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INTERNATIONAL

WHAT ARE THE CONTROVERSIES AROUND PARDONING POWER?

The story so far:

U.S. President Joe Biden has granted an unconditional pardon to his son Hunter Biden who faced sentencing for federal tax and gun convictions.

Can the President pardon anyone?

The 'royal prerogative of mercy' is a historic prerogative of the British monarch to grant pardons to convicted persons. This was originally used by the monarch to withdraw or provide alternatives to death sentences. At present it is used to grant clemency for any sentence or penalty based on ministerial advice. According to the U.S. Constitution, the President can grant pardon except in cases of impeachment. The U.S. President has absolute power of pardon for federal criminal offences. Such a pardon may be issued prior to the start of a legal case as well as prior to or after a conviction for a crime.

Once accepted, the pardon grants relief from punishment and associated disqualifications but does not erase the conviction record.

What is the current controversy?

Right from the pardon to the leaders of the 'whiskey rebellion', who protested against a federal tax, granted by the first President George Washington in 1795 to President Bill Clinton's pardon of his half-brother Roger on the last day of his office in 2001, pardoning power has been mired in controversies. Donald Trump had pardoned his son-in-law's father in 2020. In the instant case, President Joe Biden has granted pardon to his son for tax and gun offences for which he has been convicted, and for any potential federal crimes that Hunter Biden may have committed between 2014 and 2024. This is in contrast to the public promises that Joe Biden had made earlier that he would not pardon his son. The reason stated by the President was that Hunter Biden was selectively and unfairly prosecuted, and was singled out only because he is his son. Hunter Biden was convicted by a jury of illegally buying and possessing a gun as a drug user. He then pleaded guilty in a tax evasion case.

What is the Indian system?

Article 72 and 161 of the Constitution provide powers to the President and Governor respectively to grant pardon, commutation, remission, respite or reprieve to a convict. These are sovereign powers which are to be exercised on the advice of the council of ministers. A pardon in the Indian context absolves the offender from conviction, punishment and all associated disqualifications. There have been various instances in India where the acceptance, rejection or delay in decisions of mercy petitions by ruling governments have been entangled in political controversies. The Supreme Court in the Epuru Sudhakar case (2006) has held that the exercise of pardoning power is subject to judicial review on the grounds of arbitrariness, mala fides or extraneous considerations.



What can be the way forward?

The pardoning power is a practice that has its origins during the time of absolute monarchy when there was no separation of powers between the executive and the judiciary.

Critics have argued that the pardoning power in modern times have been more often used for political considerations than to correct judicial errors.

In the U.K., the Criminal Cases Review Commission has been constituted to investigate alleged miscarriages of justice. It has diminished the use of the royal prerogative of mercy. This is a transparent and judicious manner of correcting judicial errors in a modern democracy, governed by the rule of law. However, till such time the pardoning power continues in the statute books, it must be exercised in a manner that does not reek of nepotism or arbitrariness. It is essential for retaining the trust of people, who are the source of all power in a democracy, in high constitutional offices.

Note:

U.S. presidential pardons are hardly uncommon, with even Mr. Trump handing out 143 during his first term — including to Republican Party lobbyist Steve Bannon, the father of Mr. Trump’s son-in-law, Charles Kushner, and controversial figures such as Maricopa County Sheriff Joe Arpaio, former National Security Adviser Michael Flynn, and former George W. Bush aide Lewis “Scooter” Libby. Presidential pardons to family members are not unprecedented either — Bill Clinton pardoning his half-brother Roger, convicted on drug-related charges. Yet, the larger question that Mr. Biden’s latest pardon begs is whether justice can be served fairly in a political ecosystem of bitter polarisation, the kind that is presently found in the U.S. When Mr. Biden said that he believed that “raw politics has infected this process” it was a reflection upon the increasing weaponisation of law enforcement authority to score political points — ironically, a charge that Mr. Trump levels against the Department of Justice under Mr. Biden. While there is no reason to assume that Presidents will not continue to issue pardons to their allies, leaders on both sides of the aisle would do well to show restraint and prevent political interference from corrupting the working of the justice system.

HAS TRUMP’S LEGAL STORM BLOWN AWAY?

The story so far:

In light of the legal immunity afforded to U.S. Presidents for official acts, Department of Justice (DOJ) Special Counsel Jack Smith recently moved to drop the charges against President-elect Donald Trump for attempting to overturn the results of the 2020 election, specifically the criminal charges for encouraging a violent mob to attack the U.S. Capitol on January 6, 2021. Mr. Smith’s request was granted by the District Judge hearing the case.

What about the other cases?

The DOJ has also filed motions to drop all federal charges against Mr. Trump that relate to the latter’s “mishandling” of classified documents. Two state-level cases against him are also in legal limbo: the election interference case in Georgia has been paused pending a decision by an appeals court; and in the business fraud case in New York involving charges against Mr. Trump for paying off an adult film star for her silence over an alleged affair, his conviction has been indefinitely delayed. While the dropping of these charges marks the official end of Democrats’ hopes to hold



Mr. Trump liable for several alleged crimes, it remains to be seen as to whether the 45th President will use this clean slate as a springboard to a bipartisan approach to policymaking, or whether it will merely strengthen his hand towards a second innings of the brand of divisive politics that has polarised the electorate of the country in recent years.

What are the specific charges against Mr. Trump that have been dropped?

Firstly, regarding the classified documents case, Mr. Trump was first indicted in June 2023 on 37 felony counts “related to mishandling classified documents that he took from the White House to his Florida home.” These charges included wilful retention of national defence information, conspiracy to obstruct justice and making false statements. While a Florida judge had earlier dismissed the case and Mr. Smith’s office had sought an appeal, those charges are all being dropped now.

In August 2023, Mr. Trump was additionally indicted on four felony charges relating to his attempts to reverse the 2020 election results. These charges included conspiracy to defraud the U.S., conspiracy to obstruct an official proceeding (a reference to the process of certification of the election results by Congress), obstruction of and attempt to obstruct an official proceeding and conspiracy against rights.

What view has the U.S. Supreme Court taken on the subject?

The Supreme Court in July 2024 handed down its first ruling on the subject of presidential immunity when it determined, by an expected 6-3 majority, that former Presidents enjoyed broad immunity from prosecution. At the time, Chief Justice John Roberts wrote for the majority opinion of the court, “Under our constitutional structure of separated powers, the nature of presidential power entitles a former president to absolute immunity from criminal prosecution for actions within his conclusive and preclusive constitutional authority... And he is entitled to at least presumptive immunity from prosecution for all his official acts. There is no immunity for unofficial acts.”

The three liberal dissenting judges criticised the ruling as undermining the “core democratic principle that no person is above the law,” with Justice Sonia Sotomayor writing that “in every use of official power, the President is now a king above the law” and that the protection afforded to Presidents by the court was “just as bad as it sounds, and it is baseless.”

Is Mr. Trump absolved of guilt?

Not necessarily. In her latest ruling on the cases, District Judge Tanya Chutkan said that she was dismissing the election interference charges against Mr. Trump “without prejudice,” suggesting that the door to prosecuting Mr. Trump in the future has been left open, specifically after Mr. Trump demits office after his second term, and loses his legal immunity shield. Hinting at the DOJ’s view on the matter, Mr. Smith noted that the charges had been dropped because the DOJ “forbids the federal indictment and subsequent criminal prosecution of a sitting President,” while adding the decision to not proceed with the indictments and trials was “not based on the merits or strength of the case against the defendant.”

Then there are the political views of liberals and progressives, possibly including a majority of the more than 74 million Americans who voted for Mr. Trump’s rival, incumbent Vice- President and Democrat candidate Kamala Harris, in the November 5 presidential election. While voter views on Mr. Trump may vary widely in general, polling as recently as six months ago found that nearly



three in five Americans (59%) agreed that Mr. Trump was guilty of the 34 felony counts on which he was convicted in the New York case, compared to just 32% who believed he was innocent. Another poll around the same time found that a whopping 50% of respondents thought that Mr. Trump's guilty verdict on all 34 counts in his hush money trial was correct. Similarly, a poll in April this year found that 53% of respondents believed that Mr. Trump committed "serious federal crimes."

Yet the fact that a poll in May 2024 suggested that 67% of voters — including 74% of independents — said that a conviction would make no difference for how they voted in the election offers a deeper insight into the political preferences of voters.

TRUMP'S RESEARCH CZAR

On November 26, U.S. President-elect Donald Trump announced that physician and economist Jayanta 'Jay' Bhattacharya will be the director of the National Institutes of Health (NIH), the nation's chief agency for medical research.

This pick makes Dr. Bhattacharya the second Indian-American selected by Mr. Trump for a key post, after Vivek Ramaswamy, who has been tapped to lead the newly-created Department of Government Efficiency, along with billionaire Elon Musk. The NIH, with a \$48 billion budget, is one of the foremost agencies for biomedical research, with 27 centres dealing with a spectrum of subjects, including cancer research and diabetes.

