse the legal steps taken against the offenders.

## NEW NCERT TEXTBOOKS DON'T CARRY 'POVERTY AND COLONISED' NARRATIVES, SAYS PANEL MEMBER

The new social science textbooks developed by the National Council of Educational Research and Training (NCERT) have broken away from the "old poverty and colonised narratives", said Sanjeev Sanyal, member of the Prime Minister's Economic Advisory Council (PM-EAC) and Chairperson of NCERT's Curricular Area Group Economics, on Tuesday.

"The new NCERT textbooks for Class 7 are out... Note that the images are clear and in colour, the economics section teach[es] ideas using modern examples, and history tries to focus on storytelling rather than dates. I am sure these too will be improved with iterations, but we have broken away from old poverty and gratefully colonised narrative," he said on X.

Mr. Sanyal further said that the economics segment in the old textbooks (from 2012) was "deliberately" designed for "povertarian narratives". "Images from Partition-time refugee schools, all technology was steam engines, the chapter on markets was about how fair price shops and how



shopkeepers were ‘hoarding’, and the chapter on finance was all about women’s self-help groups,” he said.

The Hindu had reported that the new social science textbook for Class 7 — Exploring Society: India and Beyond — has combined previously separate textbooks on history, geography and social and political life (which also had a section on economics).

### **Digital money in**

The new book deals with economics in Theme E in two chapters — From Barter to Money and Understanding Markets.

The From Barter to Money chapter goes into the basic details of barter system, the history of money, coinage system during the Chalukyas, Cholas, and goes on to discuss use of digital money, including systems of net banking and United Payments Interface. The second chapter, Understanding Markets, also delves into the history of markets by featuring a section on Karnataka’s historical Hampi Bazaar, and goes on to explain how modern markets work.

In comparison, the previous NCERT textbook for Class 7 focused only on contemporary agrarian markets, dedicating a section to weavers’ cooperatives.

It included exercises like writing a letter to the Minister on what students think should be the proper payment to workers, after providing graphics on the current situation of labour charges in the garment industry.

While the old textbook is replete with multiple examples, the new textbook too, delves into a similar exercise in the context of a modern-day setting where a family would bargain with a vegetable seller to lower the price of vegetables, but would go to supermarkets and end up buying it at a slightly higher price.

Similarly, Mr. Sanyal also mentioned that while the economics sections of Classes 6 and 7 textbooks had been revised, his team was now looking at revising Class 8 books.

### **What’s missing**

The economics section in old NCERT textbooks of Class 6 was distinctly divided into two chapters — Rural Livelihoods and Urban Livelihoods. The Rural Livelihoods chapter touched upon daily wage workers working in paddy fields of rural Tamil Nadu. An entire section was dedicated to farmers being in debt, on the hardships faced by people living in fishing villages, and so on.

In comparison, one of the chapters in the new Class 6 textbook’s economics section begins with a quote from Kautilya’s Arthashastra, with a segment on the dairy cooperative revolution and Amul’s role in Gujarat. While the old Class 6 textbook had detailed case studies on farmers and debt, the new textbook does not include these details.

## **DELHI AND RAJASTHAN BEGIN STORING FINGERPRINTS, IRIS SCANS OF ARRESTEES**

The police in Delhi and Rajasthan have become the first in India to record, store, and analyse biometric data such as fingerprints and retina and iris scans of all those arrested and others accused of crimes.



Due to the limitations of forensic capabilities, the collection of DNA, likely drawn from blood samples, is yet to be rolled out, police officials said.

These biometric samples are being collected since March in compliance with the Criminal Procedure Identification Act, which was passed by Parliament in 2022 and has now come into effect on a pilot basis in Delhi and Rajasthan after three years.

The Act enables the police and Central investigating agencies to collect, store and analyse physical and biological samples.

Though the Act and its Rules do not explicitly mention the collection of DNA samples and face-matching procedures, the National Crime Records Bureau (NCRB) has informed State police officials that such measures will also be rolled out in around 1,300 locations spread across police districts, commissionerates, and Special Investigation Units at State headquarters.

The NCRB has been tasked with implementing the Act and has finalised the Standard Operating Procedure to be followed by police officials.

Such guidelines have been completed for the collection of finger-impresions, palm-prints, footprints, photographs, iris and retina scans, physical and biological samples and their analysis, and behavioural attributes including signatures, handwriting, or any other examination.

The NCRB has held meetings with forensic laboratories to finalise the DNA loci pointers to be used in DNA profiling under the Criminal Procedure (Identification) System, which it has developed.

Rajasthan Director General of Police U.R. Sahoo told The Hindu that the Act has been implemented in some police districts.

A Delhi Police official said that such data is being recorded for all accused persons, irrespective of whether they have been arrested or not.

#### CENTRE TO REVISE AC TEMPERATURE RANGE FOR MORE EFFICIENCY

The Bureau of Energy Efficiency (BEE) is engaged in preparing a framework to standardise default temperatures of air conditioners, including those in automobiles, in the range of 20-28 degrees Celsius to improve energy efficiency in the country.

Addressing a press conference on Tuesday, Union Power Minister Manohar Lal said the government was in talks with appliance makers and the States on standardising AC temperatures.

“Consultations are on, and once it’s over, guidelines will be finalised accordingly. Some States have requested to consider region-wise humidity factor while making the guidelines,” Mr. Lal said without sharing further details.

Asked if ACs in cars will also have such standardised temperatures, the Minister said the government was in consultation with automakers as well.

#### **Power demand**

The announcement comes at a time when India’s peak power demand has been rising and hit 241 GW on June 9.



Power Secretary Pankaj Agarwal said the move was aimed at improving energy efficiency in the country. Reduction of even 1 degree helps save 6% of energy. “There are crores of ACs in the country and every year new ones are getting installed. So you can imagine the savings,” he said.

The BEE, under the Power Ministry, promotes the use of energy-efficient processes, equipment, devices and systems. It takes steps to encourage preferential treatment for the use of energy-efficient equipment or appliances.

“Discussions are under way on the subject but no final decision has been taken so far on the exact range of temperatures or any timeframe (to come out with the guidelines),” an official said.

## AADHAAR MANDATORY FOR TATKAL BOOKINGS FROM JULY 1; CURBS IMPOSED ON AGENTS

To ensure equitable access to Tatkal tickets and curb misuse, the Indian Railways on Wednesday announced a series of modifications to the Tatkal ticket booking system.

The new provisions include Aadhaar-based authentication as a prerequisite for online Tatkal bookings. “Effective from July 1, Tatkal tickets booked through IRCTC’s official website and mobile app will be available only to users authenticated with Aadhaar,” said a spokesperson of the Ministry of Railways. Aadhaar-based OTP authentication would be mandatory for all online Tatkal bookings from July 15, the spokesperson said.

### Offline bookings

The rule will be applicable to offline bookings also. “Tatkal tickets booked at computerised Passenger Reservation System (PRS) counters and through authorised agents will require OTP authentication sent to the mobile number provided by the user at the time of booking,” the spokesperson said. This provision, too, will come into effect from July 15.

To prevent bulk bookings during the critical opening window, the Railways has barred agents from booking opening-day Tatkal tickets during the first 30 minutes of the respective booking windows. “For AC classes, this restriction applies from 10 a.m. to 10.30 a.m., and for non-AC classes, from 11 a.m. to 11.30 a.m.,” the spokesperson said. These changes, the Ministry noted, are intended to strengthen user authentication mechanisms and ensure that the Tatkal quota benefits genuine passengers.

The Railways has urged passengers to link their Aadhaar numbers with their IRCTC user profiles to avoid any inconvenience.

Additionally, the Centre for Railway Information Systems (CRIS) and IRCTC have been instructed to implement the required system modifications and inform all Zonal Railways and relevant departments accordingly.

## EXPRESS VIEW: AFTER THE CRASH

A new bride from Rajasthan’s Balotra district flying to join her husband in London. A Bikaner businessman going to visit, for the first time in a decade, his family settled abroad. A doctor couple and their three young children, en route from Banswara to a much-dreamed-of new life. A 21-year-old flight attendant who belonged to strife-torn Manipur. A former chief minister on his way to visit his daughter. A medical student, in his hostel, eating lunch. They were among the over 240



lives cruelly cut short when a London-bound Air India flight crashed into a residential area in Ahmedabad on Thursday – a British national of Indian origin is the sole survivor. The video, showing the aircraft crashing into the hostel of BJ Medical College and Civil Hospital and exploding into a fireball, will remain scorched into a nation's memory. The first wide-body aircraft crash of an Indian airline since the 1985 Kanishka bombing leaves behind stories of terrible grief and loss.

The day after, an impartial inquiry — involving Indian authorities, Boeing and international regulators — must be the priority. Till now, the Boeing 787 Dreamliner, having flown over one billion passengers since its introduction in 2011, was considered to have a respectable safety record, even though technical issues like engine shutdowns, flight control failures, smoke in cabins and hydraulic leaks were flagged repeatedly. Quality control issues in 2019 forced the company to pause delivery of new aircraft between January 2021 and August 2022. A Boeing engineer filed a whistleblower complaint in 2024 with the US Federal Aviation Administration (FAA), alleging that it took shortcuts in the making of its 777 and 787 Dreamliner jets.

It might take months or even years before the exact causes of the crash in Ahmedabad are ascertained. But even as India mourns, Air India and the Directorate General of Civil Aviation must act with urgency and transparency. Compensation, while necessary, is not a substitute for accountability. The bereaved deserve closure, they must not be left in the dark, as all too often happens in the aftermath of calamities. The disaster should serve as a wake-up call and draw attention to the structural problems that afflict India's aviation sector. There needs to be a rigorous check of the engineering departments of all Indian airlines. With Air India being one of the two dominant players in the market, there is inadequate pressure to continuously elevate standards of safety and upgrade quality. The DGCA lacks the wherewithal to effectively regulate a growing sector — it was only a few years ago that the aviation watchdog was awarded the power to impose fines on airlines. Aviation consultancy firm Capa India has warned that the shortage of pilots is growing more serious. These gaps must be filled. The investigation of Thursday's crash will be led by the Aircraft Accident Investigation Bureau, under the Ministry of Civil Aviation, with assistance from the US National Transportation Safety Board and the FAA. Every effort must be made to uncover the causes, and to address them. That is the only meaningful tribute to those who boarded Air India Flight 171 but did not reach their destination.

## MAXIMUM MUMBAI

The railways have proposed automatic sliding doors with ventilation louvres in all Mumbai suburban trains by next year in response to the Mumbra train tragedy on Monday — four people died and nearly a dozen others were injured. Sliding doors could potentially force people inside and prevent footboard travel, a factor in the accident. They could ensure that passengers do not get down at unscheduled stops and put themselves in danger of being mowed down by passing trains. The proposed vestibules connecting the coaches may also help to evenly distribute the crowds. As in Japan, each station may then need a few enforcers who could shove the crowds in so that the doors could shut and the trains move. While footboard travel is indeed a dangerous safety issue, it is only an outcome of the dangerous overcrowding in Mumbai trains. For vast numbers of people, the trains offer the least expensive travel option. Not too long ago, the dangers of overcrowding resulted in the infamous stampede at the Elphinstone Road station bridge in 2017. Multiple deaths are common along the three arteries that are the lifelines of Mumbai – the Central, Harbour and Western railway lines. Many are hit by trains while crossing tracks instead of using roads or bridges. While rail safety is an immediate issue that needs to be addressed, it is also time city leaders engineer inexpensive, alternative travel options to the trains.



Mumbai's trains have been seen as an inevitable part of the extreme urbanisation that the city represents and romanticised by literature. But they are simply not humane modes of transport. The suburban train system has undergone little change over the decades though the city has boosted its roads and enabled more vehicular traffic. Two-wheelers that were a rarity a few decades ago are now common. While the Metro promises to decongest the city to an extent, these services price out the lower classes. Bus services could be enhanced for routes connecting shorter distances. Along with doubling efforts to change the structuring of the city from a north-south network with commuter movements dictated by times, planners should consider expanding ferry transport — a cheaper and possibly more eco-friendly mode of transport to a city bound by the sea. Broadly speaking though, stampedes such as the one in Bengaluru, fire accidents in congested areas, and train tragedies such as the Mumbai one only highlight how unprepared India is to handle the consequences of urbanisation and the thrust to overturn the engagement of the vast majority of the people with agriculture.

### RECLAIMING DEONAR LANDFILL, MOVING A MOUNTAIN

With mounds of garbage as high as 40 metres, the Deonar landfill in Mumbai has long been one of the major sources of pollution in the city, posing an especially serious health hazard to residents of the nearby suburbs of Govandi, Mankhurd and Shivaji Nagar. Now, a waste characterisation study commissioned by the Brihanmumbai Municipal Corporation (BMC) has flagged the extent of the dumping ground's toxicity: Crucial indicators of environmental toxicology, like Biochemical Oxygen Demand, Chemical Oxygen Demand and Total Dissolved Solids in the waste and leachate (liquid that leaches out of waste piles) are four times higher than the permissible limits prescribed by the Central Pollution Control Board. The revelations give the lie to the BMC's promise to clear piles of legacy waste within three years. They also raise serious concerns about the plan, following a controversial Maharashtra government decision in October last year, to relocate thousands to the highly polluted site as part of the proposed Dharavi Redevelopment Project.

The BMC report was commissioned in 2023 as a first step towards reclaiming the landfill. With over 20 million metric tonnes (MT) of solid waste, the Deonar dumping ground is the oldest and largest in Mumbai, operating since 1927. It remains an active landfill with around 10 per cent of the city's waste, about 600-700 MT, making its way there every day. According to a 2024 CPCB report submitted to the National Green Tribunal, the Deonar landfill generates 6,202 kg of methane every hour, making it one of the top 22 methane hotspots in the country. The contamination caused by the leachate and the noxious fumes emanating from the dumping ground, exacerbated by the periodic fires that break out among its waste mounds, have been linked to the severely curtailed life expectancy of the area's residents, to nearly half the national average.

Clearing Deonar's mountain of waste is a monumental challenge, as is the process of making the hazardous site fit for habitation. It would require much longer than the three-year timeframe set by the BMC: For comparison, the Mulund dumping ground, which the BMC began clearing in 2018, is four times smaller than the area to be cleared in Deonar, with the quantum of waste to be removed being three times less. Seven years on, only 67 per cent of the solid waste has been cleared, in only 25 acres of the 60-acre land parcel. Cleaning up and reclaiming the Deonar landfill in order to resettle people is not an exercise to be carried out in haste. The civic body must ensure the process is carried out responsibly, and the state government must reconsider its plan to rehome thousands at a hazardous site.



## STEPPING UP NAXAL FIGHT, CARRYING ON WELFARE PUSH

The first year of Modi 3.0 has seen the government step up its efforts to root out the decades-long Naxal insurgency, while building on flagship welfare policies introduced in its previous two terms.

- Union Home Minister Amit Shah last August announced that Left-Wing Extremism (LWE) would be eliminated from the country by March 31, 2026. This was a statement of the government's intent to bring an end to the insurgency that has cast a shadow over the very heart of the country.
- To this end, security forces have registered significant gains against Naxals over the past year, especially in Chhattisgarh and parts of Jharkhand and Odisha, considered to be the last bastions of the Maoists. Major inroads have been made in Maoist strongholds in the Bijapur-Sukma-Dantewada tri-junction in Chhattisgarh, supported by intensified operations, the construction of forward operating bases, and better road connectivity.
- In Chhattisgarh alone, security forces have killed 209 Maoists in the first five months of 2025, compared to 219 in all of 2024. In 2023, forces had killed 53 Maoists across states. Those killed in encounters include top Maoist commanders: the biggest success came on May 21 when security forces killed CPI Maoist general secretary Basavaraju in the forests of Abujhmad.
- Key to these recent successes, sources said, has been the political will of the government, intelligence-driven operations, improved coordination between state and central agencies, and state forces such as the District Reserve Guards of Chhattisgarh taking the lead in operations.
- However, there have also been some setbacks. Maoist ambushes in places such as Kolhan, Jharkhand, and Abujhmad, Chhattisgarh, have resulted in casualties among security forces, and indicated that Naxals retain the ability to hit back in their strongholds. The road ahead involves not only sustaining pressure on residual Maoist zones but also ensuring that governance and infrastructure reach these regions.

### Do You Know:

- In what might be the most significant decision yet under Modi 3.0, the Centre last September approved the expansion of the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) to include all Indians above the age of 70 years, irrespective of their income or social status.
- Launched in 2018, PM-JAY is the Modi government's flagship programme in the health sector. Even prior to its expansion, it was the world's largest health insurance scheme, providing free cover of upto Rs 5 lakh per family per year to 40% of the most economically backward households in India.
- By extending universal coverage to the elderly, the Centre has anticipated what might be one of India's biggest challenges in the coming decades.
- According to the government's Longitudinal Ageing Study in India, the number of senior citizens (60 years and above) will increase from 103 million in 2011 to 319 million in 2050, going up from 8.6% of the total population to 19.5%. According to the India Ageing Report 2023, just over 20% of this population was covered by any government, employer-provided, or personal insurance scheme.
- Last year, the government approved the extension of Pradhan Mantri Awas Yojana-Gramin (PMAY-G) till 2029, paving the way for the construction of two crore more houses under the

**4<sup>TH</sup> FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR**



programme. The Centre has already released Rs 34,000 crore to states under the PMAY-G, and cleared the allocations of 84.45 lakh houses.

The Centre has also approved Pradhan Mantri Gram Sadak Yojana-IV (PMGSY-IV) to connect 25,000 villages with all-weather roads by 2028-29.