The NIH's parent agency, the Department of Health and Human Services, will be headed by Robert F. Kennedy Jr. "Together, Jay and RFK Jr. will restore the NIH to a Gold Standard of Medical Research as they examine the underlying causes of, and solutions to, America's biggest health challenges, including our Crisis of Chronic Illness and Disease," Mr. Trump said in a social media post.

Mr. Trump's health picks are unconventional, with both appointees having expressed opinions on health policy and medicine which are out of the mainstream realm.

The Kolkata-born Bhattacharya migrated to the U.S. as a child. He earned his undergraduate degree from Stanford, and later completed a medical degree and a doctorate from the same institution. His Stanford association continues; he is a tenured professor in health policy and a professor of economics by courtesy.

Dr. Bhattacharya is not a practising physician and counts public health policy, specifically centred on infectious diseases and COVID, as well as health economics as his domains of expertise. He came into the public spotlight during the pandemic years for his forceful advocacy against lockdowns, his belief that civil servants had too much power over federal policy during that time, and his criticism of Joe Biden's handling of the pandemic. Soon after the World Health Organisation declared that COVID-19 was a pandemic, Dr. Bhattacharya questioned the severity of the virus and said quarantines were not worth their economic, community and individual health cost. He also published research asserting that immunity to the virus was greater than believed.

'Irreparable damage'

Along with Sunetra Gupta, an Oxford professor of theoretical epidemiology, and Martin Kulldorff, a Swedish epidemiologist and former professor at Harvard, Dr. Bhattacharya authored the 2020



'Great Barrington Declaration', a public health manifesto. The authors mooted an approach called "Focused Protection", whereby they suggested that COVID be allowed to spread among young healthy people who were "at minimal risk of death" and could thus develop natural herd immunity. Prevention efforts were to be focused on the elderly and at-risk populations.

The authors said they had "grave concerns about the damaging physical and mental health impacts of the prevailing COVID-19 policies," saying continued lockdowns "until a vaccine is available will cause irreparable damage." The Declaration was signed by 43 other professionals in the health sciences and medicine.

The Declaration was widely denounced by public health experts. Dr. Frances Collins, then director of the NIH, called its authors "fringe epidemiologists," while Dr. Anthony Fauci termed it "total nonsense."

Dr. Bhattacharya recently hosted a forum in Stanford about pandemic policy, aiming to bring those with differing view-points together to "talk to each other in a civil way." But the forum came under fire as providing a platform to discredited figures with unscientific approaches.

His appointment heralds a new chapter in American public health. Reacting to his nomination, Dr. Bhattacharya wrote on X: "We will reform American scientific institutions so that they are worthy of trust again and will deploy the fruits of excellent science to make America healthy again!"

WHY TAIWANESE LEADERS 'TRANSIT' THE UNITED STATES, WHY CHINA IS CRITICAL OF THE VISITS

Taiwan's president Lai Ching-te arrived Saturday (November 30) in Hawaii for a two-day visit to the United States for the first time since assuming power earlier this year. Officially, the trip was referred to as a "transit", adhering to a long-held convention given China's claims over Taiwan.

China also criticised the transit, with its Ministry of Foreign Affairs saying, "China... firmly opposes any trip by leader of the Taiwan authorities to the US in any name or under whatever pretext... China strongly condemns the US's arranging for Lai Ching-te's "stopover" and has lodged serious protests with the US."

Competing claims of China and Taiwan

China has long been critical of high-level official exchanges between the US and Taiwan given its territorial claims over Taiwan. Since the inception of China's modern communist state in 1949, it has laid historical claims over the island. In turn, Taiwan also claimed to be the sole representative of China. Amid prevalent Cold War rivalries, the US supported Taiwan and officially recognised it.

However, with the end of the Cold War in 1991 and China's increasing global heft after its economic liberalisation in 1978, more countries began establishing diplomatic relations with mainland China. Its government also mandated the One-China principle, which meant that any country hoping to form diplomatic ties could not recognise Taiwanese independence.

Today, only 12 nations recognise Taiwan as an independent country. Most other countries, such as India, the US, Japan, etc., only have unofficial ties with it since they recognise mainland China. As a result, when the US recognised China and established diplomatic ties with it in 1979, it had to downgrade its relationship with Taiwan.



Underlying conditions for US-Taiwan relationship

In three joint communiqués concluded with the Chinese government in 1972, 1978, and 1982, the United States “acknowledged,” but did not endorse, the “Chinese” position that “there is but one China and Taiwan is part of China.” It also said it would “maintain cultural, commercial, and other unofficial relations with the people of Taiwan”.

It was only in 1994 that the first Taiwanese president went to the US for a “transit”, essentially having the visit serve as a stopover to travel elsewhere. According to a US Congressional Research Service report, the Bill Clinton administration allowed Taiwan’s then-President Lee Teng-hui “to stop to refuel his plane in Hawaii on his way to Central America, but not to spend the night. Apparently piqued, Lee declined to leave his plane. Some Members of Congress saw the Administration’s treatment of Lee as insufficiently respectful.”

De-classified official documents later showed the Clinton administration said it would “[p]ermit normal transits of the U.S., but no visits or public activities, for Taiwan’s top leadership,” while continuing to “[f]orbid visits, as opposed to transits...” Congress also passed the Immigration and Nationality Technical Corrections Act in 1994. Section 221 makes visas available to Taiwan officials “under specified circumstances”.

The only time a “visit” has been undertaken was in 1995, when President Lee sought to make a private visit to his alma mater, Cornell University. While the Clinton Administration initially denied the request and assured China of its decision, Lee ultimately visited Cornell in June 1995. In response, China “carried out missile launches, live-fire exercises, a naval exercise, and an amphibious landing exercise over several months in 1995,” the report says. The ensuing period of military tensions was termed the Third Taiwan Strait Crisis.

Recent criticisms from China

Criticisms over Lai’s visit also arise from his party’s more pro-independence stance. The Democratic Progressive Party has been in power since 2016 and is termed “separatist” by the communist government in China. Former Taiwan President Tsai Ing-wen, Lai’s predecessor, made seven overseas trips with transit stops in the US between 2016 and 2024. One trip in 2023, where she met House Speaker Kevin McCarthy and other members, drew China’s condemnations. The Taiwan Work Office of the Chinese Communist Party accused her party of “clinging to U.S. support to seek independence.”

China also conducted large-scale joint military exercises around Taiwan for three days. A White House official then observed that transit visits by Taiwan presidents are “not uncommon” and said there was “no reason for any overreaction here.”

Lai’s transit began a day after the US approved the potential sale of spare parts for F-16 jets and radars to Taiwan for around \$385 million. After the transit, he is scheduled to visit Marshall Islands, Tuvalu and Palau (located in Oceania), which are among the few countries still officially recognising Taiwan.

WHAT UNITED KINGDOM’S ASSISTED DYING BILL SAYS, HOW IT COMPARES TO INDIAN LAW

The House of Commons on November 29 voted in favour of the Terminally Ill Adults (End of Life) Bill. In what was a “free vote”, MPs were permitted to vote according to their conscience instead



of following the party line. Eventually, the Bill was backed by a majority of 330 to 275, with 38 MPs not voting.

- The Bill allows terminally ill patients — those with little to no hope of recovery from fatal illnesses — to request assistance to end their own life. The Bill will now be sent to a “public bill committee” which will vote on any proposed amendments before being voted on again in the House of Commons. It will then be sent to the House of Lords, where further changes could be made, before a final vote is held.

- A person making an assisted dying request must sign a “first declaration” in the presence of a “coordinating doctor” — a qualified doctor willing to provide such assistance — and another person. The coordinating doctor will then make a “first assessment” to make sure that the patient meets the qualifications to make a request for assisted dying, and has done so voluntarily. If the doctor is satisfied that all these conditions have been met, they will refer the request to a second “independent doctor” who will make the same determination after an at least seven-day-long “first period of reflection”.

Do You Know:

- Assisted dying is the process by which a patient can end their own life with the assistance of a doctor. Euthanasia involves more active involvement of the doctor to end the life of a terminally ill patient. As things stand, the law in the UK does not permit any form of assisted dying or euthanasia, with “assisted suicide” being an offence punishable with up to 14 years in prison.

- Since 2013, at least three bills have been introduced to allow assisted dying in the UK. In recent years, the country has seen a complex and polarised debate rage on the issue.

- Proponents argue that for terminally ill patients, end-of-life care often offers very little in terms of pain and symptom management.

They claim that a law for assisted dying would give the patient a degree of control by allowing them to choose when to end their own suffering in a humane way. They claim that a law would deter people from dying by suicide, or pushing their loved ones to assist with suicide.

- At the outset, the Bill says that only a terminally ill person above the age of 18 and with the mental “capacity” to make such a decision can request assisted dying. It also says that the patient must be registered, and residing in England or Wales for 12 months before the request.

- The Bill defines a terminally ill person as someone who has a worsening illness, disease or medical condition that “cannot be reversed by treatment”, and will result in a death that can “reasonably be expected within 6 months”. It also explicitly excludes persons with disabilities or “a mental disorder”.