#### CARGO VESSEL CATCHES FIRE OFF KERALA COAST; NAVY, COAST GUARD RESCUE 18, FOUR MISSING

A joint rescue operation launched by the Indian Coast Guard and the Indian Navy saved the lives of 18 persons from a cargo ship that caught fire nearly 88 nautical miles off the coast of Bepore in Kozhikode, Kerala, on Monday morning.

Two crew members sustained serious injuries, while four others, reportedly citizens of Taiwan, Indonesia and Myanmar, who were involved in firefighting efforts, were missing.

Coast Guard sources said the 270-metre-long Singapore-flagged vessel, M.V. Wan Hai 503, was headed to Mumbai from Colombo with over 650 containers and a 22-member crew.

The cause of the fire, which later led to the explosion of some of the containers, had not been ascertained.

The incident comes a couple of weeks after a Liberian flagged vessel container ship, M.S.C. ELSA 3, sank off the Kochi coast in Kerala. This came to light when the Maritime Operations Centre in Mumbai alerted its counterpart in Kochi about the underdeck fire around 9.30 a.m.

Immediate measures were initiated by the Coast Guard to rescue the crew and deter the vessel from nearing the Kerala coast.

According to the officials with the Kerala State Disaster Management Authority (KSDMA), the 18 crew members from various countries had reportedly jumped into the sea and used emergency rafts to escape the inferno that broke out at the middle portion of the ship. The ship that departed Colombo on June 7 was expected to reach Mumbai on June 10, they said.

Officials from the Maritime Rescue Sub Centre in Kochi said five Coast Guard ships and a Dornier aircraft were despatched for the speedy rescue of the crew and surveillance.

There were reportedly over 650 containers, including 150 hazardous ones, in the cargo vessel. KSDMA officials said about 20 containers reportedly fell into the sea, further triggering safety concerns. They said aerial surveillance measures were under way to closely monitor the movement of the containers that were adrift.

#### BIHAR PUSHES UP ITS AYUSHMAN BHARAT HEALTH INSURANCE COVERAGE

Bihar is now among the States leading in the enrolment of cardholders under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), with 3.94 crore Ayushman cards created till date, according to data released by the State government.

As part of its drive to ensure maximum coverage, a recent four-day drive, from May 26-30, brought 17.38 lakh more cardholders into the Central government-run cashless health insurance scheme, offering treatment for secondary and tertiary care hospitalisation for the economically weaker sections of society.



Uttar Pradesh and Madhya Pradesh are the other two States that have recently indicated a high enrolment rate.

The flagship health insurance scheme, launched in 2018, offers cashless healthcare treatment of up to ₹5 lakh per family per year.

Initially, the State government had adopted the Socio Economic Caste Census (SECC 2011) data for implementing the AB-PMJAY scheme, Shailesh Chandra Diwakar, Administrative Officer, Bihar Swasthya Suraksha Samiti (Ayushman Bharat), said on the recent focus to expand the coverage. In February 2024, the National Food Security Act (NFSA) database was adopted and coverage was provided to all NFSA-registered family members.

The State has also registered enrolment of 2.82 lakh persons under the Ayushman Vaya Vandana card (for senior citizens 70 years and above).

According to the State government, the total claims paid rose from 3.03 lakh cases in the financial year 2023-24 to 7.52 lakh cases in 2024-25, and more than 2.83 crore Ayushman cards were created in 2024.

It has also helped beneficiaries save over ₹1,000 crore in out-of-pocket medical expenses within a single year.

The State is now trying to rope in eligible individuals who have not opted for the scheme.

Over 1,100 hospitals are empanelled under the scheme, 50% of which are private hospitals, a senior Bihar health official said.

## BRIDGING HEALTH COVER, MENTAL HEALTHCARE IN INDIA

Mental health is finally getting the attention it has long deserved. The post-pandemic world has not only shifted how people think about well-being, but sparked a deeper sense of urgency around mental health, and how to plan for it.

Globally, mental health conditions affect about one in five adults, with the World Health Organization estimating an annual productivity loss of over \$1 trillion due to untreated mental health issues. In India, the conversation is gaining momentum and it's being reflected in both policy and consumer behaviour.

Until a few years ago, health insurance was largely seen as a safeguard against physical illness or hospitalisation. That has changed. Following the Mental Healthcare Act, 2017 and IRDAI directive, mental health is now covered at par with physical illnesses across health insurance plans in India. This is not just a regulatory milestone — it signals a much-needed shift in how we define health.

### Changing landscape

More importantly, this coverage is becoming more holistic. Today, most retail health insurance plans offer outpatient (OPD) benefits, either built-in or as optional add-ons. These allow for therapy, counselling, and psychiatric consultations — services central to mental healthcare but rarely require hospitalisation. Data tells us that people are using them.

Our data shows over the past 2-3 years, mental health-related claims — including for therapy, stress counselling and anxiety medication — have risen by 30–50%. It reflects not just policy



evolution but fundamental behavioural shift. More people are seeking professional help and using insurance to pay for it.

#### **Younger Indians lead**

Interestingly, the demand is being led by younger Indians. Those between 25-35 years are driving the highest search interest, policy uptake and mental health claims. This group, juggling career pressures, financial uncertainties and the demands of an always-on digital lifestyle, is showing greater openness to emotional support, particularly through app-based therapy and online mental health platforms.

A closer look at the claims data shows anxiety disorders account for about 30–35% of mental health claims, followed by depression (25–30%), workplace stress and insomnia. Most of these are early to moderate cases, which signals another crucial trend: a growing comfort with seeking care before reaching crisis point.

This is how real change begins — with early intervention.

#### **For women**

Women are significantly more likely to opt for policies that include mental health benefits — especially those aligned with life-stage transitions such as pregnancy, menopause or caregiving responsibilities. Emotional well-being during these phases is often under-acknowledged but deeply impactful. The rise in claims from women reflects broader cultural shift toward prioritising self-care often for the first time.

Geographically, mental health insurance adoption is still concentrated in Tier 1 cities, accounting for more than 50% of the total uptake. These metros typically have better access to therapy networks, more progressive workplace policies and higher levels of digital literacy. That said, growing interest from Tier 2 cities points to a promising national trend — one where awareness is no longer limited to urban pockets. Workplaces, too, are undergoing a transformation. Whether through wellness programmes, access to therapists, or stress management workshops, mental health is beginning to find a place in the benefits conversation.

#### **No longer afterthought**

The best part of this conversation is mental health is no longer an afterthought. People are researching, asking and making insurance decisions with it in mind. But there's still a long way to go. Coverage is now widespread, but utilisation and awareness need to catch up. Many still don't know their plans include OPD therapy or cashless mental health services are an option.

This is where the focus must lie — in building a system that is not only inclusive on paper but accessible in practice. The foundation is in place: regulation, product innovation and early adoption. What's needed next is education, empathy and a continued effort to normalise mental health as part of everyday healthcare planning. The message is simple: taking care of your mind is just as important as taking care of your body.

And today, with the right insurance plan, you can do both, affordably and confidently.



## WHAT IS THE COVID-19 SITUATION IN INDIA?

### **The story so far:**

After a rise in COVID-19 numbers in Southeast Asia, India has started to show an uptick in the number of cases over the last couple of weeks. The numbers slowly grew to hit 5,755 cases (as of Saturday 5:30 pm) as per the Ministry of Health's COVID-19 dashboard.

### **What is the medical advice?**

The same dashboard states that 5,484 people have been discharged. Even as the numbers rise, doctors and experts have repeatedly stated that seasonal spikes and dips in COVID-19 cases are to be expected, since it had moved from a pandemic to an endemic infection. The COVID-19 virus is co-circulating with other seasonal viruses, they point out, and currently the dominant strain is an Omicron sub-variant from which the subcontinent has adequate immunity. The cases have not been severe; from the point of transmissibility too, the R0 (reproductive number) is not that worrying to indicate a high contagion factor.

### **What is the situation in the country today?**

As of now, the variants of COVID-19 doing the rounds in India are descendants of the Omicron variant, first reported in November 2021. The emerging sub-variants, NB.1.8.1 and LF.7, driving the current COVID-19 surge are descendants of JN.1, a sub-lineage of the Omicron BA.2.86 variant. In Kerala for instance, a senior health department official said that "almost all of the samples sent for whole genome sequencing from the State have shown that the circulating virus variant is LF.1, one of the descendants of Omicron, the immune evasiveness of which is quite well-known." Cases have mostly been mild, according to the Indian Council of Medical Research (ICMR). The reported symptoms are those of the common cold or seasonal flu, including fever, cough, sore throat, runny nose, headache, fatigue, body aches, and loss of appetite. P. Senthur Nambi, senior consultant, Infectious Diseases, Apollo Hospitals, Chennai, said most of the COVID-19 patients he had seen so far have done well. "Most of them had only an upper respiratory infection. These patients were managed based on their symptoms and most of them did not require any COVID specific antiviral medications. Prior exposure to the infection, the effects of the vaccines taken or a combination of both factors with vaccine-induced antibodies could be playing a protective role," he explained. "The key difference with these new strains," said Sujan Bardhan, consultant (Tuberculosis and chest diseases), Narayana Hospital, R.N. Tagore Hospital, Kolkata, "is their speed, not their severity. Hospitals are well-prepared and the healthcare system remains under no immediate strain. Nonetheless, the importance of basic preventive measures cannot be overstated."

### **What is the vaccine position?**

India launched the world's largest COVID-19 immunisation drive in January 2021. To date, over 220 crore doses of COVID-19 vaccines have been administered in the country as per the CoWIN dashboard. These were primarily of the two vaccines available then, AstraZeneca's Covishield and Bharat Biotech's Covaxin.

Rajiv Bahl, Director General of ICMR, has said there is absolutely no need to initiate mass booster doses for COVID-19 vaccines at present, and neither is there a direction from the Central government on this. As cases rise, Dr. Bahl noted that individual doctors could recommend booster doses to patients on a case-to-case basis.



He further explained that the need for mass vaccination, while not felt at present, could arise, with perhaps a mutation in the virus or its spread. "For that, India already has the capacity to scale up production and provide for the general public. We have done this before and there is no need to panic," he said. Since vaccines which were stocked and used in 2021 and 2022 have now fallen into disuse and expired, there are no stocks at present, a government official said. The official, however, added that the government could direct manufacturers to produce more stocks as and when necessary. Most States, including Kerala, Tamil Nadu, Karnataka and West Bengal, have no stocks or supplies of the vaccine at present either in the government or private sector.

#### **Are vaccines needed at present?**

Doctors across the board say that at present they see no need for a mass vaccination drive.

"By the time Omicron ran its course, almost all of our population had been exposed to the virus. Even when this antibody protection wanes, the long-term immune memory remains. This innate immunity plus the vaccine-derived immunity through good coverage of the initial two doses means that most people have strong hybrid immunity against COVID-19," the Kerala health department official said. Previous vaccines may not be very effective against the Omicron variants but would, however, offer protection against serious forms of the disease.

Though two indigenously developed nasal vaccines specifically targeting the Omicron variant from Bharat Biotech and Indian Immunologicals, as well as another vaccine for the Omicron variant, were made available in the Indian market, the uptake was low, doctors said.

Kiran Madala, a Hyderabad-based doctor, part of an international group of genetic epidemiologists under the COVID Treatment Exchange Organisation, said the current World Health Organization guidelines recommend vaccines primarily for individuals above 70 years of age, those who are immunocompromised, and patients with multiple co-morbidities. Children, especially those aged two to six years, do not need vaccination unless they have underlying health issues or are immunosuppressed. Dr. Nambi in Chennai said some patients, those who have travel obligations, have requested the vaccines, but none are available at present. "But I wish that there was an option of vaccination, not for the general population in large but for two subsets of patient groups in whom the infection could cause problems," he said. One, those who have not received any COVID-19 vaccines or missed an infection, leaving them without immunity, while the second are those with co-morbidities and who are immuno-compromised.

T. Jacob John, retired professor of clinical virology at Christian Medical College, Vellore, also said that the elderly and immunocompromised people needed to be vaccinated again, irrespective of whether they were fully vaccinated (two doses and a booster) or had been exposed to the virus earlier.

State governments, however, have taken a more cautious stance: "Whether vaccination is required or not depends on many factors," said T. S. Selvavinayagam, T.N. Director of Public Health and Preventive Medicine. "We need to study the epidemiology of the current cases before commenting on the requirement for vaccination now." Kerala has said it was "not advocating for or against COVID booster shots" because of the lack of epidemiological data that booster doses offered enhanced protection against emerging immune-evasive variants.



### What next?

The Delhi High Court, earlier this week, directed the Centre to submit a thorough status report detailing its actions regarding the policy for sample collection, collection centres, and transportation of samples. The court also stressed urgency to finalise and implement Standard Operating Procedures.

As the virus continues to adapt, so must we, Dr. Bardhan pointed out. Staying informed and following trusted health sources, personal protection and hygiene measures such as hand washing, avoiding crowded places when possible or masking up, refraining from going outdoors when ill and maintaining a healthy, well-balanced lifestyle could help navigate this phase and any more to come.

## 1 IN 3 ADULT INDIANS FACE UNINTENDED PREGNANCIES, SHOWS UNFPA REPORT

One in three adult Indians (36%) face unintended pregnancies, while 30% experience unfulfilled desire for having either more or fewer children. Notably, 23% faced both, according to the United Nations Population Fund's (UNFPA) 2025 State of World Population (SOWP) Report released recently.

- “Vast numbers of people are unable to create the families they want,” Dr Natalia Kanem, executive director of UNFPA, told reporters at a virtual media conference. “The issue is lack of choice, not desire, with major consequences for individuals and societies. That is the real fertility crisis, and the answer lies in responding to what people say they need: paid family leave, affordable fertility care, and supportive partners,” Kanem said.
- This year’s report, ‘The real fertility crisis: The pursuit of reproductive agency in a changing world’ has called for a shift from panic over falling fertility to addressing unmet reproductive goals. SOWP 2025 underlines that millions of individuals are unable to realise their real fertility goals. This is the real crisis, not underpopulation or overpopulation. And, the answer lies in greater reproductive agency – a person’s ability to make free and informed choices about sex, contraception, and starting a family.
- The report draws on academic research and new data from a UNFPA–YouGov survey spanning 14 countries, including India. The report finds that one in five people globally expect not to have the number of children they desire. Key drivers include the prohibitive cost of parenthood, job insecurity, housing, concerns over the state of the world, and the lack of a suitable partner. A toxic blend of economic precarity and sexism plays a role in many of these issues, the report shows.

### Do You Know:

- Key findings from the UNFPA–YouGov Survey 2025, an online poll with 14,000 respondents, reveal multiple barriers to reproductive autonomy in India. Financial limitations are one of the biggest barriers to reproductive freedom. Nearly four in 10 people say financial limitations are stopping them from having the families they want. Job insecurity (21%), housing constraints (22%), and the lack of reliable childcare (18%) are making parenthood feel out of reach.
- Health barriers like poor general well-being (15%), infertility (13%), and limited access to pregnancy-related care (14%) add further strain. Many are also holding back due to growing anxiety about the future—from climate change to political and social instability. Nineteen per cent faced partner or family pressure to have fewer children than they personally wanted.



- The report challenges global narratives around ‘population explosion’ versus ‘population collapse’. Replacement-level fertility, commonly defined as 2.1 births per woman, is the rate at which a population size remains the same from one generation to the next.
- While India may have reached replacement-level fertility of 2.0, many people, especially women, still face significant barriers to making free and informed decisions about their reproductive lives and significant disparities persist across regions and states. These barriers create what the report identifies as India’s “high fertility and low fertility duality.”
- According to Professor T V Sekher from the International Institute for Population Sciences (IIPS), Mumbai, the real worry is the decline in population size instead of concern over population explosion. “The possibility of population extinction is getting attention now.”
- Low fertility is inevitable, and India is no exception. A large number of urban Indian couples prefer only one child, irrespective of boy or girl. Fertility will go down further. Efforts taken by many countries to boost their fertility levels did not succeed. China is a classic example in recent times,” he said.
- In the 1970s, women on average had nearly five children. Now, they have close to two. This milestone reflects progress in health and education, but masks regional diversity in the Total Fertility Rate, which is the average number of children a woman will have in her lifetime.
- Infertility remains under-prioritised in India and needs to be considered for inclusion under the government’s health insurance schemes. An estimated 27.5 million Indian couples face infertility, yet public sector services are limited, while private care remains expensive and largely confined to urban centres. Social stigma is particularly harsh on women, though fertility challenges affect both sexes as per the report.
- UNFPA’s vision for India calls for “demographic resilience”—societies’ ability to adapt to population change without sacrificing human rights.
- The report outlines five key pillars for India’s rights-based approach. These include expanding sexual reproductive health services with universal access to contraception, safe abortion, maternal health, and infertility care, removing structural barriers by investing in childcare, education, housing, and workplace flexibility, promoting inclusive policies, extending services to unmarried individuals, LGBTQIA+ persons, and other marginalised groups, improving data and accountability beyond fertility rates to measure unmet family planning needs and bodily autonomy, and fostering social change through community initiatives challenging stigma and building health literacy.

#### THE STORY OF HOW ASAFOETIDA CAME TO BE SUCCESSFULLY CULTIVATED IN INDIA

Heeng (asafoetida), a key ingredient in Indian cuisine and Ayurvedic medicine, was successfully cultivated in India, with the first flowering and seed set reported on May 28, 2025, by CSIR-IHBT in Palampur, Himachal Pradesh. This milestone, achieved five years after initial sowing in 2020, confirmed heeng’s acclimatization to Indian conditions, particularly in high-altitude, semi-arid regions like Lahaul-Spiti and Uttarkashi. Historically, India, the world’s largest heeng consumer, relied on imports from Afghanistan, Iran, and Uzbekistan. To reduce this dependence, CSIR-IHBT led a national effort starting in 2018, importing seeds from Iran and Afghanistan, overcoming low germination rates, and developing cultivation protocols.



The first heeng seedling was planted in Lahaul Valley in 2020, with cultivation expanding to Mandi, Kinnaur, Kullu, and Chamba. The Heeng Germplasm Resource Centre, established in 2022, and a tissue culture unit supported large-scale propagation. By 2025, 200 hectares across five states produced 50 tons of resin, meeting 4% of domestic demand. Government funding (₹50 crore in 2025), farmer cooperatives, and quality certification enabled local heeng to enter markets at lower prices than imports. Challenges like low germination and pests were addressed through pre-treatment protocols, intercropping, and biopesticides. Heeng cultivation boosted farmer incomes, empowered women, and aligned with sustainable farming, with plans to reach 1,000 hectares by 2030, targeting 20% self-sufficiency and potential exports.

#### DEATHS CAUSED BY TIGERS IN RANTHAMBORE SHOULD PUSH AUTHORITIES TO REFLECT

A relatively unusual human-animal conflict is playing out in the vicinity of one of India's premier tiger reserves, and much of the blame should be laid at the doors of the wildlife authorities in charge of the protected area. In the past two-and-a-half months, tigers have killed three people, one of them a forest officer, on the outskirts of Ranthambore National Park in Rajasthan. As reports in this paper have underlined, in at least two cases, the animals' natural tendencies went awry because the park authorities provided live bait to their ailing mother. They lost the inhibition tigers usually have towards humans and became a risk for the forest staff and visitors to Ranthambore.

Offering live bait to injured or old tigers is not banned, but the National Tiger Conservation Authority's standard operating procedure deems it "not advisable". The manual says tigers "need to be managed with minimum human intervention". Artificially feeding wild tigers to ensure their longevity "goes against the basic tenets" of conservation, it underlines. Live baiting predatory animals is known to impair their natural survival skills. It's natural for old and infirm animals to die of starvation or in a fight with their adversaries. This fundamental precept of nature seems to be lost on wildlife managers in several parts of the country. The problem is not just limited to providing food to infirm animals. It's not uncommon today for wildlife authorities to nurse animals injured in territorial fights or medically care for tigers past their prime. This goes against nature's way of managing tiger demographics. The animal no doubt evokes awe and at times, it's difficult to barricade emotions from conservation. But there's a fine line between respecting the fundamentals of conservation and misplaced kindness for an individual member of a majestic species. Artificial interventions, such as those in Ranthambore, boost tiger numbers in pockets, worsen conflicts among them and eventually push some of the animals to stray close to human habitats.

The understaffed and ill-equipped forest departments in most parts of the country deserve compliments for bringing the tiger back from the brink after the 2005 crisis. But conservation should not be just about numbers. The Ranthambore crisis betrays an attitude of overcautiousness among park managers. Authorities, instead, need to initiate conversations on the carrying capacity of the country's national parks and settle on a viable population of the tiger — especially because a sizeable percentage of tigers live outside protected areas today. The focus should be on creating and maintaining healthy ecosystems where the tiger can thrive without endangering the lives of humans.



### 'FOR A TRAPPED TIGER, INSTINCT TO LIVE OVERRULES IMPULSE TO HUNT'

Everybody wondered why the tiger didn't eat the dog — after all, they were stuck barely a foot apart in a deep pit at a private cardamom plantation at Kadukkacity in Idukki district, Kerala, for more than five hours before being rescued on Sunday.

However, Kottayam Divisional Forest Officer (DFO) Rajesh offered an explanation: "In such situations, wild animals usually don't attack; their only aim is to escape the danger. An extraordinary glimpse of wilderness grace where survival eclipsed savagery." he said.

Wildlife expert P.S. Easa observed that normally, tigers do not hunt dogs, but leopards do. "When a dog notices a tiger, it may bark, prompting the tiger to chase it, which can lead both animals to fall into a trap," Dr. Easa further said that as both animals found themselves trapped, their instinct was to escape.

The Forest Department released the tiger into the Periyar Tiger Reserve.

### FEARED EXTINCT IN VALLEY, RARE SIGHTING REVIVES HOPE OF EURASIAN OTTER'S COMEBACK

For three decades, the Eurasian otter, once an integral part of Kashmir's aquatic ecosystem, was thought to be extinct in the Valley. However, a rare sighting of the semi-aquatic mammal has now been reported in south Kashmir.

- The otter, which has been globally classified as 'near threatened' by the International Union for Conservation of Nature (IUCN), was spotted in the Lidder River in Srigufwara, south Kashmir.
- While villagers initially thought it was a crocodile, wildlife officials identified it as an Eurasian otter after watching videos captured by the villagers. That was later confirmed through photographic evidence.
- "It has been confirmed as Eurasian otter," Suhail Ahmad Wagar, the Wildlife Warden for south Kashmir, told The Indian Express. "After it was reported, we set up CCTV surveillance, and we have captured it (on camera) at a few places."

#### Do You Know:

- The Eurasian otter, locally known as Vuder, was an integral part of Kashmir's aquatic ecosystem and was abundantly found in the water bodies. Its presence was used to scare the children and keep them away from the water bodies. However, over the last three decades, it was not spotted in the water bodies of the Valley, and it was thought to be extinct in Kashmir.
- The sudden decline in otters, a carnivorous mammal that feeds on fish and other aquatic fauna, was attributed to increased water pollution and hunting of the mammal for its fur.
- Wildlife officials say that this is the third occasion this year that it has been spotted in the Valley. "In May, it was first spotted in the Gurez valley," Wagay said. "It was also spotted in Heerpora (in south Kashmir's Shopian district)."
- Wildlife officials say that the sighting of the mammal is encouraging and could help restore Kashmir's aquatic ecology.



## Lidder River

The Lidder River is a tributary of the Jhelum River, which originates from the Kolahoi Glacier, located in the upper reaches of the Pir Panjal range in Jammu and Kashmir. The Jhelum River (252 km) originates from a spring at Verinag near the Pir Panjal and flows through Wular Lake in Srinagar before entering Pakistan. It joins the Chenab near a place called Jhang in Pakistan.

## SAVING ENDANGERED SPECIES, ONE DNA SAMPLE AT A TIME: HERE IS DELHI ZOO'S NEW CONSERVATION PLAN

Eyeing long-term conservation and research projects, the National Zoological Park (NZP) in Delhi is exploring the possibility of setting up an on-site wildlife biobank in collaboration with the Centre for Cellular and Molecular Biology (CCMB) in Hyderabad.

— The proposed facility is expected to collect and preserve genetic material — DNA, tissues, reproductive cells — from animals at the zoo. The initiative is part of a broader effort led by the Central Zoo Authority (CZA) to strengthen ex-situ conservation in Indian zoos.

— The biobank at the zoo in the Capital is expected to follow a model already implemented at the Padmaja Naidu Himalayan Zoological Park in Darjeeling, which became the first to establish such a facility under the initiative earlier this year.

— While the process is in its early stages, officials involved in the project said the proposed biobank in the city could contribute to building a national repository of genetic material for conservation science.

— In 2021, the Delhi zoo was among six zoos that had been identified by the CZA to join the Consortium of Indian Zoos for Biobanking of Wildlife Genetic Resources under a pilot project.

— The programme was built on a tripartite agreement signed in 2019 between the CZA, CCMB-LaCONES (Laboratory for the Conservation of Endangered Species), and the selected zoos.

— Under this agreement, zoos, including Delhi's NZP, have been encouraged to collect biological samples from deceased animals, as well as from live animals during health interventions, for submission to the National Wildlife Genetic Resource Bank (NWGRB) at the CCMB's laboratory.

— As per the October-December 2024 quarterly inventory report of the National Zoological Park, it is home to several endangered species listed under Schedules I and II of the Wildlife Protection Act, 1972.

— These include the Asiatic Lion, Bengal Tiger, Indian Elephant, Indian Rhinoceros (Greater One-Horned Rhino), Sloth Bear, Lion-tailed Macaque, Indian Wolf, Indian Bison (Gaur), Dhole (Asiatic Wild Dog), Eld's Deer, Four-horned Antelope, Himalayan Black Bear, Marsh Crocodile, Gharial, Indian Rock Python, and Spectacled Cobra.

— At present, samples collected from zoos are sent to the CCMB facility in Hyderabad. According to officials, this has posed logistical challenges. "Bringing samples to the CCMB facility after postmortem is a challenge. They need to be preserved within four hours. That's the reason for the need for localised facilities," Dr Govindha-swamy Umopathy, Chief Scientist, the CCMB, told The Indian Express.



**Do You Know:**

— Biobanks are of immense importance in the conservation of critically endangered species. With environmental change and other factors many species of animals may go to the brink of extinction. The aim is to store the cells and the germ plasm (genetic material) of such animals that if needed the species could be brought back to life again.

— According to the website of the CZA, the Indian Board for Wildlife re-constituted its Zoo Wing as 'the Expert Group on Zoos' at its 9th session held on 18th November, 1972 at New Delhi to make detailed study for setting up and maintenance of zoos in the country.

— The report recommended setting up of a central agency (Zoo Grants Commission), and to give effect to this recommendation, the Wildlife (Protection) Act, 1972 was amended through an amendment Act in the year 1991.

— A separate chapter, Chapter IVA contain Section 38 A to 38 J was added to the Wildlife (Protection) Act, 1972 for establishment of the Central Zoo Authority in India.

— Accordingly, the Central Zoo Authority was established as a statutory body under the Ministry of Environment & Forests by the Government of India in the year 1992. The Authority consists of a Chairman, ten members and a Member Secretary.

#### 127 YRS IN VAULT, VEIL TO LIFT ON BUDDHIST RELICS

A CRYSTAL casket believed to be over 2,300 years old was found along with four other caskets at Piprahwa (ancient Kapilavastu) in Uttar Pradesh during an excavation in 1898.

- The fish-shaped knob of the 5 cm x 10 cm casket contains precious gems and gold leaves. Another casket, found in a stone coffer buried 18 feet under the ground, has an inscription in Brahmi script that roughly translates as: "the casket containing the relics of Lord Buddha was donated by Sukirti brothers along with their sisters, sons and wives belonging to the Sakya clan".

- For more than 127 years, several such sacred Buddhist relics from the third century BC, including the five caskets, a sandstone coffer and 221 gems and jewels, were kept in the secure vaults of the Indian Museum in Kolkata — conserved and preserved, never exposed to the public.

- Now, for the first time ever, the Ministry of Culture is planning an exposition of these relics of Lord Buddha that were deposited by the Sakyas, his kin, and found in a stupa belonging to Emperor Ashoka, The Indian Express has learnt.

- According to records, during the January 1898 excavation at a mound in Birdpur Estate, William Claxton Peppe — son of a British estate manager — unearthed an 18-foot shaft leading to a sandstone coffer containing the relics, which also included sacred bones and ashes. Recognising the religious importance of the relics, the then Viceroy of India, Lord Elgin II, donated the sacred bones and ashes to Siamese King Rama V. However, the caskets, coffer, and associated relics were retained in India, in the custody of the Imperial Museum, which is now known as the Indian Museum, Kolkata, its Director in-charge Arijit Dutta Choudhury told The Indian Express.

- Recently, the Culture Ministry sent a legal notice to Sotheby's Hong Kong to stop the auction of a part of the sacred relics that were held by Peppe's family, and asked that the items be returned to India. Although the auction house stopped the auction — slated for May 7 — India's legal claim on such items is yet to yield any result.

**4<sup>TH</sup> FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR**



- The attempted sale of the Piprahwa Buddhist relics at Sotheby's has raised global concerns as it commodified the sacred remains believed to be of Lord Buddha. For many across the globe, such relics are not artefacts but living embodiments of faith, said Khushi Kesari, Program Officer-History Lab: Community, Heritage & Material Culture, Advanced Study Institute of Asia at SGT University in Gurugram.

**Do You Know:**

- Buddhism emerged in India around the fifth-sixth centuries BC during a period that scholars call "the second urbanisation of India", a time of great socio-cultural change in the Gangetic plains. It emerged, along with other heterodox traditions such as Jainism, as a response to Vedic Hinduism's highly rigid and ritualistic ways.
- India is home to numerous Buddhist sites that attract devotees and tourists from around the world. These sacred sites not only offer a glimpse into the ancient traditions and teachings of Buddhism but also provide serene environments for meditation and reflection.

## HOW INDIAN TEMPLE ARCHITECTURE IS ROOTED IN ART, RELIGION, AND POLITICS

Temples in the Indian subcontinent survive in an intelligible and coherent form from at least the fifth century CE. The tradition, however, dates back much earlier to the times when they were makeshift or built in perishable material. Artefacts associated with temples – like the Garuda pillar from Besnagar and Śivaliṅga from Gudimallan dated to around 120 BCE and 80 BCE, respectively – corroborate the antiquity of this tradition.

The Indian temple architecture is broadly characterised by two overarching traditions, namely the Nāgara or northern building tradition and Draviḍa or southern building tradition. Although geographically defined, they are not exclusive to the two regions.

In addition to these two, Indian art treatises include a third type of building tradition called the "Vesara" or hybrid. The etymological bearing of the term has led scholars in the past to understand this category as a synthesis of the northern and southern artistic traditions and associate it with the geographically fitting Deccan region.

### **Nāgara and Draviḍa temples**

The multi-storeyed exterior of the Nāgara and Draviḍa temples reflects their common ancestry from the Buddhist artistic tradition. Relief carvings on the gateways of Sanchi and Bharhut, and Mathura depict cities with gatehouses, mansions, and urban dwellings. The depiction showcasing visual images of dormer-windows, pillared balconies, railings, and domed structures evokes the structural temples. The facades of the later rock-cut caves at Kondane, Karle, Bhaja, and Ajanta (caves 1 and 19) display similar palatial arrangements.

The multi-storeyed towers of the Nāgara and Draviḍa temples harbouring the garbhagr̥ha (sanctum) of the temple are composed of a string of aedicules (small temple forms). These are transformed through diminution, repetition, splitting, super-imposition, and contraction to achieve its decorative exterior.

Each tradition uses different varieties of aedicules. For instance, the Nāgara superstructure incorporated the āmalaka (fluted bulbous capstone of a Nāgara śikhara), gavākṣa (cow's eye motif or horseshoe arch), and bālapañjara (nāsī-roofed cage aedicule) over pillarlets. The Draviḍian



vimāna (south Indian shrine) featured kūṭa (domed aedicule), śālā, (wagon-vault roofed aedicule), and bālapañjara.

In the process of their evolution, the functional storeys of these towers were reduced to surface applique. The degree of architectural compression varied in both traditions: the Draviḍian superstructures were contracted enough to retain their palatial or horizontal profile, while the Nāgara superstructures were condensed significantly. In the latter, the many layers within the horizontal storeys were condensed enough to be visually subsumed within the verticality of the spire, thereby losing and mutating its original structural provenance.

#### **Lineage of architectural tradition**

The modest lineage of the temple architectural tradition was short-lived. The rock-cut, monolithic, and unpretentious structural shrines in timber, brick, and stone were swiftly supplanted by expansive structures. The caves of Barabar, Udayagiri, and Deccan, the stone shrines of Sanchi and Tigowa, the brick temples of Bhitargaon and Tala, and the monoliths of Mahabalipuram, to name a few, represent early attempts at temple building. The memory of timber shrines is captured in the rock-cut monuments of Deccan at Kondane, Karle, and Bhaja.

Over time, stones of different varieties, owing to their durability, became the primary building material in the later centuries. In the south, it was, reluctantly, adopted later in the seventh century CE because of its association with the megaliths.

In the rock-cut traditions, rocks from mountains were carved from ceiling to base-mouldings, using wooden pegs, iron chisels, and hammers. For the structural temples, the stone was dressed and placed horizontally, usually without mortar to achieve the desired form. The architectural transition owed to a range of religious, social, political, and economic necessities of the time.

#### **Temple patronage**

The religious and social necessities of ritual-based worship – such as darśan, pradakṣiṇa, puja backed by didactic texts – demanded an elaborate structure for the temple as opposed to the compact Buddhist caityas. The temples of the sixth-seventh centuries CE comprised a maṇḍapa (hall), garbhagrha, and śikhara (superstructure). Religious merit accrued through temple construction attracted important individuals towards the cause, making the temple a public institution.

Temples were often patronised by powerful kings to revere their favourite deity as well as assert, consolidate, and legitimise their overlordship over an existing or new domain. For example, Rajaraja Cola built the Thanjavur Brihadesvara temple to assert his supremacy over the region. Rulers also named the presiding deities after themselves to assert their divine kingship. For example, the presiding deity of Chalukya king Vijayāditya at Pattadakal Sangamesvara was called Śrī-Vijayēśvara-Bhaṭṭāraka.

As asserted by Kesavan Veluthat, and echoed in the arguments of Alexis Sanderson, “Patronage was not entirely without its return. It helped the patron to use the symbols of that religion for their benefit. This political use of religion included the use of its symbol for the purpose of political mobilisation and then using them as metaphors of power.” Simply put, religious institutions, such as temples, were patronised by rulers to meet political ends. Built with the same intent, small-scale temples and miniature shrines often accompanied big ones owing to meagre patronage by disadvantaged individuals.



### Temples as centres of community activity

As public institutions, temples also served as monasteries and focal points of community activity. In an inscription from the Alampur Bala Brahma, the temple's function as a monastery is highlighted in the establishment of an asylum and hospital for the ill and for sick cattle. The same inscription also elucidates the disposition of land grants towards organising musical programmes within temples.

The development of Indian temple architecture is rooted in a complex interplay of art, religion, politics, and society. While it began modestly, it developed into a sophisticated tradition that varied across regions yet maintained a coherent cultural identity.