- In 2018, the Supreme Court of India held that the “right to die with dignity” formed a part of the right to life with dignity under Article 21 of the Constitution of India, and recognised the legality of “passive euthanasia” — the withdrawal of life support from terminally ill patients or patients in a “permanent vegetative state”. This allows the patient to die a natural death in the absence of medical interventions, as opposed to the assisted dying bill which gives patients a more active role in choosing when to die.



FIRST STEP

When Hezbollah decided to start firing rockets into Israel in October 2023 after the Israel-Hamas war broke out, “in solidarity with the Palestinians”, the then chief of the Shia militant group, Hassan Nasrallah, said he would cease fire only if Israel ceased fire in Gaza. When Israel Prime Minister Benjamin Netanyahu decided to send ground troops into Lebanon on October 1, 2024 — Israel’s fourth invasion — he said the main objective was for the over 50,000 residents of northern Israel, displaced by Hezbollah rockets, to return to their homes. In less than two months, Hezbollah and Israel have climbed down from their maximalist positions and agreed to a U.S. and France-mediated ceasefire. According to the agreement, all Israeli troops would withdraw from Lebanon to the Israeli side of the border, while Hezbollah would redeploy its forces to the north of the Litani river. The Lebanese army would be deployed in areas between the Israeli border and the Litani and entrusted with enforcing the ceasefire. Both sides have claimed victory. Israel says Hezbollah is not the same organisation it used to be, while Hezbollah claimed that it had taken a “divine victory” against the Israelis. The reality is that both have suffered setbacks and wanted a break.

Hezbollah lost many fighters and top commanders, including Nasrallah. Hezbollah strongholds in Lebanon, including the border villages and the Dahiye, the southern Shia neighbourhood of Beirut, were pulverised by Israel. Israel’s failures were starker. True, Israel possesses higher air superiority which it used to weaken Hezbollah’s capabilities. But it did not make many territorial advances in southern Lebanon. It faced stiff resistance from Hezbollah and took high casualties. Worse, Israel’s bombings had little impact on Hezbollah’s capability to fire rockets. On November 24, Hezbollah fired over 250 rockets into Israel. Some hit high security zones, including a residence of Mr. Netanyahu. According to a Channel 13 poll, most Israelis believe that Hezbollah has not been defeated. So, given their setbacks, it is unsurprising that both sides have given up their original demands and settled for a ceasefire. While it is good news for West Asia, it could be short-lived if further measures are not taken. Israel and Hezbollah could rearm and refresh themselves before returning to fighting if Israel’s disproportionate war on Gaza continues. The U.S., which played a constructive role in the Lebanon ceasefire, should build on the momentum and push for a ceasefire in Gaza. U.S. President Joe Biden has less than two months in office, which he should use to correct a policy that gave unconditional support for Israel’s war on Gaza and use America’s leverage over its ally to bring some relief to millions of Palestinians living under constant Israeli bombardment.

COSTLY MISCALCULATION

South Korea’s President Yoon Suk Yeol’s surprise announcement of martial law on Tuesday night was a shocker for Koreans, including members of his own conservative People Power Party, for whom memories of the military dictatorship, a dark, violent phase in the country’s history, are still afresh. Mr. Yoon, a former prosecutor, said he was issuing the martial law “to protect free South Korea from the North Korean communist forces, eliminate shameless pro-North Korean and anti-state forces”. In reality, the unpopular President, who is grappling with a parliamentary deadlock, was seeking greater powers for himself and to crush his political opposition. But by embracing the extreme measure, Mr. Yoon shot himself in the foot. The declaration triggered street protests, while lawmakers assembled in the Parliament building braving security personnel and voted 190-0 against the measure. Following the vote and faced with an explosion of public anger, Mr. Yoon reversed his decision and the personnel were withdrawn. The opposition has



moved an impeachment motion against Mr. Yoon. If the vote passes with a two-thirds majority, his powers would be revoked and he would be put on trial.

Mr. Yoon's grip on power has always been shaky. While he won the presidency on a threadbare margin in 2022, the opposition Democratic Party (DP) took control of the National Assembly. In late 2022, after a Halloween crowd crush in Seoul claimed 159 lives, the government's handling of the tragedy was widely criticised. Earlier this year, doctors went on strike, citing their 'harsh' working conditions and demanding higher pay. Mr. Yoon's wife was caught on camera accepting a luxury handbag as a gift — a scandal which continues to haunt his government. In April this year, the DP retained its control of the National Assembly with a greater victory. Mr. Yoon's approval rating fell below 20%, while the opposition kept blocking his legislative push at the assembly, the latest showdown being about the budget Bill. Public resentment mounted amid a housing crisis and high unemployment. Under pressure, Mr. Yoon chose to launch a frontal attack on South Korea's democracy. His sudden turnaround in the face of protests and legislative pushback is a reprieve for South Koreans. But the fact that political infighting led to the President declaring martial law, despite a violent history, itself points to the deeper problems the country is facing. It took years of street protests to bring the military dictatorship, known for its ruthless, vindictive rule, to an end in the 1980s and start the democratisation process. Any attempt to reverse the hard-won gains of the democratic period should be resisted forcefully. Mr. Yoon should not prolong his unpopular regime. He should resign without waiting for the impeachment proceedings and let the country elect a new leader.

VEILED FACE OF PTI

"This is the fight for Pakistan's freedom," said Bushra Bibi, ex-Prime Minister Imran Khan's wife, in a rare video message on November 22, ahead of the planned 'do or die' sit-in by Pakistan Tehreek-e-Insaf (PTI) supporters in Islamabad. The 49-year-old was appealing to PTI supporters to gather in large numbers in the capital to join the protest demanding Mr. Khan's release from jail.

Life in Islamabad ground to a halt on November 25-26 as thousands of PTI supporters led by Bushra marched into the city, defying a ban order. Making an unexpected appearance on top of a truck along with Ali Amin Gandapur, Chief Minister of Khyber-Pakhtunkhwa, in Islamabad, Bushra told the protesters, "You will have to promise that till the time Imran Khan comes here, you will not leave". However, as clashes between protesters and security forces turned violent, Bushra and Mr. Gandapur retreated from the capital's 'Red Zone' — an area housing Pakistan's government buildings.

Hailing from a landowning family in Punjab, little was known about Bushra Riaz Wattoo prior to her marriage to Mr. Khan in 2018. A follower of Sufi saint Fariduddin Masud Ganjshakar (Baba Farid), Bushra was introduced to Mr. Khan by her sister Maryam Riaz Wattoo in 2014 during a PTI's 'sit-in' protest in Islamabad. Married to Khawar Maneka, a customs official, at that time, Bushra and Mr. Khan connected over their joint interest in Sufism. Soon enough, Mr. Khan began frequently visiting her, seeking 'spiritual guidance' at her husband's house in Pakpattan — the birthplace of Baba Farid. On November 14, 2017, Mr. Maneka and Bushra divorced and in February 2018, the cricketer-turned-politician married her in a secret ceremony.

The contrast between Mr. Khan's two ex-wives and his current spouse is stark. British journalist Jemima Goldsmith and Pakistani journalist Reham Khan are both public figures, who have made several statements about their ex-husband, praise or otherwise. In comparison, Bushra has



remained shrouded from the public eye, literally, as she is generally spotted wearing a black or white abaya covering her face. She has five children (three daughters and two sons) from her previous marriage and her eldest, Mehru Maneka, is a PTI member.

Growing influence

Bushra's influence over Mr. Khan grew as he won the general elections and became Prime Minister in 2018, six months after their wedding. While several Sufi devotees call her a 'spiritual leader', Mr. Khan's political rivals have accused her of practising sorcery.

Bushra was also accused of hoodwinking Mr. Khan, according to Tribune, by presenting information previously passed to her by ex-ISI chief Gen. Faiz Hameed as 'divine intervention', thus reinforcing Mr. Khan's belief in her powers. Her ex-husband Mr. Maneka moved an Islamabad court in November 2023, alleging that the marriage of Bushra and Mr. Khan was 'un-Islamic' as they had not completed the 'iddah period' (time gap required for a woman to remarry after divorce as per Muslim family law). While the court voided their marriage and convicted the two, they were later acquitted in July this year.

Bushra has constantly remained at Mr. Khan's side, including earlier this year, when she was arrested in connection with the Toshakhana case. The PTI founder, who has been in jail since August 2023, and his wife have been accused of failing to disclose state gifts received from foreign guests. After nine months of incarceration, Bushra was granted bail and released from Rawalpindi's Adiala Jail in October.

Since her release, Bushra and Aleema Khan, the former PM's sister, have become the PTI's rallying point as most of the party's top leadership is in jail. From attacking Saudi Arabia to demanding immediate release of Mr. Khan and other PTI leaders, Bushra's presence, in spite of her lack of experience, has filled a leadership vacuum in the party. November's rally brought Bushra under the political spotlight, though the protests were called off in the face of state crackdown.