## THREE JEWELS THAT SHAPE BUDDHIST PHILOSOPHY AND WAY OF LIFE

Buddhism, rooted in the teachings of Siddhartha Gautama or Buddha, presents the path to *nibbana* (liberation). Central to this path are the three jewels or *triratna* of Buddhism — the *Buddha*, the *Dhamma*, and the *Sangha*. Also called the *tisarana* (threefold refuge), these three are the refuges for the followers of Buddhism — both the laity (*upasakas/upasikas*) and those in the monastic order.

Let us explore the significance of the *triratna* and their role in shaping Buddhist philosophy and way of life.

### Taking refuge in the Buddha

Among the *triratna*, the Buddha is the first and most foundational refuge. He is revered not as a god, but as an awakened teacher who discovered and shared the path to liberation. In the *Dhammapada* (verse 183), the Buddha is depicted as a moral teacher who guides his followers on how to avoid evil, cultivate good conduct, and cleanse their thoughts. The *Majjhima Nikāya* (discourse 107 – *Gaṇakamoggallānasutta*) contains a verse that praises the Buddha's teachings using the imagery of the finest natural fragrances.

*Among all fragrant roots, spikenard is considered the finest;  
Among all fragrant heartwoods, red sandalwood is the most prized;  
Among all fragrant flowers, jasmine stands supreme.  
In the same way, among all the teachings of the time, the guidance of the blessed Gautama is the most excellent.*

This poetic comparison highlights how the Buddha's *Dhamma* is seen as the most refined and sublime among the various contemporary teachings. Taking refuge in the Buddha means placing trust in his awakening and recognising him as the one who has shown the path to freedom, compassion, and wisdom.

### Doctrine of *anattā* (non-self)

In Buddhism, *Dhamma* refers to the teachings of the Buddha, rooted in the *ariya sacchani* or four noble truths and the *atthanga magga* or the eightfold path. It outlines ethical conduct, discipline, and wisdom as the foundations of an individual's progress. A significant component of the Buddha's teaching in this regard is impermanence (*aniccha*).



Impermanence manifests in various aspects of life. In the context of a person's life and existence, there is no force in this universe that can prevent the inevitable. As Siddhartha learned from his first journey outside the palace, the onset of old age, illness, and death is inevitable. Therefore, the concepts of 'I', 'me', and the 'self' are not constant; they are constantly evolving and are made of multiple experiences.

This understanding directly connects to Buddhism's rejection of anything permanent, such as the soul or *atman*. Buddhism teaches the doctrine of *anattā* (non-self), which posits that there is no enduring, unchanging self or essence within beings or phenomena. This concept can be explained through a dialogue between King Milinda and monk Nāgasena from *Milindapañhā* (a later Buddhist text from around the 1st century CE).

In the dialogue, Milinda asks for clarification on the nature of personal identity. Nāgasena responds with a famous parable: although the king claims that he arrived in a chariot, upon examination, no inherent "chariot" was identified in any single component – the axle, wheels, or chassis (these parts alone cannot constitute a chariot, either).

Here the term "chariot" is merely a convenient label applied to the assemblage of interdependent parts. Similarly, our personal identity (such as our names) does not indicate an enduring self or soul; rather it refers to the combination of several aggregates – like form, feeling, perception, mental formations, and consciousness.

#### **Dhamma compared to a raft**

In Buddhist teachings, the *Dhamma* is often compared to a raft – a powerful analogy used in the *Majjhima Nikaya* (1.134–35). The text presents the image of a man who comes upon a wide river in flood. The shore he stands on is dangerous and filled with fear, while the far shore appears safe. However, there is no bridge or boat for him to cross the river.

Thinking practically, the man gathers grass, sticks, branches, and leaves, and constructs a raft. Using the raft, he manages to cross the river safely. Once on the far shore, he reflects on the raft's usefulness and considers whether he should carry it on his head or back as he continues his journey. The Buddha suggests that this would be inappropriate. The man should recognise the raft's value for the specific purpose, and now since the purpose is fulfilled, he should leave it behind.

Similarly, the *Dhamma* is a raft that is meant to help one cross over the river of suffering. It is not meant to be clung to once its purpose is fulfilled. The ultimate goal is liberation where one is free from all sorts of attachments, including the *Dhamma*.

#### **Sangha, the third jewel**

After the *Buddha* and the *Dhamma*, the *Sangha* is the third jewel from the *triratna*. The *Sangha* is the monastic order of Buddhism, which was established during the lifetime of the Buddha. It was the core institution that spread the Buddha's teachings.

The *Sutta Vibhanga*, a section of the canonical text *Vinaya Pitaka*, mentions the *Patimokkha* – the rules for monastic life. It consists of 227 rules for bhikkhus (monks) and 311 for bhikkhunis (nuns), each accompanied by explanations. The *Patimokkha* was usually recited by the monks as part of the *uposatha* – a fortnightly ceremony held on the days of full moon and new moon.



These rules of the *Sangha* outline aspects of monastic life – what its members should eat, how they should talk and walk, what they should wear, and how they should conduct themselves. These rules also provide guidelines for resolving disputes, and defining the relations between the Sangha and laity. The *Vinaya Pitaka* also gives information on the monks' initial wandering lifestyle and eventual shift to settled living.

Sukumar Dutt, in his work *Early Buddhist Monachism*, observes that the settling down of monks can be traced back to *vassavassa* or the monsoon retreat. Monks were expected to stray in one place during the rainy season. According to Dutt, these temporary retreats would have eventually led to the monastic establishments known as viharas.

### **Sangha and women**

The process by which one renounces household life and becomes a novice under a preceptor is called the *pravrajya* ceremony. As part of this rite, one had to shave their heads, wear ochre robes, and take vows. They then take refuge in the *tisarana*, and chant "*Buddhaṃ saraṇaṃ gacchāmi, Dhammaṃ saraṇaṃ gacchāmi, Saṅghaṃ saraṇaṃ gacchāmi*" (I take refuge in the Buddha, Dhamma, and the Sangha).

Later, when a novice achieves full membership, they undergo the ordination ceremony or *upasampada*. Subsequently, they are permitted to possess only three robes, a clay or iron alms bowl, a razor, a needle, a waistband, and a water filter or strainer.

An important question at this juncture is the role of women in the *Sangha*. Buddhist texts reflect the social settings of its period and present women as temptresses, and often compare them with fire and venomous snakes. But historian Upinder Singh observed that a tradition that gave high regard to celibacy naturally perceived women as creatures of passion and therefore a threat.

Later on, women got entry into the *Sangha*. Some narrations say that when the Buddha's foster-mother Mahapajapati Gotami expressed interest in joining the monastic order, a bhikkhuni *Sangha* was formed. The *Vinaya Pitaka* contains a conversation between Ānanda and the Buddha in which the latter remarks that the Buddhist doctrine, which could have endured for a full thousand years, would instead decline in five hundred years due to the admission of women into the *Sangha*.

However, the Sangha did not admit certain categories of women, including those who were pregnant, mothers with unweaned children, women considered rebellious or have close associations with young men, and those who did not have the consent of their parents or husbands to join. In addition to these restrictions, numerous other specific rules were established for nuns.

Despite this, it is important to view the role of women in Buddhism through a historically contextual lens. One concurs with Upinder Singh in concluding that the progressiveness of a tradition must be understood within the context of its historical period. Reading it in the milieu of the sixth century BCE, one can observe that Buddhism created a remarkably inclusive space for the spiritual pursuits of women.

Compared to other traditions of the time, Buddhist texts feature women with striking visibility. In the centuries that followed, both bhikkhunis (nuns) and *upasikas* (laywomen) played prominent roles as donors and patrons in the development of Buddhist stupa-monastery complexes.



## SHORT NEWS

### STATE OF WORLD POPULATION (SOWP) REPORT 2025

- United Nations Population Fund (UNFPA) has released the 2025 State of World Population (SOWP) Report titled, 'The real fertility crisis: The pursuit of reproductive agency in a changing world'.
- The report has called for a shift from panic over falling fertility to addressing unmet reproductive goals. SOWP 2025 underlines that millions of individuals are unable to realise their real fertility goals. This is the real crisis, not underpopulation or overpopulation.
- According to the report, one in three adult Indians (36%) face unintended pregnancies, while 30% experience unfulfilled desire for having either more or fewer children. Financial limitations are one of the biggest barriers to reproductive freedom in India.
- The report finds that one in five people globally expect not to have the number of children they desire. Key drivers include the prohibitive cost of parenthood, job insecurity, housing, concerns over the state of the world, and the lack of a suitable partner.
- Replacement-level fertility, commonly defined as 2.1 births per woman, is the rate at which a population size remains the same from one generation to the next. In India, the replacement-level fertility is 2.0. But, fertility rate remains high in Bihar (3.0), Meghalaya (2.9), and Uttar Pradesh (2.7).

### GENDER GAP INDEX 2025

- The 19th edition of the Global Gender Gap Report 2025 was published by the World Economic Forum (WEF), with the global gender gap at 68.8 per cent for 148 countries.
- India has ranked 131 out of 148 countries in the World Economic Forum's Global Gender Gap Report 2025, slipping two places from its position last year. With a parity score of just 64.1 per cent, India is among the lowest-ranked countries in South Asia. In 2024, India ranked 129.
- It benchmarks the current state and evolution of gender parity across four key dimensions: Economic Participation and Opportunity, Educational Attainment, Health and Survival, and Political Empowerment. The index lies between 0 and 1, with 1 denoting complete parity.
- Iceland retains the world's most gender-equal economy for the 16th consecutive year, closing 92.6% of the gender gap – the only economy to reach 90% parity- followed by Finland, Norway, the United Kingdom, and New Zealand.

### LEE JAE-MYUNG

- Lee Jae-myung, the leader of South Korea's liberal Democratic Party, has won the presidential snap election.
- He is the country's 14th president and will serve a single five-year term, as mandated by the South Korean constitution.



INDIA, CHINA TO RESUME DIRECT FLIGHTS, SHARE DATA ON RIVERS; FOCUS TO BE ON 'PEOPLE-CENTRIC ENGAGEMENTS', SAYS MEA

After a meeting between Foreign Secretary Vikram Misri and Chinese Vice Foreign Minister Sun Weidong, who is visiting New Delhi, the two sides reviewed developments in India-China bilateral relations since their last meeting in Beijing in January, and "agreed to continue efforts to stabilise and rebuild ties with a focus on people-centric engagements," as per a statement issued by the Ministry of External Affairs (MEA) on Friday.

FAILS TO GET INTO 'EXPECTED' UNSC PANELS, INDIA IN TALKS WITH FRIENDS

India is working with its partners and friends on the UN Security Council to blunt Pakistan's moves, as Islamabad has been appointed to key counter-terror committees at the UNSC. Sources in New York told The Indian Express that Pakistan demanded to be the chair of the 1267 Sanctions Committee; 1540 (Non-Proliferation) Sanctions Committee; 1988 (Taliban) Committee and Chair of the 1373 Counter Terrorism Committee (CTC).

INDIA-EU PACT LIKELY TO IMPLEMENTED FROM SEPT, SAYS GOYAL

The free trade agreement (FTA) between India and the four-nation European bloc EFTA is likely to come into force from September, Commerce and Industry Minister Piyush Goyal said on Monday. The two sides signed the Trade and Economic Partnership Agreement (TEPA) on March 10, 2024. Under the pact, India has received an investment commitment of USD 100 billion in 15 years from the grouping while allowing several products such as Swiss watches, chocolates, and cut and polished diamonds at lower or zero duties. The European Free Trade Association (EFTA) members are Iceland, Liechtenstein, Norway, and Switzerland.

INDIA CENTRAL TO SUPPLY CHAIN; MUST BE PART OF G7 DISCUSSIONS: CANADA PM

India is the fifth largest economy in the world and it is central to a number of critical global supply chains, Canadian Prime Minister Mark Carney has said, arguing that the leadership of the country must be part of discussions at the upcoming G7 summit. Prime Minister Modi accepted Carney's invitation to attend the G7 summit during a phone conversation on Friday. Canada is hosting the G7 summit in Alberta province from June 15 to 17 in its capacity as the current chair of the grouping.

BLACK BOX

— In what may be among the worst aviation disasters in India, an Air India Boeing 787 Dreamliner (VT-ANB) crashed soon after taking off from Sardar Vallabhbhai Patel International Airport in Ahmedabad on June 12.

— The cause of the crash is unclear at this stage. On June 13, one of the black boxes was recovered from the Ahmedabad crash site. Generally, an aircraft consists of two such boxes – the Flight Data Recorder (FDR) and the Cockpit Voice Recorder (CVR).

— A black box is simply a flight recorder, with origins in the early 1950s. In 1963, following two fatal aviation disasters, Australia became the first country to make flight recorders a mandatory legal requirement.



— The film runs continuously in a box that is constructed to prevent any light from entering it, lending it the name “black box”. The name has endured, even as the outer box of the recorder has always been orange – a bright colour that makes it easier to identify the metal case.

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#### LIEUTENANT COMMANDER YASHASWI SOLANKEE

— On May 9, Lieutenant Commander Yashaswi Solankee (27) became the first woman officer to be appointed as an Aide-de-Camp (ADC) to the President of India.

— The President has five ADCs — three from the Army, and one each from the Navy and Air Force — none of them have been a woman officer so far.

— The President’s ADC serves as the bridge to the First Citizen — liaising her appointments and call-ons, being present with her at all presidential ceremonies and events, facilitating communication with various branches of the government and military.

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#### DIGIPIN

— The Indian government has launched a new digital address system called DIGIPIN that aims to enable the precise identification of locations in the country.

— DIGIPIN is a unique ten-character alphanumeric code that can be generated for any property that is approximately 4 by 4 square meters on Indian land. This means that unique DIGIPINs can be generated for nearly all types of properties, including in urban locations and rural areas across different maritime zones.

— The Department of Posts has developed the underlying technology of DIGIPIN in collaboration with Indian Institute of Technology (IIT) Hyderabad and the National Remote Sensing Centre, which works under the aegis of the Indian Space Research Organisation (ISRO).

— Each DIGIPIN is encoded with the geographic coordinates of that property so it does not store any personal information. The DIGIPIN will not replace the traditional six-digit PIN system. Instead, it is intended to act as an extra layer of precision built on top of existing postal addresses.

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#### CROPIC

— The Ministry of Agriculture and Farmers Welfare plans to launch CROPIC, a study to gather crop information using field photographs and AI-based models.

— CROPIC stands for Collection of Real Time Observations & Photo of Crops. According to the plan, crops will be photographed four-five times during their cycle, and the pictures will be analysed to assess their health and potential mid-season losses.

— The CROPIC mobile app has been developed by the Union Ministry of Agriculture and Farmers’ Welfare. The CROPIC model will use an AI-based cloud platform for photo analysis and information extraction, and a web-based dashboard for visualisation.



## MSC IRINA

- MSC IRINA, the world's largest container ship by capacity, docked at Vizhinjam International Seaport, which was commissioned last month. This is India's first deepwater transshipment port which was commissioned by Prime Minister Narendra Modi last month.
- The port is managed by Adani Ports and SEZ Private Limited under a design, build, finance, operate and transfer (DBFOT) model.
- A transshipment port includes terminals, where cargo containers are shifted from one vessel to another before they reach their final destination. Countries with robust global trade networks tend to use such ports to process large amounts of international cargo efficiently.
- The Vizhinjam port in the Arabian Sea is India's strategic response to over-reliance on foreign ports for transshipment cargo.

### Advantages offered by the Vizhinjam port

- a) The Vizhinjam port's proximity to the congested east-west international shipping lane just 10 nautical miles away puts it in a prime location to become a major transshipment hub for the Indian subcontinent.
- b) Vizhinjam's biggest advantage is its natural depth of 18 to 20 metres only a kilometre away from the shore—deep enough for the world's largest cargo vessels to dock without dredging, a costly and environmentally disruptive process used to deepen shallow ports.
- c) Unlike most Indian ports, Vizhinjam experiences minimal sand movement along the coast (littoral drift), which reduces maintenance costs.

## WILDLIFE PROTECTION ACT TO DECLARE THE WILD BOARS AS VERMIN

- The Union government has rejected Kerala's demand to recognise wild boars as vermin under the Wildlife Protection Act. The Center is also not in favour of the state's demand to remove monkeys (bonnet macaque) from Schedule I to Schedule II.
- Section 11 of the 1972 Act regulates the hunting of wild animals. As per clause (1)(A) of the section, the Chief Wildlife Warden (CWLW) of a state may — if satisfied that a wild animal specified in Schedule I (mammals) has become dangerous to human life or disabled or diseased beyond recovery — permit hunting or killing of such animal.
- As per section 62 of the Wildlife Protection Act, the Union Government can notify any wild animal in Schedule II of the Act (which protects it from hunting), as vermin for a period of time in an area/state.
- An animal is declared vermin when it poses a threat to life and crops. Once declared as vermin, wild boar would lose its protection from hunting, thus enabling the state and citizens to cull the wild boar population to protect against the menace the species poses to life and livelihood.



## ENVIRONMENTAL TOXICOLOGY

- According to the study commissioned by the Brihanmumbai Municipal Corporation (BMC), shows that the level of toxicology indicators at the Deonar landfill is up to four times the permissible limits prescribed by the Central Pollution Control Board (CPCB).
- The Deonar dumping ground at Mankhurd-Shivaji Nagar in Mumbai's eastern suburbs is the oldest waste dump in the country. It has been operational since 1927, a time when this area had very little human habitation.
- The study analysed the levels of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and Total Dissolved Solids (TDS) — all crucial indicators of environmental toxicology.
- BOD indicates the amount of dissolved oxygen required by microorganisms to break down organic matter present in a water sample; COD refers to the amount of oxygen required to chemically oxidise organic matter; TDS refers to the total concentration of all dissolved substances, including inorganic salts, minerals, and organic matter.

## PASSAGE EXERCISE

- The Indian Navy's stealth frigate INS Tabar, a submarine, and P-8I maritime patrol aircraft participated in a passage exercise (PASSEX) with the United Kingdom's Carrier Strike Group in the North Arabian Sea on June 9 and 10.
- The joint exercise demonstrates the deepening cooperation between the Indian Navy and the Royal Navy, showcasing a shared commitment to maritime security and robust bilateral ties.

## NOMADIC ELEPHANT

- The 17th edition of India-Mongolia Joint Military Exercise NOMADIC ELEPHANT is being conducted in Ulaanbaatar, Mongolia, from 31st May to 13th June 2025.
- It is an annual event conducted alternately in India and Mongolia. The 2024 edition was conducted at Umroi, Meghalaya.

## METROPOLE HOTEL COMPLEX

- Last week, the Ministry of Home Affairs temporarily allotted Nainital's Metropole Hotel Complex — classified as enemy property — to the state government for use as a parking facility.
- The hotel was built in 1880 and owned by the Raja of Mahmudabad. This is where Mohammad Ali Jinnah and his wife Rattanbai honeymooned in 1918.
- The design of its roof came to be known as Nainital-pattern-roofing, which the British then used in many buildings across India.
- After Mohammad Amir Ahmed Khan, the Raja of Mahmudabad, moved to Pakistan post Partition, his considerable properties in north India, including the 11-acre Nainital hotel, were declared enemy property.



— Pandit Rahul Sanskritayan, who was an exceptional scholar with proficiency in almost 11 languages, stayed there and wrote his famous work, Kumaun.

### Enemy Property

Enemy property are the assets (movable and immovable) that were left behind in India by individuals who migrated to countries designated as “enemy nations” during times of conflict.

Under the Enemy Property Act of 1968, properties designated as enemy properties remain permanently vested with the Custodian of Enemy Property, meaning they cannot be inherited or transferred.

### ON BOARD SHUBHANSHU SHUKLA’S MISSION: STUDY TO ENABLE DIABETES PATIENTS TRAVEL TO SPACE

AMONG the studies and experiments that will keep India’s Shubhanshu Shukla and other astronauts on Axiom-4 mission busy during their two-week stay in space expected to launch June 10, is one aimed at enabling diabetic people to travel into space. As of now, insulin-dependent diabetic patients are not selected to become astronauts. That is because the space environment, particularly micro-gravity conditions, makes it difficult to control and maintain blood sugar levels. But scientists around the world have been working for the last several years to make this possible. A diabetes-related research project on Axiom-4 mission marks an important step in that effort.

### URBAN HOUSEHOLDS PESSIMISTIC ABOUT PRESENT, OPTIMISM ABOUT FUTURE RISES

Urban Indian households remained pessimistic about their economic situation at present in May 2025, with the Reserve Bank of India’s (RBI) Urban Consumer Confidence Survey, released Friday, showing that Current Situation Index (CSI) for these households inched down to 95.4 from 95.5 in March 2025. Rural households reported a similar decline, with their CSI edging down to 100.0 from 100.1. An index number of less than 100 is indicative of pessimism, while a 100-plus figure suggests optimism. While rural households’ assessment of their current situation has been steadily improving since falling to 96.1 in July 2024, the CSI for urban households has been under 100 for more than six years. The findings of the two surveys are broadly in line with expectations, with a good monsoon and falling food inflation seen driving rural demand and consumption.

### KHEER BHAWANI FESTIVAL

— Several devotees offer prayers during the annual mela at the Mata Kheer Bhawani temple in Tullamulla in Ganderbal district on 3rd June.

— Kheer Bhawani temple is dedicated to the goddess Ragnya Devi. It is situated 30 km from Srinagar city, and is one of the most sacred pilgrimage sites for Kashmiri Hindus.

— The temple gets its name from kheer, or milk and rice pudding, that pilgrims pour into the spring inside the temple complex as an offering to the goddess.

— Every year, a mela or festival is held at the temple. The festival, known as Mela Kheerbhawani, is the largest gathering of Hindus in Kashmir after the annual Amarnath Yatra.



#### INTERNATIONAL INSTITUTE OF ADMINISTRATIVE SCIENCES

- India won the Presidency of the International Institute of Administrative Sciences (IIAS) for the 2025–2028 term.
- IIAS is a Federation of 31 Member Countries, 20 National Sections and 15 Academic Research Centres jointly collaborating for scientific research on public administration. It is not a formally affiliated body of the United Nations.
- India has been represented by the Department of Administrative Reforms and Public Grievances since 1998.

#### NEW RAMSAR SITES

- On the eve of World Environment Day, Khichan in Phalodi and Menar in Udaipur have been designated as Ramsar sites, taking the total tally to 91. Both are located in Rajasthan.
- The Menar Wetland Complex is a freshwater monsoon wetland complex formed by three ponds, Braham talab, Dhand talab, and Kheroda talab, and agricultural land that connects the latter two.
- Khichan Wetland, located in the northern Thar Desert, comprises two water bodies, Ratri nadi (river) and Vijaysagar talab (pond), riparian habitat, and scrub land. This desert ecosystem supports drought-resistant plant species that provide habitat for over 150 species of birds.
- The Ramsar Convention is an intergovernmental treaty signed in 1971 in Ramsar, Iran. It encourages the protection and conservation of wetlands worldwide by designating them as such. Ramsar sites are also known as wetlands of international importance.

#### SINDOOR PLANT

- On the occasion of World Environment Day (June 5), Prime Minister Narendra Modi planted a sapling of the sindoor plant at his residence in New Delhi. The Gujarat government has also decided to come up with a memorial, which will be called 'Sindoor Van' (forest), dedicated to Operation Sindoor.
- The sindoor plant is commonly known as *Bixa orellana*. It is also called 'Annatto' in English. It is a small tree or shrub with bright green leaves and pink flowers. The seeds of this plant are covered with a red-orange coating.

#### FUSARIUM GRAMINEARUM

- The United States (US) has charged two Chinese nationals with smuggling a toxic fungus into the country, called *Fusarium graminearum*.
- The fungus is known to cause head blight in crops such as wheat, barley and oats — a disease that significantly affects the yield of the crops.



— It affects the kernel development of various grains, thereby reducing the yield. It can also cause ear rot or stalk rot in maize crops. Once infected, the fungus continues to spread as the crop matures. It is known to survive in plant tissue residues like small grain stems and roots and infect new plants.

— The fungus is also known to produce mycotoxins — secondary metabolites (end products of biochemical processes) that are of significance to the fungal growth but may be harmful to humans. One of the mycotoxins called deoxynivalenol or DON can lead to vomiting in humans and animals.

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#### ASKAP J1832-0911

— Scientists have discovered a mysterious object ASKAP J1832-0911 in the Milky Way, around 15,000 light years away from Earth.

— First discovered by NASA's Chandra X-ray Observatory, ASKAP J1832-0911 belongs to a class of objects called "long period radio transients" (also known as LPT), which emit intense radio waves over tens of minutes.

— Discovered in 2022, LPTs are cosmic bodies that emit radio pulses every few minutes or hours. In the last few years, astronomers have come across 10 LPTs, but say that ASKAP J1832-0911 is unlike any other.

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#### AHILYA BAI HOLKAR

— Ahilya Bai Holkar was born on May 31, 1725, in Chondi village of Maharashtra. She ruled Malwa territory (a major part of which is now in Madhya Pradesh) from 1767 to 1795. The Holkar dynasty under the Maratha Empire achieved its peak during her tenure.

— Rooted in the civilisational ethos of samajik samrasta — a philosophical vision that aims to foster an equitable and dignified society — her policies addressed disadvantaged groups, specifically the Bhils, Gonds, and Dalits.

— She nominated Tukoji Holkar, a trustworthy soldier who had previously served under her father-in-law Malhar Rao Holkar, as head of her army.

— During her reign, numerous religious places were renovated, including Somnath, Varanasi, Trambak, Gaya, Pushkar, Vrindavan, Nathdwara, Haridwar, Badrinath, and Kedarnath.

— The Madhya Pradesh government led a nine-month-long celebration from September 2024 to May 31, 2025, leading to the 300th birth anniversary.

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#### S MAHENDRA DEV

— Economist S Mahendra Dev has been appointed as the Chairman of the Economic Advisory Council to the Prime Minister (EAC-PM).



— Dev is an expert in the fields of agriculture and rural economy, and also serves as the editor of the Economic and Political Weekly.

— Economic Advisory Council to the Prime Minister (EAC-PM) is an independent body constituted to give advice on economic and related issues to the Government of India, specifically to the Prime Minister.

#### UEFA CHAMPIONS LEAGUE

— Paris Saint-Germain (PSG) won the Champions League for the first time after defeating Inter Milan in the finals by 5-0.

— Luis Enrique, who won the 2015 Champions League with Barcelona, became the seventh coach to win the trophy with two different teams, in the footsteps of greats Carlo Ancelotti, Pep Guardiola and Jose Mourinho.

#### IPL 2025

— Royal Challengers Bengaluru beat Punjab Kings by 6 runs to win their first IPL trophy in the 18th season.

— Mumbai Indians batter and India T20I captain **Suryakumar Yadav** was named the 'Most Valuable Player' (Player of the tournament) of the Indian Premier League 2025 season.

— Both Mumbai Indians and Chennai Super Kings are two of the most successful sides in the history of IPL, having won five titles each.

#### WORLD TEST CHAMPIONSHIP

— South Africa claimed its first International Cricket Council (ICC) trophy in 27 years after beating Australia by five wickets in the World Test Championship (WTC) final at Lord's.

— The World Test Championship points table is independent of the ICC Test rankings.

— Point system: Each series has 120 points. Accordingly, in a two-match series, 60 points is awarded for a win, 30 points for a tie, and 20 points for a draw. No point is awarded for a defeat.

→ In a three-match series, 40 points are awarded for a win, 20 points for a tie, and 13 points for a draw.

→ In a four-match series, 30 points are awarded for a win, 15 points for a tie, and 10 points for a draw.

→ In a five-match series, 24 points are awarded for a win, 12 points for a tie, and 8 points for a draw.



## BUSINESS AND ECONOMY

### WORLD BANK REPORT UNDERLINES CONTINUED UNCERTAINTY BUT INDIA'S PERFORMANCE HOLDS HOPES OF TRADE DEALS

The 2020s have already seen major shocks to the global economy such as the Covid pandemic and the Russia-Ukraine conflict. There is now another shock to contend with. According to the World Bank, “increased trade barriers and heightened policy uncertainty” are causing “a notable deterioration of the outlook”. In its latest Global Economic Prospects report, the Bank has revised downwards its forecast for global growth this year to 2.3 per cent, down 40 basis points from its January estimate. To put this growth estimate in perspective, excluding periods of global recession, this is the “weakest performance in 17 years”. In April, the International Monetary Fund (IMF) also estimated global growth to slow to 2.8 per cent in 2025. In its report, the World Bank has also projected global growth to average just about 2.5 per cent between 2020 and 2027 — this is the “slowest pace of any decade since the 1960s”. This is a remarkable deceleration.

The report's stark warning that “many of the forces behind the great economic miracle of the last 50 years... have swung into reverse” is worrying, particularly for developing economies. This group of countries has already seen a steady slowing in economic momentum — growth has come down sharply from averaging 5.9 per cent in the 2000s to 3.7 per cent in the 2020s, as per the report. It should perhaps not come as a surprise that this is in line with the slowdown in global trade. And the “upheaval”, which has caused the drastic scaling down of global growth and trade expectations this year, continues. After another round of talks in London, the US and China are now said to have agreed to a “framework”. Deals with most countries remain a work in progress. India is “hopeful” that an agreement with the US will be reached before the 90-day pause on the Liberation Day tariffs ends in the second week of July. Amid this uncertainty, the Bank now expects global trade volume to grow at just 1.8 per cent in 2025, a steep scaling down of 1.3 percentage points from its January projections.

The World Bank report projects India to grow at 6.3 per cent in 2025-26, with both investments and exports expected to remain subdued. This forecast is in line with that of the IMF, which had in April pegged the country to grow at 6.2 per cent in its World Economic Outlook. These assessments are only marginally lower than the RBI's most recent projection of 6.5 per cent. Expectations of a sharp uptick in the near term appear muted — the World Bank has pegged growth to average 6.6 per cent over the following two years.

### TRADE TO TERROR, INDIA AND UK FLAG DEEPER TIES

After meeting visiting UK Foreign Secretary David Lammy Saturday, External Affairs Minister S Jaishankar said that India follows a policy of “zero tolerance against terrorism” and expects its partners to understand that Delhi will never “countenance” the equivalence of perpetrators and victims.

- Prime Minister Narendra Modi, who met Lammy as well, said: “Pleased to meet UK Foreign Secretary Mr David Lammy. Appreciate his substantive contribution to the remarkable progress in our Comprehensive Strategic Partnership, further strengthened by the recently concluded FTA. Value UK's support for India's fight against cross-border terrorism.”



- This is the first visit by a Foreign Minister from a P-5 country to India after the India-Pakistan hostilities last month. Lammy had visited Islamabad on May 16, when he had welcomed the ceasefire between India and Pakistan.
- Jaishankar said that recent conclusion of the India-UK FTA and the Double Contribution Convention is “truly a milestone” which will not only propel two-way trade and investment but will have also have a “positive effect on other strategic aspects of our bilateral ties, it would also contribute to the strengthening of supply and value chains”.
- He said that the Technology Security Initiative (TSI) will enable deeper collaboration in strategic technology sectors of AI, Semiconductors, Telecom, Quantum, HealthTech/ Bio-Tech, Critical Minerals and Advanced Materials.
- The two sides have also launched the Strategic Exports and Technology Cooperation Dialogue which will increase TSI’s effectiveness in promoting trade in critical and emerging technologies, including the resolution of relevant licensing or regulatory issues.
- According to the British High Commission, bolstering economic and migration ties and delivering further growth opportunities for British businesses are top on Lammy’s agenda.
- “The visit follows the historic Free Trade Agreement agreed between the two countries and will deliver on this government’s commitment to boost jobs and prosperity. The new deal with India is expected to increase bilateral trade by over £25 billion every year, UK GDP by £4.8 billion, and wages by £2.2 billion each year in the long run, putting money back in the pockets of working people,” it said.
- On May 2, the UK and India signed a new UK-India Programme of Cultural Cooperation to boost collaboration across the arts and culture, creative industries, tourism and sport sectors. The agreement will open the door for increased UK creative exports to India and enable more partnerships between UK and Indian museums and cultural institutions, helping to grow UK soft power.
- On May 6, India and the UK concluded a landmark Free Trade Agreement (FTA). The deal grants India zero-duty access to all industrial goods and eliminates import tariffs on over 99.3 per cent of animal products, 99.8 per cent of vegetable/oil products, and 99.7 per cent processed foods.
- India is the 12th largest trading partner of the UK, but with a meagre 1.8 per cent (\$15.3 billion) share in goods imported to the country. The UK exports goods worth \$512.9 billion, mainly to the US (\$71.3 billion), China (\$46.4 billion) and Germany (\$38.8 billion).
- India remains the UK’s second-largest source of Foreign Direct Investment (FDI), after only the United States. The United Kingdom is the sixth largest investor in India.

#### EYE ON STRONG EXPORT ADVANTAGE, INDIA NOT KEEN TO DENT TURKEY TRADE TIES WITH CURBS

Amid moves to curb the role of Turkish companies in critical infrastructure, citing national security grounds, there is palpably less appetite within the Government to extend this approach to the bilateral trade basket despite calls from industry groups to ban the import of items such as apples and marbles.



- “We have received a number of representations to ban imports from Turkey. Apple-growers from Himachal Pradesh have sought a ban on apple imports from Turkey. But India runs a trade surplus with Turkey and we have to keep in mind our exporters’ interests too. It (a trade ban) could be a strong geopolitical message, but it’s about how far you want to take it,” a Government official told The Indian Express.
- The trade surplus assumes significance as India’s outbound shipments to Turkey largely consist of industrial exports, such as engineering goods, electronics, and organic and inorganic chemicals, which have increased over the past five years.
- In contrast, Turkey’s exports to India are largely limited to fruits, nuts, gold and marble. Turkey had also stepped up petroleum product imports from India following the Ukraine war but this category has seen a significant decline in FY25.
- Last month, apple-growers from Himachal met Union Commerce Ministry officials to seek a ban on apple imports, stating that subsidised apples from Turkey are crippling the domestic horticulture economy and pushing orchardists in the state into financial distress.
- According to them, apples are not just a commercial crop but the economic backbone of hill states.
- Marble processors from Udaipur also wrote to the Prime Minister’s Office (PMO) last month seeking import curbs on marble from Turkey, citing its support to Pakistan during Operation Sindoor — India imports the majority of its marble from Turkey.

**Do You Know:**

- Official trade data showed that exports to Turkey in FY25 totalled \$5.72 billion, largely driven by engineering exports, which comprise over 50 per cent at \$3 billion. Notably, the Micro, Small and Medium Enterprises (MSME) sector dominated the segment, contributing nearly 35-40 per cent.
- Turkey’s support for Pakistan, including supplies of drones, during Op Sindoor had led to India cancelling the security clearance for Turkish aviation firm Celebi — and tourism numbers to Turkey showing a sharp dip. But India holds the edge in bilateral trade: exports in FY25 totalled \$5.72 bn, driven by engineering exports, while imports stood at \$2.99 bn, mainly of fruits and nuts.
- Imports from Turkey during the last financial year stood at \$2.99 billion — imports in the fruits and nuts category were \$107.12 million, up nearly 10 per cent from \$96.82 million the previous financial year. India also imported gold worth \$270.83 million from Turkey in FY25 — 159.02 per cent higher than the \$104.56 million worth of gold imports in FY24.
- Last month, the Bureau of Civil Aviation Security (BCAS) had revoked the security clearance of the Indian arm of Turkey-headquartered airport ground-handling major Celebi Aviation Holding on grounds related to “national security”.
- The Indian Express reported last month that Indian tourists are increasingly cancelling holidays to Turkey and Azerbaijan, which had also supported Pakistan, as reflected in visa applications. While Turkey registered 3 lakh Indian tourists in 2024, Azerbaijan saw 2.44 lakh.
- Industry representatives expect that a chunk of these numbers will now be diverted to Central Asian countries such as Kazakhstan and Uzbekistan.