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NATION

A SLOW RETURN

The government's decision to offer statements on China, suo motu, in both Houses of Parliament and to brief a parliamentary panel are positive but long overdue steps. Since 2020, following the Chinese transgression along the Line of Actual Control (LAC) and the deadly Galwan clashes, it has avoided divulging details of the negotiations with China over the actions of the People's Liberation Army (PLA), only announcing agreements on disengagement at six points of friction, as they occurred in 2021, 2022 and 2024. In a democracy, the people must not be kept in the dark on matters of national interest. But the statements by External Affairs Minister S. Jaishankar and the briefing by Foreign Secretary Vikram Misri appear to have been substantial. Mr. Jaishankar focused on three aspects of the LAC negotiations. He said India has made it clear to China that "normal" engagement in other parts of the relationship were contingent on the LAC tensions being resolved. India has adopted a policy of "continuous engagement" and a step-by-step approach involving 17 meetings of the Working Mechanism for Consultation and Coordination on India-China Border Affairs, 21 meetings of the Senior Highest Military Commanders meeting mechanism, and several meetings between the Foreign and Defence Ministers and Special Representatives of both countries. Finally, he said that with disengagement "fully achieved", the next priorities would be troop de-escalation and de-induction, followed by a discussion on how to manage ties in the border areas, given the problems in the last few years. Mr. Jaishankar said that for Depsang and Demchok, "patrolling arrangements" had been agreed upon, but the resumption of patrols is still "underway". For the other areas of North and South Pangong Tso lake, Gogra and Hot Springs, disengagement had been achieved through "steps of a temporary and limited nature" — a euphemism for LAC "buffer zones".

But the government's nearly 2,500 word statement gave no indication of the casus belli for the Chinese actions nor any reference to when the return to 'status quo ante', or to positions of 2020, can be expected. The statement laid stress on India's "national security" interests being upheld, without mentioning India's "territorial integrity" at any point. The government must now expedite efforts to build a common understanding of the LAC and to demarcate the boundary. It is important to tell the nation about the nearly 20 Modi-Xi meetings prior to 2020, in spite of which the PLA acted the way it did. The past few years should have demonstrated to the 'doves and hawks' in India's establishment that such an intensive engagement is no guarantor of peace, nor can conflicts be resolved without the kind of intense and "continuous engagement" that New Delhi and Beijing have sustained in the past few years.

WHAT WILL BE THE FALLOUT OF BANGLADESH EVENTS?

The story so far:

On November 25, Chinmoy Krishna Das, spokesperson of the Bangladesh Sammilito Sanatani Jagaran Jote, an umbrella group of minority religious communities, was arrested in Dhaka en route to Chittagong. He was sent to police custody after being charged with sedition over alleged disrespect of the national flag of Bangladesh during a rally on October 25.



What followed the arrest?

Clashes erupted resulting in the death of a government law officer. Communal incidents, including desecration of three temples in the region, were reported as rumours spread that the lawyer was killed by supporters of the Vaishnavite monk. More than 18 individuals have been arrested on charges of rioting and for the murder of the assistant public prosecutor.

What are the charges against Das?

Das is a former leader of Pundarik Dham, a religious centre in Chittagong known for the worship of Sri Krishna and Lord Jagannath. Pundarik is also a centre for the International Society for Krishna Consciousness (ISKCON), and Das was associated with the organisation till recently. He rose into prominence after the fall of the Sheikh Hasina government on August 5, as reports of attacks on the minority communities and Sufi shrines spread. He held three major rallies in Dhaka, Chittagong and Rangpur, delivering fiery speeches in support of minority rights. His stature grew with many political leaders calling on him. The case against him was filed by former local BNP leader Firoze Khan who alleged that during a rally in Chittagong, a saffron flag was raised higher than the Bangladesh national flag, which has been interpreted as an insult.

Who are leaders of minority communities?

Bangladesh has an ancient Hindu and Buddhist population, and in recent decades has also acquired a thriving Christian community. These groups mobilised in the backdrop of years of military rule. When Khaleda Zia became the Prime Minister in 1991, the minorities gathered under the Bangladesh Hindu Bouddho Christian Oikyo Parishad (BHBCOP). According to Monindra Kumar Nath, who is the public face of the group, incidents of discrimination and atrocities against Hindus, Buddhists and other religious communities have been increasing over the years. Despite repeated pleas, neither the Hasina government, nor the governments prior to that, were able to help. This has created a sense of frustration among the younger members of the communities, creating space for leaders like Das.

What is ISKCON Bangladesh's stand?

In a press conference on November 28, the Secretary-General of Bangladesh ISKCON, Charu Chandra Das, said that several activist monks of ISKCON including Chinmoy Krishna Das had been removed from their positions. "It was clearly stated that their actions are not representative of ISKCON," Charu Chandra Das said. He also said that connecting ISKCON as an organisation with the murder of the assistant public prosecutor was "wrong". He said: "We want to make it clear that ISKCON Bangladesh has no involvement in this tragic event."

What is happening in the border States?

ISKCON, which is based in West Bengal's Mayapur, has a large support base in West Bengal, and Tripura, and followers of the organisation have been agitating about the threats to the organisation in Bangladesh. Protesters held a demonstration outside the Bangladesh Assistant High Commission in Agartala, protesting against the attacks on Chakmas in the Chittagong Hill Tracts. On Thursday, a similar but more aggressive scene was witnessed outside the Deputy High Commission of Bangladesh in Kolkata where a large crowd of protesters burnt an effigy of Muhammad Yunus, Chief Adviser of the interim government of Bangladesh.



The communal tension and online exchange between the majority and minority communities have added to concerns about a possible exodus of minority communities of Bangladesh to bordering States.

What has been the government's response?

Mr. Yunus stresses that his government is led by activists and human rights advocates who have a clean record and, are therefore, not part of any plot to discriminate against minority groups. But on the ground, there are often instances of attacks against temples and places of worship. This is partly also happening because the government has not managed to restore law and order and bring agencies under control to maintain peace and harmony in a plural society. The BHBCOP has expressed concern about the Yunus government's intentions, especially because of a push for 'reforms'. As part of constitutional reforms, the Attorney General of the interim government, Md Asaduzzaman, has taken up the validity of the 15th amendment of the Bangladesh Constitution of 2011 that re-inserted 'secularism' in the statute. 'Secularism' was first incorporated in the Bangladesh Constitution in 1972. While arguing the case as part of the Yunus government's reform agenda, Mr. Asaduzzaman drew attention to the demography of the country, saying that "socialism and secularism do not reflect the realities of a nation where 90% of the population is Muslim." These remarks were taken as a sign that the government is keen to dismantle Bangladesh's secular constitution.

What about India-Bangladesh ties?

The interim Yunus government has been widely perceived as a setback for India's Bangladesh policy as Ms. Hasina had warm ties with India. Bangladesh has been critical of the former Prime Minister being harboured on Indian soil, and earlier this week Ms. Hasina made a scathing statement about the Yunus government which was widely publicised. Ms. Hasina's verbal attack blew away the careful silence of the Indian government about her presence in India. India maintains a formal policy of non-intervention in foreign affairs and expects the same from partner countries. But with Ms. Hasina becoming vocal — while in exile in India — has added to India's diplomatic baggage, with sources indicating that it is not in a position to openly support or oppose any of the actions that she may resort to. That apart, many India-backed projects have taken a hit. An Adani Group power project involving export of power generated at its Godda power plant has been placed under review; a consultancy agency will be hired soon to evaluate the feasibility of the project, the interim Bangladesh government has said. The turn of events has added to the interim government's internal problems. It faces an uncertain future as it is well-known that Mr. Yunus and Donald Trump do not share cordial personal ties. That apart, Jamaat-e-Islami, the third largest political formation and an avowed anti-India party that was banned by Ms. Hasina, has become internationally active.

BHUTAN AND INDIA DISCUSS GELEPHU, HYDEL POWER PLANS

India and Bhutan on Thursday discussed bilateral projects in the fields of electricity and urban planning during the visit of the King Jigme Khesar Namgyal Wangchuk and Queen Jetsun Pema. Mr. Wangchuk met Prime Minister Narendra Modi and both sides reiterated continued collaboration on multiple fronts including in the Gelephu Mindfulness City project and hydropower.

A joint statement issued after the meeting said Mr. Modi "reassured His Majesty of India's continued support for the Gelephu Mindfulness City Project, which will bring prosperity and well-



being in Bhutan and also the border areas, and further strengthen economy and investment linkages between the two countries”.

The two sides on Thursday also discussed the hydel power projects including the 1020-MW Punatsangchhu-II hydro power project and expressed satisfaction as it was “nearing completion”.

“The leaders agreed on the need for early conclusion of the Punatsangchhu-I hydro power project. The two sides reiterated the importance of cooperation in the hydropower sector, and their commitment to advancing it, including through finalizing modalities urgently for new projects, including reservoir hydro projects,” the joint statement said.

Both sides also discussed cross-border connectivity projects including a rail line as well as digital networks.

The visit of the Bhutan royals comes days after the visit of Prime Minister Tshering Tobgay who inaugurated the Global Cooperatives Alliance in New Delhi on November 25. India’s commitment for the Gelephu project while hosting the Bhutanese King is significant as it comes against the backdrop of diplomatic setbacks that South Block has faced in the neighbourhood, especially in Dhaka where India’s ties with the interim government of Bangladesh has failed to stabilise since the fall of the Sheikh Hasina government in August.

In Nepal too, Prime Minister KP Sharma Oli has prioritised Kathmandu’s ties with Beijing and sealed a new Framework for Belt and Road Cooperation on Wednesday during his first foreign trip since taking power in July this year.

The Hindu had earlier reported that the Adani Group was in talks with Thimphu for investing in the project in Gelephu. In July, Mr. Wangchuk and Prime Minister Tobgay had travelled to Gujarat where they sought cooperation with the Adani Group on airport, infrastructure and renewable energy projects.

While India’s neighbours, including Sri Lanka and Bangladesh have announced reviews of Adani projects in the past few weeks, and the U.S. Department of Justice indictment of the Adani Group has cast a shadow, the Bhutanese government has so far not commented on the issue.

ADANI GREEN SOLAR PROJECT: GOVT WAIVED TRANSMISSION COST, SWEETENED DEAL

Within 24 hours of the Union power ministry waiving transmission charges for states buying electricity from Adani Green and Azure Power, the YSRCP-led Andhra Pradesh government signed a deal with Central utility Solar Energy Corporation of India (SECI), which had awarded a total of 12 giga watt (GW) projects to these two companies.

- This waiver of ISTS (interstate transmission system) charges is estimated to have resulted in savings of 80 paise per unit (Rs 1,360 crore a year), in a way incentivising the state to buy power from the two projects.

—ISTS charges are levied when power is wheeled from one state to another using the national grid.

- The Power Ministry’s order on November 30, 2021, essentially eased two conditions stipulated in an earlier order issued just a week ago on November 23. These two conditions were:

—that the project be commissioned before June 30, 2025, and



—that the power from the project be within the renewable power obligation (RPO) of the state. RPO requires states to buy a certain percentage of its total power from renewable sources.

- The first 1,000 MW of Adani Green power is expected to be commissioned only in April 2025, with the balance beyond June 2025, said an Andhra government source.
- Adani Group Chairperson Gautam Adani, his nephew Sagar Adani and six others were indicted by the US Department of Justice for paying or offering to pay \$250 million bribes to bag lucrative power contracts from the state.
- A day after the Power Ministry's November 30, 2021, order, Andhra Pradesh signed a Power Sale Agreement (PSA) with SECI, the nodal agency in the country for renewable power, on December 1, 2021.
- The new government headed by TDP's N Chandrababu Naidu is currently scrutinising the PSA signed during the previous government under YSR Congress Party. This comes after the US court indictment of Gautam Adani, Sagar Adani and six others.

Do You Know:

- Adani Group Chairman Gautam Adani, his nephew Sagar Adani and six others were indicted by US prosecutors in New York on November 20 this year, in an alleged Rs 2,029 crore bribery case. The bribes were allegedly offered to Indian government officials for securing “lucrative solar energy supply contracts” with state electricity distribution companies.
- Apart from Gautam Adani and Sagar Adani (the 30-year-old son of his brother Rajesh Adani, and Executive Director of Adani Green Energy Ltd), the other defendants named are: i) Vneet Jaain, CEO of Adani Green Energy Ltd, ii) Ranjit Gupta, CEO of Azure Power Global Ltd between 2019 and 2022, iii) Rupesh Agarwal, who worked with Azure Power between 2022 and 2023; iv, v, vi) Cyril Cabanes, a citizen of Australia and France, and Saurabh Agarwal and Deepak Malhotra, all three of whom worked with a Canadian institutional investor.
- According to the US prosecutors, the “Indian Energy Company” and a “US Issuer” won awards to supply 8 gigawatts and 4 gigawatts of solar power at a fixed rate to state-owned Solar Energy Corporation of India (SCI).
- SECI was supposed to sell the power to state electricity companies. But since SECI could not find buyers, it could not enter into corresponding power purchase agreements with Adani Group and Azure Power.
- It was after this that the defendants came up with a plan to bribe state government officials in India to buy the power from SECI. A press release by the Attorney's Office of the Eastern District of New York says, “...between approximately 2020 and 2024, the defendants agreed to pay more than \$250 million in bribes to Indian government officials to obtain lucrative solar energy supply contracts with the Indian government, which were projected to generate more than \$2 billion in profits after tax over an approximately 20-year period (the Bribery Scheme). On several occasions, Gautam S Adani personally met with an Indian government official to advance the Bribery Scheme...”
- The US Securities and Exchange Commission also charged Gautam Adani, Sagar Adani, and Cabanes.



12 CREW MEMBERS OF SUNKEN VESSEL RESCUED IN JOINT EFFORT BY INDIA, PAK.

In close collaboration with the Pakistan Maritime Security Agency (MSA), the Indian Coast Guard (ICG) rescued 12 crew members of the sunken Indian vessel MSV Al Piranpir from the north Arabian Sea in the early hours of Wednesday.

“This humanitarian search and rescue mission saw close collaboration between the ICG and MSA, with both nations’ Maritime Rescue Coordination Centres (MRCCs) maintaining continuous communication throughout the operation,” the ICG said in a statement on Thursday.

Al Piranpir, a mechanised sailing vessel (dhow), which had departed from Porbandar for Bandar Abbas in Iran, sank in the early hours of Wednesday due to rough seas and flooding, the statement said.

The distress call was received by the ICG’s MRCC, Mumbai, which promptly alerted the ICG Regional Headquarters (North West) in Gandhinagar and ICG ship Sarthak was immediately diverted to the reported location. The MRCC, Pakistan was also contacted to alert mariners, and their assistance was swiftly provided, the ICG stated.

“The 12 crew members, who had abandoned their vessel and taken refuge in a dinghy, were located and rescued, within Pakistan’s search and rescue region. The search was supported by a Pakistan MSA aircraft and merchant ship MV Cosco Glory,” the Coast Guard said.

ELECTRONIC MONITORING OF PRISONERS: ARGUMENTS FOR AND AGAINST

On November 5, President Droupadi Murmu released a report titled “Prisons in India: Mapping Prison Manuals and Measures for Reformation and Decongestion”. The report, authored by the Supreme Court’s Centre for Research and Planning, suggests a variety of measures to address overcrowding in prisons, including a section titled “Electronic Tracking of Prisoners”.

- A broad comparison can be drawn with India where, like communities of colour in the US, people from Scheduled Castes, Scheduled Tribes and Other Backward Classes backgrounds are overrepresented in prison populations. The latest NCRB data shows that 68.4% of prisoners belong to SC, ST and OBC communities.
- On July 8, a Bench of Justices Abhay S Oka and Ujjal Bhuyan struck down an unusual bail condition imposed by the Delhi High Court on two foreign nationals booked for offences under the Narcotic Drugs and Psychotropic Substances Act, 1985. The Delhi HC granted bail to the accused persons and ordered that they must “drop a PIN on the google map to ensure that their location is available to the Investigation Officer of the case”.
- The court held that such a condition would violate the fundamental right to privacy under Article 21, stating that “The investigating agency cannot be permitted to continuously peep into the private life of the accused enlarged on bail”. The court then deleted this bail condition.

Do You Know:

- According to statistics by the National Crime Records Bureau (NCRB), prisons in India suffer from significant overpopulation with a 131.4% occupancy rate as of December 2022 — 5,73,220 inmates in comparison to a total capacity of 4,36,266 in jails across India.



- In addition, 75.8% of prisoners in India are undertrials. The Prisons in India report suggests that electronic monitoring “could prove to be a cost-effective method to decongest jails in India”.
- Some studies claim that electronic monitoring simply amounts to incarceration by a different name, often referred to as ‘e-carceration’. In the United States of America, where electronic monitoring and movement restrictions for persons on parole or in the pre-trial stage is a widespread practice, the American Civil Liberties Union (ACLU) published a report titled “Rethinking Electronic Monitoring: A Harm Reduction Guide”.
- The Parliamentary Standing Committee in 2023, while advocating for the cost benefits of electronic monitoring, noted that such measures must only be taken with the consent of the inmate in question. “At the same time, it must be ensured that to avoid any kind of human rights violation this scheme or method should be used on voluntary basis after procuring the consent of inmates”.
- The 268th Law Commission report acknowledges the “grave and significant impact on constitutional rights” that such a measure might have. It suggests that such monitoring “must be used only in grave and heinous crimes, where the accused person has a prior conviction in similar offences” and states that criminal legislations should be amended accordingly.

SC MANDATES PRIOR SANCTION TO PROSECUTE PUBLIC SERVANTS UNDER PMLA: WHAT THIS MEANS, ITS IMPLICATIONS

Citing as precedent a recent ruling by the Supreme Court, Delhi Chief Minister Arvind Kejriwal and Congress MP P Chidambaram moved the Delhi High Court seeking a stay of their respective trials. While Chidambaram’s trial in the Aircel-Maxis case was stayed on November 20, the High Court is still hearing Kejriwal’s plea regarding the excise policy scam.

The SC ruling being cited as precedent came on November 6, and for the very first time mandated that the Enforcement Directorate (ED) obtain prior sanction to prosecute public servants on money laundering charges.