## AFTER EASING OF FOOD INFLATION, THE COOLING EFFECT

Retail inflation, as measured by the consumer price index, plunged to a multi-year low of 2.82 per cent in May 2025, according to the latest data from the National Statistics Office. This is, in fact, the lowest recorded inflation after February 2019. With this latest print, retail inflation has averaged just under 3 per cent in the quarter so far (April-May). This is in line with the RBI's expectations. In the Monetary Policy Committee's June meeting, the central bank had pegged inflation at 2.9 per cent in the first quarter.

The decline was, in part, due to softening food inflation. The moderation in the food price index was led by vegetables (-13.7 per cent) and pulses (-8.22 per cent), even as oils, fats and fruits have registered double-digit inflation. The agricultural sector had fared well last year — it had grown by a robust 4.6 per cent — with the benefits showing in the rabi crop. Much will now depend on how the southwest monsoon unfolds. As on June 12, rainfall during the season has been 33 per cent below its long-term average. This will decide the fate of the kharif crop, the sowing for which has commenced. On the other hand, core inflation, which excludes the volatile food and fuel components, remained stable at around 4.3 per cent. Inflation, though, remains high in the personal care and effects category. In an earlier report, analysts at Nomura had noted that “muted core inflationary pressures likely reflect lower global commodity prices, India's increased reliance on Chinese imports, weak domestic growth, and muted second-round effects through lower household inflation expectations and wage growth”. With this latest print, inflation has stayed below the RBI's target of 4 per cent for four consecutive months.

In its last meeting, the RBI's Monetary Policy Committee had lowered the benchmark repo rate by 50 basis points. Since February, the MPC has cumulatively cut rates by 100 basis points, bringing down the repo rate to 5.5 per cent. Alongside, the central bank had also lowered the cash reserve ratio by 100 basis points, a move designed to aid policy transmission. At the same meeting, however, RBI Governor Sanjay Malhotra also noted that “monetary policy is left with very limited space to support growth”. As per the central bank's projections, inflation is likely to slowly edge upwards this year, averaging just about 3.7 per cent, even as some analysts expect it to be lower. The MPC is thus likely to adopt a wait-and-watch approach. Greater clarity will emerge on the monsoon over the coming weeks and months. This will have implications for food output and prices. How the trajectories of prices and growth evolve will determine further policy action.

## 'NEW BASE YEAR FOR GDP, CPI, IIP FROM EARLY 2026; SERVICES SURVEY FROM JAN'

With the Ministry of Statistics and Programme Implementation (MoSPI) undertaking a base revision exercise and expansion of its data indicators, the key economic datasets — GDP, IIP and CPI — will see a new base from next year onwards, MoSPI Secretary Saurabh Garg said.

- The base year revision exercise of Gross Domestic Product (GDP), Index of Industrial Production (IIP) and Consumer Price Index (CPI) is currently underway. For GDP, the new series is scheduled to be released on February 27, 2026 with financial year 2022-23 as base year. For IIP, 2022 -23 has been tentatively identified as the revised base. IIP on revised base would be released from 2026-27. For CPI, 2024 has been identified as the revised base year as the item basket and the weightage of the items would be decided based on the NSO's Household Consumer Expenditure Survey (HCES) conducted in 2023-24. The new CPI series is expected to be published from the first quarter of 2026.



- Initially, the Ministry decided to use 2022-23 HCES data for deriving weights and item basket for CPI base updation. Now since data for HCES 2023-24 is released and available for use, the Ministry has decided to use the latest data that is HCES 2023-24 data for deriving weights and item basket for the new series.

- In GDP calculation, in addition to the use of data from Controller General of Accounts, MCA-21, the Reserve Bank of India (RBI), etc. as was done in the previous base revision exercise, use of GST data, E-Vahan portal, UPI transaction data from NPCI, etc. (will be done) by NSO. MoSPI has tapped the GSTN database for conducting Annual Survey of Service Sector Enterprises (ASSSE), which is new in the NSS ecosystem.

**Do You Know:**

- A base year is the first of a series of years in an economic or financial index. In this context, it is typically set to an arbitrary level of 100. New, up-to-date base years are periodically introduced to keep data current in a particular index. Base years are also used to measure the growth of a company. Any year can serve as a base year, but analysts typically choose recent years.

- A base year is used for comparison in the measure of business activity or economic or financial index. For example, to find the rate of inflation between 2016 and 2024, 2016 is the base year or the first year in the time set. The base year can also describe the starting point from a point of growth or a baseline for calculating same-store sales.

**WEALTH OF OPTIONS PROPEL QUEST FOR NEWER INVESTMENT CHOICES**

India's wealth management landscape is being reshaped by a confluence of factors, including evolving demographics and rising incomes.

With net worth exceeding ₹5 crore, nearly 1% Indians now qualify as high net-worth individuals (HNI); meanwhile, the number of ultra-wealthy individuals (with ₹1,000-plus crore assets) grew to 1,539 — representing a 46% rise in wealth from last year, as per Hurun India.

The affluent base is rising not just in numbers but also in financial sophistication, paving the way for innovative investment platforms like alternative investment funds (AIFs).

A new wave of demand is emerging from the smaller cities — driving the need for financial strategies that go beyond the urban strongholds. There is also a shift from physical assets such as property and gold to financial assets, especially equity and other higher-yield products.

Tailored investments for specific risk-return goals are increasingly in demand. Technology has emerged as a key enabler, transforming how investors access, evaluate, and engage with sophisticated wealth solutions.

The growing popularity of alternative investments stems from progressive regulatory developments and continuous technological advancements.

Over the past six years, commitments in the Indian AIF industry has soared by over 378% — from ₹2.82 lakh crore in FY19 to ₹13.49 lakh crore in Q4FY25. This near five-fold expansion highlights the significant market potential. AIF's expanding reach beyond ultra-HNIs to a broader spectrum of investors owes to several factors.



Firstly, enhanced transparency and regulatory support from SEBI through steps such as mandatory dematerialisation of AIF holdings and aligning risk-return profiles with financial commitments have strengthened governance and boosted investor confidence.

Secondly, the diversified investment choices under the three distinct categories of AIFs provide fund managers the flexibility to invest across a wide spectrum of asset classes. This includes debt instruments (such as venture debt and structured debt), listed and unlisted equity (including private equity funds), real estate, infrastructure assets (including REITs and InvITs), and even derivatives for enhanced returns.

#### **Operational flexibility**

Thirdly, AIFs have greater operational flexibility, compared with mutual funds. Given AIFs, with a minimum investment threshold of ₹1 crore, are primarily targeted at HNI investors, the regulatory environment is less restrictive, giving fund managers more flexibility in constructing and managing portfolios, potentially leading to more competitive risk-adjusted returns.

Lastly, alternatives offer two compelling advantages: diversification and outperformance potential. With traditional equity returns stabilising, investors are pivoting to sophisticated strategies that promise higher yields and insulation from market swings.

AIFs have consistently outperformed mutual funds and gold over the long term. As of September 2024, Long-Only Cat III AIFs delivered 23.52% annual returns over five years, compared to 18.98% for Nifty 50 TRI mutual funds and 14.88% for gold.

The AIF industry in India shows strong growth potential, with a forecasted compound annual growth rate of 26%, to reach ₹43.64 lakh crore by 2028. Together the portfolio management services (PMS) and AIF industries are projected to cross ₹100 lakh crore by 2030.

The growth of AIFs in GIFT City is set for the next phase of significant expansion. With over 200 funds registered in this deemed offshore location and a strong pipeline, GIFT City offers non-resident Indians a streamlined, tax-efficient route to invest in India. It also provides resident Indians a regulated avenue to explore offshore opportunities under the Liberalised Remittance Scheme.

The real disruption? When India's street-smart investing psyche — honed on real estate and generational savings — collides with the algorithmic precision of global alternatives. The winners won't be those who adapt. They'll be the ones who code the rules mid-game.

## HOW IS INDIA PLANNING TO LOCALISE EV MANUFACTURING?

### **The story so far:**

More than a year since it was announced, the Ministry of Heavy Industries (MHI) notified guidelines of the Scheme to Promote Manufacturing of Electric Passenger Cars in India.

### **What does the policy propose?**

At the centre of the notified policy is the provision to reduce customs duty on the import of ready-to-ship completely assembled electric four-wheelers from the present 70-100% to 15%. This would apply to all vehicles valued at \$35,000 for a period of five years. However, this would be subject to the manufacturer investing a minimum of ₹4,150 crore over the next three years. They



would also be expected to build infrastructure and facilities as to enable 25% of the overall manufacturing activity to be undertaken domestically within three years, and 50% within five years. The MHI specifies that a maximum of 8,000 vehicles can be imported at the reduced duty rate in a year. The maximum duty permitted to be foregone under the scheme has been capped at ₹6,484 crore.

#### **Does this help our overall ecosystem?**

Shouvik Chakraborty, Assistant Research Professor at the Political Economy Research Institute at the University of Massachusetts Amherst, argues that a domestic industrial policy aligned with a vision for the future could be a step in the right direction. However, he holds that the current policy would bode well for India only if there is a sharing of technology with domestic auto-makers. Further, he observes, “Countries these days are extremely cautious about transferring technology outside. In that light, India must not become a domestic hub for producing components of a vehicle.” Dinesh Abrol, adjunct faculty at the Transdisciplinary Research Cluster on Sustainable Studies at JNU in Delhi, observes that no foreign firm has ever helped build some other country’s ecosystem. He attributed China and South Korea’s ability to build manufacturing setups to their focus on skilling, research and development alongside undertaking innovation projects. “This enabled conditions for a technology transfer and prompting companies to come and invest into the ecosystem,” he states. China as the leading manufacturer of EVs accounted for 70% of the global manufacturing in 2024. The other set of concerns relate to the potentially increased focus on four-wheeler EVs. According to data compiled by FADA, EVs accounted for 7.8% of all vehicles sold in FY 2025. This was predominantly led by electric three-wheelers (at 57% in its category), followed by two-wheelers (6.1%), passenger vehicles (2.6%) and commercial vehicles (0.9%). Also imperative to note that the International Energy Association (IEA) attributed India as the world’s largest market for electric three-wheelers in 2024. Mr. Chakraborty further emphasises that majority of India is travelling by public transport, and policies must also endow their focus towards building the same.

#### **What about our industrial ambitions?**

Reuters had reported in December 2023 that Tata Motors opposed Tesla’s proposal to lower import duties. It had argued that lowering duties would “vitalize” the investment climate which was premised around expectations of the tax regime favouring locals. The auto-maker further held that India’s EV players required more government support in the early growth stages of the industry. According to IEA’s EV Outlook, domestic Original Equipment Manufacturers (Tata and Mahindra) accounted for more than 80% of the electric cars produced domestically in 2024. Additionally, it attributed a less than 15% share of Chinese imports in the country’s EV sales in 2024 to high import duties on EVs and the availability of locally made, affordable electric models. Thus, the lowering of duties prompt concerns about the impact on domestic industries. According to Mr. Abrol, the policy is premised around foreign-capital. He suggested the policy should instead be oriented towards local ecosystems.

### **COPPER WIRE, TUBE IMPORTS HIT MULTI-YEAR HIGHS IN FY25; CATHODE SHIPMENTS DROP**

India’s copper cathode imports declined 34 per cent year-on-year in 2024-25 (FY25), largely due to a three-month supply disruption triggered by a quality control order (QCO), even as imports of downstream products such as wire, tubes, and sheets surged to multi-year highs.



- While copper cathode imports dropped sharply, imports of key downstream copper products climbed in FY25 — wire rose 17 per cent y-o-y, tubes and pipes 30 per cent, and plates, sheets, and strips 49 per cent.
- In India, copper is classified as a critical mineral given limited domestic production and high demand in conventional and emerging technologies—from air conditioners and transformers to electric vehicle (EV) batteries and wind turbines. It is also seen as a bellwether of economic activity owing to its extensive application across sectors.
- From an average of 27,000 tonnes each month between April and November 2024, copper cathode imports fell to around 2,000 tonnes per month between December and February, after the QCO went into effect from December 1. Then, in March 2025, imports recovered slightly to 16,000 tonnes, official trade data showed.
- India relies on imports for about 30 per cent of its copper cathode demand, a key raw material for wire, tubes, and sheets. The Adani Group’s new Gujarat smelter, scheduled to reach peak capacity this financial year, is expected to make the country self-sufficient for the near-term.
- In FY25, India imported 2.39 lakh tonnes (Rs 19,134 crore) of copper cathode, 34 per cent less than 3.63 lakh tonnes (Rs 24,552 crore) in the previous financial year. Amid sharp drop in imports between December to February, two metals trade associations filed a petition against the Union Mines Ministry, which issued the QCO, alleging that the quality norms have caused “acute shortages” in supply.
- The steep drop in imports stemmed from compliance issues among exporters, especially Japanese suppliers who dominate India’s copper cathode imports. The QCO mandates that both domestic producers and foreign suppliers obtain the Bureau of Indian Standards (BIS) certification to sell copper cathode in India. Most Japanese producers received certification only after the QCO took effect, and some continued to face minor challenges in ensuring compliance post-certification.

**Do You Know:**

- Downstream copper imports climbed to multi-year highs in FY25, defying the slump in cathode shipments. Copper wire imports—primarily from the UAE—rose 17 per cent from 1.31 lakh tonnes in FY24 to 1.54 lakh tonnes in FY25, with their value jumping 29 per cent to Rs 12,653 crore.
- Imports of copper products rose despite the Department for Promotion of Industry and Internal Trade (DPIIT) enforcing a QCO on these items from October 19, 2024, initially for large and medium enterprises. Growth persisted due to potential stocking-up before enforcement, longer timelines for small (January 2025) and micro (April 2025) units, exemptions for certain tubes and export-use products, and timely grant of BIS certification to some foreign manufacturers.
- Domestic copper cathode production rose 12.6 per cent to 5.73 lakh tonnes in FY25, driven primarily by Hindalco Industries Ltd, which holds a 70 per cent market share and has a capacity of 5 lakh tonnes. Production last year surpassed the previous peak of 5.55 lakh tonnes recorded in FY23.
- Vedanta’s Sterlite Copper, with a smaller capacity of 2.16 lakh tonnes, contributed 26 per cent of cathode in FY25. Notably, India remained self-sufficient in copper cathode until 2018, when Vedanta’s Tuticorin plant was shut down over environmental violations.

4<sup>TH</sup> FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



## INDIA TO ADD 75 GW RENEWABLES IN FY26 AND FY27, INVESTMENTS WORTH RS 3.8 LAKH CRORE EXPECTED: CRISIL RATINGS

India is set to add 75 gigawatt (GW) of renewable energy in 2025-26 (FY26) and FY27, up 53 per cent from 49 GW added in FY24 and FY25, Crisil Ratings said.

- Investments in renewables are also expected to surge by 52 per cent from Rs 2.5 lakh crore to Rs 3.8 lakh crore in FY26 and FY27, largely on account of increasing share of hybrid projects that are more capital intensive, the ratings agency said.
- Of the total 75 GW renewable capacity to be added over the next two financial years, around 37 per cent will come from hybrid and storage-linked projects, significantly larger than the 17 per cent share in FY24 and FY25.
- Hybrid projects mix solar and wind capacities to support more consistent generation, while storage-linked projects use batteries and pumped hydro to save excess power generation for later use.
- Crisil Ratings said investments in renewables were recorded at Rs 1.8 lakh crore in FY22 and FY23, which increased to Rs 2.5 lakh crore in the following two fiscals, and is expected to grow by half to Rs 3.8 lakh crore in FY26 and FY27. The surge in investments will partly be on account of rising share of hybrid and storage projects, which are more capital intensive.
- A key challenge facing the sector is the inability of transmission infrastructure to keep pace with capacity addition.
- Renewable projects are also facing difficulties in securing buyers through renewable energy implementing agencies (REIAs), with not enough states signing power purchase agreements (PPAs).

### Do You Know:

- Renewable energy sources such as solar power, hydroelectric power, and wind power can be harnessed repeatedly without depleting natural resources, making them essential to a sustainable future. Therefore, expanding the scope and uses of renewable energy sources is critical to reducing the dependence on fossil fuels and combating climate change.

### Types of Renewable Energy

1. **Solar Energy:** Solar energy is harnessed from the sun's radiation. It can be transformed into electricity using solar panels (photovoltaic cells) or alternatively can be utilised to produce heat through solar thermal systems.
2. **Wind Energy:** It is generated by converting the kinetic energy of wind into electricity using wind turbines.
3. **Hydropower:** It is created by harnessing the kinetic energy of flowing water in rivers, dams, waterfalls, etc. It is one of the oldest and most widely used forms of renewable energy.



4. **Biomass Energy:** Biomass is produced from organic materials such as plant residues, animal waste, and wood. It can be heated or converted to liquid or gaseous fuels for consumption.
5. **Geothermal Energy:** This form of energy is derived from the Earth's internal heat. These can be naturally occurring hot water reservoirs or can be man-made. Occurring at various depths and varying temperatures below the earth's surface, these geothermal resources can be used for electricity generation and direct heating applications.
6. **Tidal and Wave Energy:** It harnesses the movement of ocean water to generate electricity. Tidal energy relies on the gravitational pull of the moon and the sun, whereas wave energy captures the energy of surface waves.

## DECLINING POVERTY, AND THE DATA THAT SHOWS IT

Poverty and inequality estimation in India have been subjects of considerable debate, especially in recent years with the economy experiencing several shocks. The great India poverty debate has, in fact, been marked by significant differences of opinion on the household survey data which forms the basis of estimation, the construction of the poverty lines, and on the trends over the decades. The debate has been particularly heated in the absence of data — the government did not release the consumption expenditure survey data for 2017-18 due to “data quality issues”. This led to several studies trying to estimate poverty levels in India by drawing on alternate data sources such as the Periodic Labour Force Surveys and the CMIE data. Recently, the government has attempted to fill the data gap by conducting two rounds of household consumption expenditure surveys for 2022-23 and 2023-24. These surveys now allow for an examination of the trends in poverty over the past decade or so. The decline has been significant.

Extreme poverty in India is estimated to have declined from 27.1 per cent in 2011-12 to 5.3 per cent in 2022-23 as per the latest World Bank data reported in this paper. This steep decline has occurred even as the Bank has raised the threshold for measuring extreme poverty to \$3 a day from \$2.15 earlier. To put these figures in perspective — the number of people living in extreme poverty in India fell from 344.47 million to 75.24 million over this period. While there has been some concern over the comparability of the consumption expenditure surveys carried out in 2011-12 and 2022-23 due to changes in the manner in which the recent survey was carried out and its sampling design, this is a steep decline. Moreover, even considering the poverty line for lower-middle income countries of \$4.2 per day (revised upwards from \$3.65), the poverty ratio in India fell from 57.7 per cent in 2011-12 to 23.9 per cent in 2022-23. The decline appears to have continued in the year thereafter. Earlier, Niti Aayog had estimated that multidimensional poverty in India had also registered a steep decline — falling from 55.34 per cent in 2005-06 to 24.85 per cent in 2015-16 to 14.96 per cent in 2019-21. This estimate of poverty was based on 12 indicators and drew on data from the National Family Health Surveys.

Alongside these poverty estimates, the World Bank has also estimated that inequality in India, based on measures such as the Gini and Theil indices, did fall between 2011 and 2022. However, these estimates of inequality are based on the household consumption expenditure data, which typically tends to be lower than estimates based on household income. This is not just an academic exercise. The data from the latest rounds of the consumption expenditure surveys as well as the labour force surveys must serve as a valuable input for policy, informing the choices of policymakers.



## IN A FIRST, NREGS SPEND CAPPED AT 60% FOR FIRST HALF OF FY26

For the first time, the government has capped spending under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) at 60 per cent of its annual allocation for the first half of the financial year 2025–26.

- Until now, the rural jobs guarantee scheme has operated as a demand-driven programme with no such spending limit.
- It is learnt that the Ministry of Finance has informed the Ministry of Rural Development that it will now be brought under the Monthly/Quarterly Expenditure Plan (MEP/QEP), a spending control mechanism from which it had been exempt so far.
- The Finance Ministry introduced the MEP/QEP in 2017 to help ministries manage cash flow and avoid unnecessary borrowing. MGNREGS remained outside its scope until now, with the Rural Development Ministry arguing that the scheme's demand-driven nature made fixed spending caps unworkable. But at the start of the 2025–26 financial year, the Finance Ministry is learnt to have directed the MoRD to include MGNREGS under the MEP/QEP framework as well.
- It is learnt that the Rural Development Ministry (MoRD) had submitted its MEP/QEP for MGNREGS to the Budget Division of the Finance Ministry, proposing a higher spending limit for the first two quarters of 2025–26. However, the Finance Ministry did not agree.
- After multiple rounds of communication between the two ministries, the Finance Ministry informed MoRD on May 29 that it could spend up to 60 per cent of MGNREGS's annual outlay—Rs 86,000 crore—in the first half of the financial year, “considering the urgent need of expenditure to be incurred during [the] first half.” This means that only Rs 51,600 crore will be available for the scheme until the end of September.
- Although a 60 per cent spending cap may not have made a difference in most years—given that first-half spending has typically ranged between 50 and 60 per cent (53.5 per cent in 2024–25, 60.51 per cent in 2023–24, 54.29 per cent in 2022–23, 60.83 per cent in 2021–22, and 53.79 per cent in 2020–21)—officials told The Indian Express that it could impact employment generation under the rural job guarantee scheme this year, due to a significant carryover of pending liabilities worth Rs 21,000 crore from the previous financial year.

### Do You Know:

- For 2025–26, the Rural Development Ministry has approved a labour budget of 198.86 crore person days. Of this, 67.11 per cent—or 133.45 crore person days — are projected to be created in the first half of the financial year. As of June 8, 2025, the Centre has released Rs 24,485 crore, which is 28.47 per cent of MGNREGS's total allocation of Rs 86,000 crore for the year.
- Finance Ministry officials are also learnt to have raised questions about the pending liabilities from the previous year. Citing provisions of the MGNREGA Act, 2005—which mandate that wages must be paid within 15 days—they questioned how dues of over Rs 21,000 crore were still pending for the last fortnight (March 15–31) of the 2024–25 financial year.
- Launched in 200 of the country's most backward rural districts in 2006–07, MGNREGS was expanded to 130 more districts in 2007–08 and rolled out nationwide in 2008–09. The scheme



saw a surge in demand during 2020–21, when a record 7.55 crore rural families accessed work under it amid the Covid-19 outbreak.

- It became a key safety net for migrant workers returning to their villages during the lockdown. Since then, the number of families employed under the scheme has steadily declined—7.25 crore in 2021–22, 6.18 crore in 2022–23, 5.99 crore in 2023–24, and 5.79 crore in 2024–25. These figures do not include beneficiaries from West Bengal, where the scheme has been suspended since March 2022.



# DreamIAS



## LIFE AND SCIENCES

### HOW ASTRONAUTS REACH INTERNATIONAL SPACE STATION

The launch of the Axiom-4 Mission to the International Space Station (ISS), scheduled for Wednesday from the Kennedy Space Centre in Cape Canaveral, Florida, has been postponed due to a technical fault.

- The mission will take a crew of four astronauts — American Peggy Whitson, Indian Shubhanshu Shukla, Polish Slawosz Uznanski-Wisniewski, and Hungarian Tibor Kapu — to the ISS aboard SpaceX's Crew Dragon spacecraft which will be launched by the company's Falcon 9 rocket. Shukla is set to become only the second Indian to venture into space.
- Before launching any mission to space, scientists first have to first select a launch window, that is, a time slot in which the spacecraft must be launched so it can reach its intended destination, be it a space station like the ISS or a celestial body like the Moon or Mars.
- Since everything in space — including the ISS — is in constant motion, it is not viable for a mission to be launched at just any time. Celestial alignment is essential for any mission to be viable. Scientists make complex calculations to ensure that the trajectory of the spacecraft aligns with the trajectory of the intended destination.
- In case of missions to the ISS, spacecraft orbit around Earth multiple times to align with the orbit of the space station. Such a trajectory also makes any mission viable in terms of the fuel needed.
- If a spacecraft were to travel to its destination in a straight trajectory, it would have to continuously accelerate to counteract gravitational forces, which would be inefficient in terms of the fuel needed.
- Spacecraft usually travel in a curved trajectory upon reaching a certain altitude and velocity, which minimises the energy they need to expend to counteract the force of gravity.
- Falcon 9 is a partially reusable rocket designed and manufactured by Elon Musk-owned SpaceX. It is used to transport satellites, cargo and the Dragon spacecraft to low Earth orbit (an altitude of 2,000 km or less) and beyond.
- The rocket has two stages. The first stage or booster stage comprises nine Merlin engines (a family of rocket engines developed by SpaceX), and aluminium-lithium alloy tanks containing liquid oxygen and rocket-grade kerosene propellant. The second stage consists of a single Merlin engine.

#### **Do You Know:**

- When the Dragon capsule gets close enough to the ISS, it establishes communication with the space station and performs its final phase manoeuvre. Then, the spacecraft enters an imaginary 200 metres bubble around the ISS known as the “keep-out sphere”, and aligns with the space station's docking port. At this point, the Dragon capsule initiates its autonomous docking system and slowly moves towards the ISS to finally dock with it. This happens while both are moving at great speeds but are almost at rest relative to each other.



- The spacecraft carries out autonomous docking with the help of GPS sensors, cameras and imaging sensors such as Lidar (laser ranging) on its nosecone. All these sensors feed data back to the flight computer which then uses algorithms that determine — based on this information — how to fire the thrusters to most effectively get to the docking target. If needed, the astronauts on board can also take over manual control of the spacecraft.
- After the docking is done, it takes between one and two hours for the spacecraft to stabilise and carry out safety checks. Subsequently, transfer gates are opened, and astronauts enter the ISS.

#### WHY SCIENTISTS STUDY TARDIGRADES, TINY EIGHT-LEGGED ‘WATER BEARS’, IN SPACE

Among the scientific experiments astronaut Shubhanshu Shukla will undertake during his two week stay at the International Space Station (ISS) is one that will examine the revival, survival, and reproduction of tardigrades in space.

- Tardigrades, also known as “water bears”, are robust aquatic animals that have been around for roughly 600 million years, 400 million years before dinosaurs walked the planet. They have survived all the five major mass extinction events to have taken place thus far, and scientists believe they could be around long after humanity has died out.
- Typically about 0.5 mm long when fully grown, tardigrades have four pairs of legs, with 4-6 claws on each foot. They also have a specialised mouth which helps them suck nutrients from plant cells, algae, and other small invertebrates.
- Tardigrades can be found almost everywhere — from the highest mountains to the deepest oceans. Their most common habitat, however, is the thin film of water found on mosses and lichens, which bestows upon these animals the moniker of “moss piglets”.
- Siddharth Pandey, an affiliate research scientist with US-based Blue Marble Space Institute of Science, told The Indian Express that tardigrades owe their incredible resilience to cryptobiosis, a state in which organisms bring their metabolism to a near-complete standstill in the face of adverse environmental conditions. Tardigrades can reduce their metabolism to less than 0.01% of normal, and drop their water levels by more than 95%, a state called anhydrobiosis.
- Both anhydrobiosis and cryptobiosis result in the emergence of a durable shrunken state, called tun, in which tardigrades are able to withstand extreme conditions.
- Also, these animals produce unique proteins such as cytoplasmic-abundant heat soluble (CAHS) proteins which are key to their resilience.
- Scientists will take tardigrades to the ISS in a state of tun, before reviving them and examining the effects of space radiation and microgravity on their biological processes.
- The primary objective of the experiment is to identify the genes that are responsible for making these animals resilient. In other words, scientists hope to pinpoint the specific molecular machinery that enables tardigrades’ survival and DNA repair in space.
- This will help scientists develop strategies to protect astronauts during long-duration space missions, and preserve biological materials for extended space travel.



**Do You Know:**

- Tardigrades were discovered in 1773 by German zoologist Johann August Ephraim Goeze, they have become a subject of intensive research in the past few decades.
- This is because tardigrades are remarkably resilient creatures, known to survive in the harshest of conditions. Water bears have been known to withstand temperatures as low as minus 272.95 degrees Celsius or as high as 150 degrees Celsius; endure ultraviolet radiation of space and pressures of 40,000 kilopascals (equivalent to what can be experienced at a depth of 4 km under the ocean's surface); and live after being stored in a freezer for 30 years, according to a report by Front Line Genomics.
- Tardigrades have been a part of space missions since 2007, when some 3,000 moss piglets hitched a ride to space aboard the European Space Agency's Foton-M3 mission.

**SENSITIVE GERMAN EXPERIMENT SETS NEW LIMIT ON MAXIMUM NEUTRINO MASS**

KATRIN (Karlsruhe Tritium Neutrino Experiment), a German experiment has set a new upper limit on neutrino mass using a massive 200-tonne spectrometer that required an elaborate 8,600-km journey to transport.

**Key Achievement:** KATRIN determined that the sum of masses of the three known neutrino types cannot exceed  $8.8 \times 10^{-7}$  times the mass of an electron - a twofold improvement over previous constraints. This result came from analyzing 36 million electrons over 259 days of measurements between 2019-2021.

**Why Neutrinos Matter:** The article outlines four major puzzles driving neutrino research:

**Actual mass measurement** - While we know neutrinos have mass (2015 Nobel Prize discovery), measuring the tiny actual masses rather than just mass differences remains extremely challenging.

**Unexplained lightness** - Neutrinos are so light they travel nearly at light speed, making precise measurements difficult, and physicists don't understand why they're so light.

**Beyond the Standard Model** - The Standard Model predicts massless neutrinos, but experimental evidence shows they have mass, indicating unknown forces and particles exist.

**Self-antiparticle question** - Determining whether neutrinos are their own antiparticles requires detecting an extremely rare process called neutrinoless double beta decay.

**Experimental Significance:** KATRIN's approach of studying tritium decay is particularly valuable because it makes no assumptions about neutrino properties, unlike cosmological observations or other experimental methods. This makes the result more robust, though other approaches have achieved tighter limits (like cosmological data suggesting  $1.4 \times 10^{-7}$  electron masses).

The experiment represents a significant step in understanding one of the universe's most elusive particles.



## BILL ATKINSON, ARCHITECT OF THE MODERN MAC INTERFACE, PASSES AWAY AT 74

Bill Atkinson, a pioneering software engineer whose groundbreaking work underpinned the look and feel of Apple's seminal computers, died at his Portola Valley home on Thursday (June 5, 2025). He was 74.

His family confirmed in a Facebook post that he passed away surrounded by family after a lengthy battle with pancreatic cancer.

Atkinson, Apple's 51st employee, joined the company in 1978, abandoning his PhD in neurobiology at the University of Washington after being persuaded by co-founder Steve Jobs. His entrance marked the beginning of Apple's move toward graphical computing.

Atkinson's design of QuickDraw, a graphics library that efficiently rendered text, shapes, and images on screen, laid the foundation for the graphical user interfaces of both the Lisa (1983) and Macintosh (1984) desktop computers.

He also introduced interface staples like the pull-down menus, the double-click gesture, the selection lasso, and the rounded-corner rectangle — elements now universal in digital design.

"We are deeply saddened by the passing of Bill Atkinson," Apple CEO Tim Cook posted on social platform X.

"He was a true visionary whose creativity, heart, and groundbreaking work on the Mac will forever inspire us. Our thoughts are with his loved ones."

### **Launch of HypreCard**

Atkinson's creative flair was most visible in MacPaint, the digital art application bundled with the Macintosh. It gave everyday users pixel-level drawing control and introduced tool palettes that were revolutionary for non-technical users.

His description of himself as "a cross between an artist and an inventor" couldn't ring truer.

In 1987, Atkinson launched HyperCard, one of the earliest success stories in hypermedia software and a direct precursor to the World Wide Web. HyperCard brought programming and data linkage to non-programmers.

After Mr. Jobs left Apple in 1985, Atkinson remained to complete HyperCard and secured its release as a bundled feature in Macintosh systems.

He departed Apple in 1990 to co-found General Magic, an innovative but commercially premature handheld computing venture that anticipated the smartphone revolution.

In later years, Atkinson found a parallel life in nature photography, creating striking close-up images of stones and launching a book, *Within the Stone* (2004).

He remained active in creative and tech communities, attending events like the burning man festival and sailing trips well into his late seventies.

His wide circle of family survives him, including his wife Jingwen Cai, two daughters, two stepchildren, and siblings.



Atkinson's legacy is woven into nearly every modern interface, from the icons we click to paint apps we sketch in, to the hyperlinks we follow on the web. His genius broke the barrier between text and visuals, and his code made computers accessible, intuitive, even beautiful for millions.

Atkinson's death marks the end of a Silicon Valley era. Many of his innovations — QuickDraw, MacPaint, HyperCard — have faded into the architecture of modern software, but their DNA persists. Without his willingness to reimagine the user experience, personal computing might never have become so widely embraced.

## WHAT DOES GOOGLE PLAN TO DO ABOUT THE 'ONLINE SEARCH' ANTITRUST DECISION?

### The story so far:

On May 31, Google said it will appeal an antitrust decision aimed at making competition in the online search market fair. Google's reaction to the decision comes a day after U.S. Judge Amit Mehta heard closing arguments in a trial that sought to curtail the tech giant's illegal monopoly in online search. While the U.S. Department of Justice (DOJ) proposed stringent remedies to bring about fair competition, Google is opposed to these measures and proposed its own tentative remedies. After considering the proposed remedies from both sides, Judge Mehta is expected to deliver his decision. These court remedies could potentially unravel Google's position as a dominant player in the online search business.

### What is DOJ vs Google antitrust case?

The DOJ hit Google with multiple legal challenges in recent years, alleging violation of antitrust laws, and the monopolisation of multiple markets the search giant operates in. In particular, the regulator scrutinised Google's revenue sharing agreements with partners like Apple over worries that the search giant's rivals' services are being locked out of the market and that customers are seeing reduced choices for search engines on their devices.

In August 2024, Judge Mehta handed the DOJ a victory when he ruled that Google was an illegal monopolist with monopoly power in the general search services and general search text advertising markets. The Google Search Remedies trial that followed this year saw the DOJ presenting a series of far-reaching proposals to cut down Google's monopoly power, while Google presented its own list of far milder proposals.

### What is DOJ's case against Google?

The DOJ and the U.S. Federal Trade Commission (FTC) are regulators that both work to ensure that companies, including Big Tech firms, are complying with American antitrust laws to enable fair competition. While the two regulators coordinate their efforts, the U.S. DOJ has the power to obtain criminal sanctions and has sole antitrust jurisdiction across industries including telecommunications, banks, railroads, and airlines.