What is the prior sanction provision?

Section 197 of the Code of Criminal Procedure, 1973, (CrPC) bars courts from taking cognisance of offences alleged to have been committed by a judge, a magistrate, or a public servant who was “acting or purporting to act in the discharge of his official duty” while committing the alleged offence, unless prior or “previous” sanction has been given by the government. An identical requirement can be found under Section 218 of the Bharatiya Nagarik Suraksha Sanhita, 2023 (BNSS) as well.

This provision is meant to shield public servants from unnecessary prosecution. However, the explanation to the provision clarifies that “no sanction shall be required” when public servants are accused of certain crimes against women (such as rape, sexual harassment, stalking, and voyeurism), and other serious crimes such as human trafficking.

Several rulings on the provision have held that the provision does not extend its protective cover to every act or omission of a public servant while in service. It applies only to those acts or omissions which are done by public servants while discharging their official duties. For instance, in the case of *Devinder Singh v. State of Punjab* (2016), the SC held that “Protection of sanction is



an assurance to an honest and sincere officer to perform his duty honestly and to the best of his ability to further public duty. However, authority cannot be camouflaged to commit crime.”

What does the recent SC verdict say?

On November 6, the apex court held that Section 197(1) of the CrPC will apply to alleged offences under the Prevention of Money Laundering Act (PMLA) too. A Bench comprising Justices A S Oka and Augustine George Masih delivered the verdict in a case involving IAS officers Bibhu Prasad Acharya and Adityanath Das, both of whom are facing money laundering charges, in a case that also implicates former Andhra Pradesh Chief Minister Jagan Mohan Reddy.

In a short, 18-page decision, the SC essentially upheld an January 2019 order by the Telangana High Court which set aside the trial court’s order taking cognisance of the case. The challenge was on the ground that both of them were public servants and, therefore, it was necessary to obtain prior sanction under Section 197(1) of the CrPC before they could be prosecuted.

The SC noted that although there is no specific provision in the PMLA that states prior sanction is not required, it did not find “any provision therein which is inconsistent with the provisions of Section 197(1) of CrPC”. The Bench referred to Section 65 of PMLA which makes the provisions of the CrPC applicable to all proceedings under the PMLA, unless they are inconsistent with the PMLA provisions.

The SC also recorded that the accused were public servants, and that there was a connection between their duties and alleged criminal acts, thus satisfying both conditions for requirement of prior sanction under CrPC section 197(1).

The SC’s judgement has now been cited by public servants such as Congress MP and former finance minister P Chidambaram and former Delhi CM Arvind Kejriwal before the Delhi HC to challenge the cognisance taken by trial court of ED chargesheets in the absence of prior prosecution sanction by the central agency. In Chidambaram’s case the prosecution complaints against him were filed in 2018, and the trial court took cognisance in 2021.

Is prior sanction required in other kinds of cases?

Apart from the requirement under CrPC section 197(1), the Prevention of Corruption Act (PCA) also provides for the requirement of prior sanction to prosecute for offences alleged under PCA against public servants.

Section 19(1) of PCA contains a requirement for prior sanction from the government before the court can take cognisance of certain offenses against public officials such as accepting bribes (Section 7) or receiving undue advantage without paying sufficient consideration in return (Section 11). This sanction, in most cases, must be obtained by the police or the investigating agency. Further, the public servant must be given an opportunity to be heard by the government before allowing the prosecution to go ahead.

In 2018, the PCA was amended to expand the situations where prior sanction is necessary to prosecute public officials. Under the new Section 17A of the PCA, any recommendation or decision made by a public official “in discharge of his official functions or duties” cannot be investigated without the “previous approval” of the government. Following a split verdict in January, a case is pending at the SC to decide if this section applies to cases filed before Section 17A was introduced in 2018.



Notably, with former CM Arvind Kejriwal challenging the cognisance of an ED chargesheet in the liquor policy excise case before Delhi HC on grounds of absence of prior prosecution sanction, one of the arguments put forth has been that for the very same allegations against him, the Central Bureau of Investigation (CBI) had filed the chargesheet against him “only after applying for Sanction u/s 19 of the PC Act, which clearly shows that the facts of the present matter also required the sanction to be obtained.”

How will the requirement of prior sanction impact ED cases involving public servants?

While complaints and the investigation under PMLA will hold, cognisance of chargesheets accusing public servants of money laundering purportedly while in discharge of their duty, by the trial court can go away.

In effect, this can mean that an accused public servant, even if convicted by the trial court, can argue during an appeal that the offences alleged were in discharge of their duty, and that the trial took place without obtaining prior sanction from the government. If this argument is accepted, it can result in the court setting aside the conviction.

In *P K Pradhan v. State of Sikkim* (2001), the SC held that the argument that prior sanction under Section 197 was not obtained can be raised by the accused at any time during a trial, or even after conviction. However, the accused public servant must establish that his alleged act was in the course of the performance of his official duty.

As the SC held in the *Bibhu Prasad Acharya* judgement, “there is no embargo on considering the plea of absence of sanction, after cognisance is taken by the Special Court of the offences punishable under Section 4 of the PMLA.”

REVANCHIST SUITS

Motivated litigation aimed at altering the status of a place of worship, a questionable ex parte court order, and the violent protest that it evoked, led to the killing of four persons in Sambhal district, Uttar Pradesh, recently. The Supreme Court of India’s order calling for preserving peace and harmony has provided some respite from the tension. The Court has also asked the trial judge not to proceed with a suit filed by Hindutva proponents until the Allahabad High Court hears the mosque committee on the validity of the survey order. It has also directed that the report, if any, prepared by an Advocate-Commissioner appointed by the civil court to survey the Shahi Jama Masjid at Chandausi be kept sealed. The incident is part of a baleful pattern of action by aggressive Hindutva proponents who claim that many mosques were built after destroying Hindu temples and seek to use the judicial process to alter the religious character of the structures. The lower court’s order was passed on the same day it was taken up and without hearing the mosque’s management committee. Local residents interpreted the survey as an attempt to convert the 16th century mosque, built during Babar’s reign, into a temple. Police say the four dead were shot by firearms used by the protesters; residents say it was police firing.

The civil court order came on an application in a suit filed by eight parties. The violence took place during a second survey of the mosque. It is unfortunate that precedents arising from similar claims against mosques in Varanasi and Mathura have rendered it normal for courts to pass perfunctory orders in favour of surveying disputed property even before establishing whether such suits were permissible in law. In the process, courts have been routinely allowing the wilful violation of the Places of Worship (Special Provisions) Act, 1991, which freezes the status of places of worship as



on August 15, 1947, and bars suits aimed at changing their status. Former Chief Justice of India, D.Y. Chandrachud's observation that the Act does not bar ascertaining the religious character of a place of worship on that day may have emboldened many an ill-motivated claimant. Independent of this Act, this masjid is a place of worship protected by the Archaeological Survey of India, and there is a prohibition against it being put to any use inconsistent with its character. The lesson is not merely that courts should be wary of entertaining revanchist suits. There should also be sufficient recognition that such developments stoke communal tension, and have undesirable consequences for peace and harmony.

THE SALIENCE OF THE PLACES OF WORSHIP ACT

The story so far:

A suit filed against the Shahi Jama Masjid in Sambhal district, Uttar Pradesh, in which the trial court issued an ex-parte order permitting a survey of the mosque, triggered violence on November 24, resulting in the death of four persons. The petitioners have alleged that the 16th-century mosque was built at the site of an ancient Hari Har Mandir which was purportedly demolished by Mughal ruler Babur in 1529. The incident is part of a pernicious trend of local courts in States like Rajasthan and Uttar Pradesh entertaining civil suits contesting the origins of mosques across the country. Experts have however flagged that such suits constitute a violation of the Places of Worship (Special Provisions) Act, 1991.

What does the 1991 Act stipulate?

The 1991 Act was introduced by the Congress government under Prime Minister P.V. Narasimha Rao amid the communal turmoil that followed the demolition of the Babri Masjid in Ayodhya in 1992. Then Home Minister S.B. Chavan stated that the “enactment of this Bill will go a long way in helping restore communal amity and goodwill.”

The law preserves the character of a place of worship as it existed on August 15, 1947, and prohibits courts from examining whether any place of worship has been altered since that date. Section 3 of the Act forbids the conversion —either in whole or in part — of a place of worship from one religious denomination to another, or even within different sects of the same religion. However, the Ram Janmabhoomi dispute in Ayodhya was explicitly exempted from the Act's purview, as the matter was already sub judice when the law was enacted.

A five-judge Constitution Bench in the 2019 Ayodhya title suit affirmed that the law was designed to protect the nation's secular fabric and imposes a positive obligation on the State to preserve the religious character of all places of worship as they stood on the day India attained independence. Although the disputed site was awarded to the child deity Ram Lalla, the top court barred the institution of similar suits concerning other religious places, in accordance with the provisions of the 1991 Act.

Why has it been challenged?

A slew of petitions have been filed in the apex court challenging the constitutionality of the law, including one by BJP leader and advocate Ashwini Kumar Upadhyay. The petitioners argue that by freezing the status of religious sites as they stood in 1947, the law effectively prevents Hindus from “reclaiming” their places of worship that were allegedly “invaded” by Muslim rulers and British colonialists. They further point out that destroyed temples retain their original character



under Hindu personal laws and cannot be considered valid mosques under Islamic law without the establishment of a waqf.

In September 2022, a Bench led by then Chief Justice of India (CJI) U.U. Lalit directed the government to file a response on its stand within two weeks. However, two years later, the Centre has still not submitted its affidavit.

Noted academician Prof. (Dr.) Faizan Mustafa told The Hindu that the inordinate delay in hearing the challenge has emboldened lower courts to disregard the provisions of the 1991 law. “An authoritative pronouncement from the top court is crucial to preserving the country’s social fabric. The government is duty-bound to defend the constitutionality of parliamentary laws. Similarly, the court must expedite the hearing of the challenge with a presumption in favour of the Act’s constitutionality. A heavy burden lies on the petitioners to prove its unconstitutionality,” he said.

Why did Justice Chandrachud’s remarks stir political row now?

In August 2021, five women associated with the Vishwa Vedic Sanatan Sangh filed a petition in a Varanasi civil court seeking year-round access to pray at a shrine located behind the western wall of the Gyanvapi mosque complex. They claimed the mosque housed several Hindu deities. On April 8, 2022, a Varanasi civil judge appointed an Advocate Commissioner to conduct a videographic survey to ascertain the alleged existence of these idols. The mosque committee challenged the order citing the 1991 Act. However, the High Court and later the Supreme Court refused to halt the survey.

In May 2022, during a hearing on the maintainability of the suit, Justice D.Y. Chandrachud remarked that the 1991 Act does not preclude inquiries into the status of a place of worship as of August 15, 1947, provided there is no intent to alter or convert its character. This interpretation marked a stark departure from the stance taken in the Ayodhya verdict, also purportedly authored by the former CJI. It also broadened the scope for district courts to entertain a host of similar petitions. This oral remark has also recently sparked a political storm, with Congress leader Jairam Ramesh claiming that it has since opened a Pandora’s box.

“Oral observations hold no binding authority as they are not formally recorded in the order. The legislative intent of the 1993 Act could not have been any clearer — it explicitly bars even the admission of such suits. Such claims may only be considered if, on August 15, 1947, the site was unquestionably used by multiple religious communities, for instance, as both a temple and a mosque,” explained Dr. Mustafa.

EXPLAINED: STORY OF THE AJMER DARGAH AND KHWAJA GARIB NAWAZ

A court in Ajmer last Wednesday admitted a petition requesting a survey of the Ajmer Sharif Dargah, the shrine of the revered Sufi saint Khwaja Moinuddin Chishti (also spelt ‘Muinuddin’, ‘Muiniiddin’, or ‘Mu’in al-din’). The petition claims that the dargah was constructed “after demolishing Hindu and Jain temples” that stood at the site.

The town and the dargah

Ajmer, then referred to as Ajaymeru, was once the capital of the Chauhans, a Rajput clan that ruled parts of present-day Rajasthan, Haryana, Delhi, and Uttar Pradesh from the seventh to the 12th centuries CE. Ajaydeva is credited with constructing the city in the mid-12th century.



The town was sacked by the Afghan invader Muhammad of Ghor after he defeated Prithviraj III (popularly known as Prithviraj Chauhan) in the Second Battle of Tarain in 1192. The Ghurid army killed, looted, and “destroyed the pillars and foundations of the idol temples” in Ajaymeru, Har Bilas Sarda, an Ajmer-based jurist, wrote in *Ajmer: Historical and Descriptive* (1911). Sarda’s book is the primary source material cited in the petition filed before the court.

Subsequently, the city fell into a state of disrepair for almost 400 years, until it saw a revival during the reign of the Mughal emperor Akbar (1556-1605).

“In the middle of the fifteenth century AD, it is said that tigers used to roam where the tomb of Khwaja Muiniiddin Chishti stands,” Sarda wrote.

The mausoleum itself was built some time in the second half of the 15th century. According to tradition, Sarda wrote, the cellar in which the Khwaja was interred houses “the image of Mahadeva in a temple, on which sandal used to be placed every day by a Brahman family still maintained by the Dargah gharyali (bell striker)”.

His account, however, does not say that a temple was destroyed to build the dargah.

Robert Hamilton Irvine in *Some Account of the General and Medical Topography of Ajmeer* (1841) wrote about a story he had heard from one of Ajmer’s “most learned khadims” (attendants).

“At one place...there was an ancient shrine sacred to Mahadeva, the lingam of which was hidden by leaves and rubbish. To this wood the Khwaja had retired to contemplate [for] forty days; and every day he hung up his small mussuq of water on a branch of a tree overhanging the lingam. The water constantly dropped on this. At length Mahadeva became highly pleased... [and] spoke out of the stone commending his virtue,” Irvine wrote.

Historian P M Currie, who cited Irvine’s work in *The Shrine and Cult of Mu’in al-din Chishti Ajmer* (1989), mentioned a different version of this legend, in which the lingam lies underneath the Khwaja’s tomb.

Journey from Sistan to Ajmer

These legends narrated by Ajmer Sharif’s khadims serve to explain why people from all faiths and all walks of life come to pay their respects to the Khwaja. Speaking about the legend of Moinuddin’s encounter with Lord Shiva, Irvine wrote: “From this tradition...the Hindus equally venerate the Khwaja with the Mahomedans”.

One can find such stories about many Sufi shrines across India. Sufism, the mystical aspect of Islam, emerged between the seventh and 10th centuries as a counterweight to the orthodoxy of the clergy, and the increasing worldliness of the ummah.

Sufi traditions — especially those of the Chishti order of Sufism to which Moinuddin and later Sufi masters such as Qutbuddin Bakhtiyar Kaki, Hazrat Nizamuddin Auliya, and Nasiruddin Mahmud Chiragh Dehlavi, all of Delhi, belonged — drew heavily from pre-existing local practices, which were seen as heretical in orthodox Islam. The Chishti saints in India preached a message of tolerance and inclusivity.

ajmer dargah, ajmer dargah sharif, shiva temple beneath dargah, ASI, Hindu sena chief vishnu, ajmer dargah, court issues notices, archaeological survey of india, ajmer dargah committee, hindu temple under ajmer dargah, ajmer dargah survey, ajmer dargah conflict, ajmer mosque, ajmer



sharif history, khwaja moinuddin chisti shrine, ajmer sharif news, rajasthan news indian express explained, current affairs Ajmer, then referred to as Ajaymeru, was once the capital of the Chauhans, a Rajput clan that ruled parts of present-day Rajasthan, Haryana, Delhi, and Uttar Pradesh from the seventh to the 12th centuries CE.

Khwaja Moinuddin Chishti of Ajmer exemplified this heterodoxy. He “watched ascetics perform yoga... He realised how much he had in common with the wandering mystics of the land who, like him, were unafraid to express their utter devotion to their creator as the ultimate means of achieving spiritual perfection,” historian Mehru Jaffer wrote in *The Book of Muinuddin Chishti* (2008).

Born in 1141 in Sistan, a province in Persia (Iran), Moinuddin was orphaned at the age of 14. He was set on his spiritual journey after a chance encounter with a wandering mystic named Ibrahim Qandozi, who is said to have advised him to seek out the truth that lay beyond loneliness, death, and destruction (Jaffer). By the time he turned 20, Moinuddin had travelled widely, and had studied theology, grammar, philosophy, ethics, and religion in the seminaries of Bukhara and Samarkand.

In Herath (in present-day Afghanistan), Moinuddin met Khwaja Usman Harooni, a Sufi master of the Chishti order, in whom he found a mentor and spiritual teacher, and was initiated into the Chishti silsila (chain of spiritual descent).

Moinuddin accepted Qutbuddin Bakhtiyar Kaki as his first follower, with whom he journeyed to Multan, where he studied Sanskrit and talked to Hindu scholars. He then went to Lahore, then to Delhi, and finally reached Ajmer in 1191.

He met his wife, Bibi Ummatullah, in Ajmer, and decided to stay in the city. “The modest home of Bibi and Muinuddin made of mud soon became a refuge for all those without roof, shelter or food, and for those seeking solace and peace. His generosity and amazing acts of selflessness earned Muinuddin the title of Gharib Nawaz, or friend of the poor,” Jaffer wrote.

Development of the shrine

Moinuddin died in 1236. “On the death of the Khwaja, his remains were interred in the cell in which he lived, but no masonry tomb was built over them. In fact he appears to have been forgotten in Ajmer,” Sarda wrote.

A pucca mausoleum for the pir was first constructed in the 1460s by the Khalji rulers of Malwa (not to be confused with the Khalji sultans of Delhi). Sultan Mahmud Khan Khalji and his son Ghiyasuddin built the Buland Darwaza, the dargah’s massive northern gateway.