One of the key topics in Google's Search Remedies trial is the Big Tech company's multi-billion dollar deals with telecom device manufacturers to offer Google services via their products. To bring about fairer competition, the U.S. DOJ suggested the forced sale of the Chrome browser, possible divestment of the Android platform, temporary restrictions on some of Google's market activities, and the creation of a 'Technical Committee' to oversee Google's compliance measures.



### What is Google's defence?

Google has consistently defended the quality and innovation of its products, while denying that it stifled competition. The tech giant vocally criticised the DOJ's remedies to reduce its dominance, claiming that data-sharing with rivals would put customers at risk and that giving up Chrome and Android would lead to cybersecurity risks as well as increased device costs.

Google strongly opposed the idea of a DOJ-controlled Technical Committee, complaining that it would reserve the right for the U.S. government to decide who can access Google users' data. This is not a favourable outcome for the company, since U.S. President Donald Trump has systematically worked to reduce the independence of even federal agencies and regulators such as the FTC. Mr. Trump also suggested in the past that Google could shut down. However, the DOJ had suggested a court-appointed Technical Committee made up of independent experts.

Google's own proposed remedies include more flexible browser agreements and Android contracts, as well as oversight to ensure that Google complies with the court's order rather than coming under government control. "While we heard a lot about how the remedies would help various well-funded competitors (w/ repeated references to Bing), we heard very little about how all this helps consumers," posted Google on X on May 31.

However, a new issue in Google's antitrust quandary is Generative AI, and whether or not Google's monopoly in multiple markets also hurts competition in markets related to large language models (LLMs) and AI integrations across devices and the web. For example, Google's 'AI overviews' that now greet users at the top of their searches could reshape the way customers worldwide search for information online. Google, meanwhile, claimed that the AI space was highly competitive and that rivals were thriving even without government intervention.

"The U.S. Department of Justice's 2020 search distribution lawsuit is a backwards-looking case at a time of intense competition and unprecedented innovation. With new services like ChatGPT (and foreign competitors like DeepSeek) thriving, DOJ's sweeping remedy proposals are both unnecessary and harmful," wrote Lee-Anne Mulholland, Vice President, Regulatory Affairs, Google, in a company blog post.

### What happens to Google next?

U.S. Judge Amit Mehta will take time over the summer months to consider the facts of the case. A decision regarding the Google Search Remedies trial is expected from him before Labour Day (the first Monday of September), as per AP.

Google is waiting for the court's remedies but said it still disagrees with the original decision and believes it is "wrong."

The tech giant also plans to present its side during the appeal, which will happen after the court remedy is revealed. In other words, the legal process could stretch on for years.

This is just one of several antitrust challenges that Google is facing in the U.S. and overseas, with cases covering different areas of its lucrative business such as its advertising technology, rights to its Android platform, and the treatment of developers using the Google Play Store.

The U.S. DOJ in April announced that it "prevailed" against Google in a second monopolisation case, where the U.S. District Court for the Eastern District of Virginia held that Google "violated antitrust law by monopolising open-web digital advertising markets."



Google disagreed with this decision as well and said it would appeal the ruling.

#### HUMAN OVERSIGHT KEY TO SAFE USE OF AI IN HEALTHCARE, SAY EXPERTS

AI is transforming Indian healthcare with tools like Garbhini-GA2, an AI model developed by IIT-Madras and THSTI, which predicts foetal age from ultrasonography with half-day accuracy, outperforming the less accurate Hadlock's formula. Other applications include high-risk pregnancy (HRP) management, virtual autopsies (virtopsies), and clinical chatbots, matching expert accuracy while speeding up processes. For HRPs, ARMMAN's AI chatbot assists auxiliary nurse-midwives (ANMs) with 94% positive feedback, though it struggles with regional Indian accents. Virtopsies, using CT/MRI and convolutional neural networks, reduce autopsy time to 30 minutes but may miss subtle tissue details. However, challenges like automation bias—over-reliance on AI suggestions—data privacy, and weak regulation pose risks. Studies show even experienced radiologists' accuracy drops when misled by AI. Experts emphasize human oversight, robust data governance, clinician training, and clear regulations to ensure AI augments ethical healthcare without supplanting it.

#### DONKEY PRICES SOAR IN PAK. DUE TO CHINA'S DEMAND FOR EJIAO

In Pakistan, donkey prices have surged dramatically, with healthy donkeys now costing up to ₹2,00,000 in markets like Karachi's Lyari, compared to ₹30,000 eight years ago, driven by China's booming ejiao industry. Ejiao, a gelatin made from donkey hides, is used in traditional Chinese medicine for its purported anti-fatigue, immunity-boosting, tumor-suppressing, and anti-anemia properties. China's domestic donkey population has plummeted from 5.6 million in 1990 to 0.86 million in 2022, forcing reliance on imports, especially from Pakistan, which has 5.9 million donkeys, the third-largest population globally.

This price surge threatens the livelihoods of poor Pakistani workers like Abdul Rasheed, whose donkey, Tiger, recently died, leaving him unable to afford a replacement with his annual income below ₹4,00,000. Donkeys are vital for low-income families, supporting industries like transport, agriculture, and brick kilns, with workers like Samad earning ₹1,500–₹2,000 daily, half spent on donkey upkeep. Chinese buyers, desperate for hides, even purchase weak donkeys for ₹40,000, distorting local markets.

In April 2025, Pakistan's government discussed establishing donkey farms with a Chinese delegation, seen as an economic opportunity to create jobs, but ethical concerns arise. Donkey meat, considered haram in Pakistan, risks entering local markets, prompting calls for regulated slaughterhouses. Animal rights advocates criticize the trade for welfare and zoonotic disease risks. The 160% growth in ejiao production over five years exacerbates these challenges, leaving Pakistan's poor struggling to afford their lifeline animals.

#### WORLD'S RIVERS ARE LEAKING OLD CO2 INTO THE AIR

The world's older carbon has less carbon-14. By measuring its levels in rivers, researchers have reported how long the carbon has been out of the atmosphere. They found that about 60% of the CO2 escaping from rivers came from millennia-old material locked in deep soil. This 'leak' means rivers are returning ancient carbon to the air at a rate similar to the amount land ecosystems absorb, so carbon-cycle models may have been undercounting losses from land.



## USING BACTERIOPHAGES TO COMBAT ANTIMICROBIAL RESISTANCE

If one has a urinary tract infection, for instance, the pathology lab will identify the bacterium to be, say, *Escherichia coli*. It will also determine the pathogen's sensitivity to over a dozen antibiotics. It is fine if the bacterium is sensitive to many or all of the drugs. The nightmare scenario is when it is resistant to all of them.

Increasingly, antibiotics don't work because the bacteria have developed resistance. It is estimated that globally, about five million people are dying of conditions related to antimicrobial resistance (AMR) each year. This may double by 2050. It is a silent pandemic.

What is the solution? Largely, pharmaceutical companies have lost interest in developing new antibiotics. Whereas a drug for cancer is used for a long time, antibiotics are given for just a few days. Also, due to the problem of AMR, new antibiotics are used as sparingly as possible to prevent the development of resistance. Therefore, there is no financial incentive for companies to work on new antibiotics. There is some drug development happening, but probably not enough to address the AMR problem.

Bacteriophages are 'good viruses' that naturally prey on bacteria. They are all around us, in the water, in the soil, in our gut, on our skin, etc. There are believed to be 10 times as many phages as bacteria on earth.

Phages were beginning to be used against bacterial infections about a century ago, but antibiotics superseded them once they were discovered. Unlike an antibiotic, phages may only kill a few strains of a particular bacterium. Therefore, only countries in the Soviet bloc, cut off from the antibiotics, continued to use them. An institute in Tbilisi, Georgia, with over 100 years of experience, is famous for its phage expertise. Due to AMR, the rest of the world is now rediscovering phages, and relevant research is ongoing in many countries.

Phages have been used for burns, foot ulcers, gut infections, respiratory infections, urinary tract infections, etc. There are two main strategies that have been used. One, isolate the bacteria from the infected tissue, check which phage works against it in the lab, grow more of that phage, and administer it to the patient. These phages may come from a phage bank of one's own, or in very serious cases, one may even ask phage banks elsewhere in the world for help. These are natural phages. Then there are genetically engineered phages, which have been modified in the lab to, say, expand the variety of bacteria they can kill.

The world is desperate for new treatment modalities for AMR. Thus far, no government in the Western world has approved a phage as a drug. But they may allow patients to access phages in the form of "compassionate use", "emergency-use expanded access," or "special access" routes. These are often approvals for single, named patients who are in desperate need. Yet another route, used in Belgium for instance, is the "magistral route" where particular pharmacies can 'compound' a phage specifically for a particular patient.

The regulatory headache may be solved if the following scenario, which Jean-Paul Pirnay and colleagues in Belgium are researching, works out. Create a device in which all of the following steps can be conducted: isolate the bacteria from an infection, sequence its genome, use AI to determine which phage genome is the most likely to work, create the phage from scratch in the device, and administer it to the patient on the spot.



In such a scenario, the phage wouldn't be regulated as a drug. Instead, the device would be regulated. And the device would only contain routinely used molecules, such as nucleotides and enzymes that would be used to assemble the phage.

The scale of AMR is such that we need many large initiatives to tackle it. If a group of microbiologists is looking for a grand challenge that uses AI, surely the Pirnay route is one worth exploring?

## TWINKLE IN THE EYES

### Why do animals' eyes seem to glow at night?

Nocturnal animals are adapted to dim light. Their retina has more rod cells, than cone cells, which aid photopic vision or vision under bright light.

Behind their retina is a layer called the choroid coat, which has a reflective surface called the tapetum lucidum (Latin for 'shiny carpet'). The cells of the tapetum lucidum are made of reflective materials such as guanine crystals (in insects), yellow crystals of riboflavin (in some mammals), or white collagenous fibres. The tapetum lucidum layer acts as a mirror. When light falls on the eye, it is first incident on the retina.

The light not absorbed by the retinal cells then proceeds to the tapetum lucidum cells, which reflect it back through the rod cells to the outer layers, where it becomes available once again for the retina to process.

The benefit for the animal is that the retina has two opportunities to receive the light, once when it is incident and next when the tapetum lucidum sends it back. As a result, the animal can see clearly even in dark conditions.

— Published in The Hindu on September 5, 1996

## NEW STUDY MAKES CONTROVERSIAL WEATHER-TWEAKING IDEA MORE REALISTIC

Stratospheric aerosol injection is a method in which aerosols are injected into the earth's stratosphere at around 20 km altitude to reduce the amount of sunlight reaching the surface of the earth. The idea is controversial because the effects will be global: if one country injects aerosols, all countries will be affected, and not always in a good way

The world needs to lower its dependence on fossil fuels. Countries have done so in fits and starts: issues like war, poverty, disease, and inflation have often left climate mitigation on the back burner. Today, greenhouse gas emissions are increasing worldwide.

Some researchers have proposed the use of technologies to directly cool the planet rather than bank on reducing emissions alone. Stratospheric aerosol injection (SAI) is one such technology — and a controversial one. In SAI, aerosols are injected into the earth's stratosphere to reduce the amount of sunlight reaching the surface. A study recently published in the journal Earth's Future offered an innovative approach to this technique that could reduce its costs but also bring it closer to fruition despite the opposition to it.



### **A volcano-inspired tool**

SAI is a “proposed method of cooling the planet and reducing the impacts of climate change by adding a layer of tiny reflective particles to the high atmosphere,” Alistair Duffey, a PhD student at the Department of Earth Sciences at the University College London and the study’s lead author, said.

The method was inspired by volcanic eruptions, which have been known to have a cooling effect on the planet by spewing aerosols into the air. By reflecting more sunlight away from the earth, SAI aims to create a cooling effect.

How well SAI works depends on the type of material injected, the timing of the injection, and the location. Technical challenges are also more pronounced at higher altitudes. Most studies of SAI’s efficacy have focused on implementing it at 20 km or more, particularly over areas closer to the equator. Doing so demands specially designed aircraft capable of operating at such elevations.

### **A contrasting approach**

The study’s authors have explored an alternative approach to undertaking SAI using existing aircraft. “We were interested in understanding how the effectiveness of stratospheric aerosol injection varies with the altitude,” Duffey said, adding that “low altitude injection strategies are necessarily” meant for the polar regions. At the equator and regions close to the equator, the stratosphere is higher — 18 km and above — where existing aircraft can’t fly. In polar and extratropical regions, the boundary between the troposphere and stratosphere, called the tropopause, is at a lower altitude than over the equator or subtropics. This means existing jets can reach the stratosphere .

“Higher altitude injection is generally more effective because the particles stay in the stratosphere for longer,” anywhere between months or years, Duffey said. In contrast, particles released at lower altitudes are more likely to be caught in clouds and washed out by rain. Despite this, researchers are exploring low-altitude SAI because spraying particles at lower heights is technically less challenging and doesn’t require specially designed high-altitude aircraft, also making the approach potentially more accessible and cost-effective.

Even when using existing aircraft, modifications are necessary. An August 2024 study said aircraft like the Boeing 777F would have to be modified to install insulated double-walled pressurised tanks to ensure the safe transport of aerosols and maintain the desired temperature.

### **Time-and cost-effective**

The new study’s researchers simulated various particle-injection strategies. Using the UK’s Earth System Model 1 (UKESM1), a computer model of the climate, they simulated the “spraying” of sulphur dioxide at different altitudes, latitudes, and seasons. The team found that injecting 12 million tonnes of sulphur dioxide every year at an altitude of 13 km in the local spring and summer seasons of each hemisphere could cool the planet by approximately 0.6 degrees Celsius. The spray quantity is comparable to the amount added to the atmosphere by the Mount Pinatubo volcano in 1991. For cooling by 1 degree Celsius, their models suggested spraying 21 million tonnes of sulphur dioxide a year. If the particles were injected at an even higher altitude in the subtropics, only 7.6 million tonnes would be required annually.



An added advantage is that this technique could begin sooner than conventional higher altitude methods because designing and building specialised aircraft meant for flying 20 km and above requires almost a decade and several billion dollars in capital expenses.

#### Is it worth the risk?

But while there are some benefits to this method, using three times the usual amount of aerosols carries greater risk. “There are lots of important risks and side-effects related to SAI, including social and geopolitical risks, as well as direct side-effects such as delayed recovery of the ozone hole and acid rain,” Duffey said. The cooling effect will also be more pronounced in polar regions than in the tropics, where warming is more severe. Duffey also stressed that the cooling effect wouldn’t reverse climate change. The cooling may also have some other ecological effects, but it would also introduce new challenges.

As The Hindu reported recently, the cooling could mask warming on the ground and make countries complacent about curtailing emissions.

SAI is also controversial because its effects are global: if one country injects aerosols into the stratosphere, all countries will be affected, and not always in a good way.

In 2021, the US National Academies of Sciences, Engineering, and Medicine recommended the US government fund solar geoengineering research with a focus on transparency.

But a year later, an international coalition of scholars called for a moratorium on solar geoengineering R&D because the technology is “ungovernable in a fair, democratic, and effective manner.”

#### NEW ‘WEIGHT-LOSS’ DRUGS HAVE LOWER IMPACT IN REAL LIFE: STUDY

A recent study done in the U.S. showed that semaglutide and tirzepatide — injectable GLP-1 drugs for obesity — produce lower weight loss in a real-world setting than during the clinical trial, because patients discontinue treatment or use lower maintenance dosages.

The results were published by researchers from the Cleveland Clinic, Ohio, U.S., in the peer-reviewed journal *Obesity* on June 10. Semaglutide and tirzepatide are FDA-approved medications for the treatment of Type 2 diabetes and chronic weight management and are now also available in India.

Hamlet Gasoyan et al accessed electronic health record data from a large health system in Ohio and Florida to identify adults with overweight or obesity without Type 2 diabetes who started with injectable semaglutide or tirzepatide between 2021 and 2023. They recorded early discontinuation (within three months) and late discontinuation (within 3–12 months) along with weight reduction.

The researchers observed that treatment discontinuation and use of lower maintenance dosages might reduce the likelihood of achieving clinically meaningful weight reduction in patients on these drugs.

Researchers also identified the factors associated with higher odds of achieving a weight loss of 10% or more, after one year of treatment — continuing medications or discontinuing late (vs early), taking a high maintenance dosage, getting tirzepatide (vs semaglutide) and being female (vs male).



Commenting on the results of the study, V. Mohan, senior diabetologist, and chairman, Dr. Mohan's Diabetes Specialties Centre, Chennai, who has initiated patients on weight-loss drugs, says: "The findings are not surprising because in a randomised clinical trial (RCT), there is constant follow up with the participants to continue with the drug regimen. On the other hand, in the real world, especially if patients buy their own medication, they often stop the drug. Even otherwise, compliance rates in real world are much poorer than in an RCT. The bottom line is that these drugs work as long as they are taken. That is how it is with most drugs; if you stop statins, for instance, cholesterol levels go up; if you stop anti-diabetic drugs or BP drugs, the sugar and BP go up."

#### 'A reality check'

Anoop Misra, who heads Fortis C-DOC Hospital for Diabetes and Allied Sciences in Delhi, says: "This study gives us a reality check of weight loss and blood sugar-lowering effects of these drugs. It is important to note that discontinuation of such drugs is likely to be more in India, driven also by cost concerns. Non-compliance to diet and exercise are additional reasons to be considered in India which may cause lower weight loss."

"Our findings about the real-world use patterns of these medications and associated clinical outcomes could inform the decisions of healthcare providers and their patients," Dr. Gasoyan said.



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