The architecture of this gateway has been cited in the petition. Quoting Sarda, the petition says that “this gate is supported on either side by three-storied chatrees of carved stone, the spoils of some Hindu building. The materials and the style of these chatrees plainly betray their Hindu origin... It is also stated that these chatrees and the gate...formed part of an old Jain temple, which was demolished”.

The current white marble dome of the Ajmer Dargah was built in 1532, during the reign of the Mughal emperor Humayun, according to an inscription on the northern wall of the building.

But the real expansion in Ajmer took place during the reign of Akbar, who was a great devotee of a later Chishti saint, Salim Chishti of Fatehpur Sikri.



“By 1579 Akbar had come on pilgrimage to the dargah of Mu’in al-Din Chishti in Ajmer fourteen times... The construction of religious structures was encouraged by the new status that Akbar’s interest in the Chishti sect conferred upon the city; this was enhanced by imperial decree,” historian Catherine B Asher wrote in her seminal work *Architecture of Mughal India* (1992).

In the early 1570s, Akbar had a mosque — now referred to as the Akbari Masjid — built to the west of the shrine’s southern entrance.

Further construction took place during the reigns of emperors Jahangir (1605-27) and Shah Jahan (1628-58). In 1616, Jahangir had a “gold railing with lattice work” built around the tomb of the saint.

GOVT HAS AGREED TO 95% LOCAL QUOTA IN JOBS: LADAKH LEADERS

Over a year after the Union Ministry of Home Affairs constituted a High Powered Committee (HPC) to address the concerns of the people of Ladakh, representatives from the region met with the Minister of State for Home Affairs Nityanand Rai in New Delhi on Tuesday.

- Members of Apex Body Leh (ABL) and Kargil Democratic Alliance (KDA) – the two organisations leading the movement for statehood and other demands – met the minister at North Block. This reservation, according to those who attended the meeting, extends to both gazetted and non-gazetted posts in the region.
- Former Ladakh MP and ABL leader Thupstan Chhewang, who is also part of the HPC, said, “The meeting took place in a cordial atmosphere, and an important step has been taken in resolving the issues of the people of Ladakh. We have a firm commitment from the government on recruitment and they have said that this will begin within the next three months.”
- In January 2023, after months of agitations within and outside Ladakh, the J&K and Ladakh Division of the MHA issued an order constituting the HPC to discuss measures to protect Ladakh’s “unique culture and language”, considering its geographical location and strategic importance.
- The HPC’s mandate includes “ensuring the protection of land and employment for the people of Ladakh.”
- However, with differences over the constitution and the agenda of the HPC, the representatives held their first meeting with the MHA in December 2023. After four rounds of discussions, talks broke down in March this year, with the ABL and the KDA remaining firm on their four-point agenda.

Do You Know:

- Articles 371 and 371-A through J provide “special provisions” for specific states, often to give representation to certain religious and social groups and to allow these groups to exercise autonomy over their affairs without interference from the state and central governments.
- Special provisions under Article 371 would allow protections to be extended to the local population of Ladakh, while stopping short of the widespread autonomy that is provided to ADCs and ARCs under the Sixth Schedule.
- When the Constitution first came into force, Article 371 stood alone, requiring the creation of “development boards” in Maharashtra and Gujarat for certain regions in order to assess their



overall development and the need for government expenditure. As new states were created, more special provisions were introduced.

- Following the repeal of Article 370 in August 2019 and the subsequent enactment of the Jammu and Kashmir Reorganisation Act, 2019,

Ladakh has been recognised as a separate Union Territory “without legislature”. UTs like New Delhi and Pondicherry have their own Legislative Assemblies.

- Ever since the separation, organisations like the ABL and the KDA have demanded that Ladakh be included under the Sixth Schedule. This Schedule contains provisions regarding the administration of tribal areas in the states of Assam, Meghalaya, Tripura and Mizoram.

- Inclusion under this Schedule would allow Ladakh to create Autonomous District and Regional Councils (ADCs and ARCs) — elected bodies with the power to administrate tribal areas. This would include the power to make laws on subjects such as forest management, agriculture, administration of villages and towns, inheritance, marriage, divorce and social customs. A majority of the population in Ladakh belongs to Scheduled Tribes.

IS THE CASTE CENSUS A USEFUL EXERCISE?

The demand for a caste Census has become a heated political issue, fuelled by calls from opposition leaders, NGOs, and, more recently, the Rashtriya Swayamsevak Sangh (RSS) also adding itself to the cohort. Proponents argue that such a Census would determine the population sizes of various castes and that these numbers can be used to provide a proportionate share to each caste in government jobs, land, and wealth.

This article discusses how the attempt to collect individual caste data will once again prove to be a futile exercise, and how individual caste-based proportionate reservations is a regressive policy.

Caste Census: a historical background

The exercise of a caste Census in India dates back to the late 19th century when the first detailed caste Census was conducted in 1871-72. It attempted to collect caste-based information and classify various groups, and was conducted across four major regions — the North-Western Provinces (NWP), the Central Provinces (CP), Bengal, and Madras.

There were several arbitrarily constituted “sets” based on a very superficial understanding of caste. In the NWP, for instance, only four sets were officially recorded — Brahmins, Rajputs, Baniyas, and “other castes of Hindus”. Meanwhile, in the CP, groups such as “servants and labourers” and “mendicants and devotees” were arbitrarily included under these sets. Some of Bengal’s classifications included beggars, musicians, and cooks, while Madras added “mixed castes” and “outcastes” as distinct categories.

Frustrated with the complexities of understanding caste, W. Chichele Plowden, who prepared the 1881 Census report, termed the whole question of caste ‘confusing’ and hoped that ‘on another occasion no attempt will be made to attempt to obtain information as to the castes and tribes of the population’. However, the same issues persisted in the caste Census of 1931 where 4,147 castes were identified. The officials were surprised to find that caste groups frequently claimed different identities in different regions.



These challenges are not relics of the past but continue to shape the difficulties India faces to conduct a caste Census today. For instance, the Socio-Economic and Caste Census (SECC) of 2011 identified over 46.7 lakh castes/sub-castes with 8.2 crore acknowledged errors. A more recent example is the controversy surrounding the inclusion of 'hijra' and 'kinnar' as categories in the caste list in the Bihar Census (2022).

Challenges to access accurate data

Upward caste mobility claim — the reporting of one's caste by respondents can be influenced by the perceived prestige associated with certain social groups and their position within the varna hierarchy. This is evident from changes in caste claims between the 1921 and 1931 Censuses, where some communities that initially reported belonging to lower positions within the varna system in 1921 later reported themselves as belonging to higher categories in 1931 (see Table 1). Another notable observation from these claims is that different members of the same community, such as Sonar, reported belonging to different social categories — Kshatriya and Rajput in 1921, and Brahmin and Vaishya in 1931, in the same region (see Table 1). These occurrences were noted in colonial Censuses but their implications remain relevant even today.

Downward caste mobility claim — some respondents may claim to belong to a group positioned lower in the social hierarchy, particularly when they are aware of the potential benefits associated with such affiliations. Notably, these downward social group mobility claims are predominantly a post-independence phenomenon likely due to the advantages associated with reservation policies (such as when some upper castes demand OBC status/ some OBCs demand ST status).

Problem of caste misclassification — similar-sounding castes and surnames often lead to confusion in caste classification. For example, in Rajasthan, surnames like 'Dhanak', 'Dhankia', and 'Dhanuk' are classified as SC, while 'Dhanka' is listed as ST. Similarly, the surname 'Sen' refers to an upper-caste group in Bengal, whereas 'Sain' is associated with the OBC barber community. Enumerators may mis-record such surnames, inadvertently placing communities in incorrect social categories. Additionally, caste remains a sensitive issue, which may make both respondents and enumerators uncomfortable discussing it directly.

As a result, enumerators might avoid asking about caste explicitly and instead make assumptions based on surnames, further increasing the risk of misclassification.

On proportional representation

Proportional representation in reservations may appear fair at first glance, but upon closer inspection, it becomes clear that it is both impractical and regressive. The system of reserving positions based on a reserved category's quota is straightforward: the reserved posts are determined by dividing 100 by the percentage of reservation allotted to that reserved category. For instance, since the reservation for OBCs is 27%, every 4th position in a sequence of vacancies would go to an OBC candidate ($100/27 = 3.7$, rounded up to 4). Similarly, an SC candidate would get every 7th position ($100/15 = 6.7$, rounded to 7), an ST candidate every 14th position ($100/7.5 = 13.3$, rounded to 14), and an EWS candidate every 10th ($100/10 = 10$).

However, significant flaws emerge when proportional representation formulas are applied to individual castes. According to different ministries data, there are around 6,000 castes. Assuming India's population is approximately 1.4 billion, the average population per caste would be around 2.3 lakh.



To illustrate the challenges of implementing proportional representation at the individual caste level (see Table 2), consider a hypothetical caste ranked last with a population of just 10,000 (0.0007% of the total population). For this caste to secure just one reserved vacancy in an institution, at least 1,40,845 positions would need to be advertised. Using the UPSC as an example, which typically advertises around 1,000 vacancies annually, it would take 141 years for the least populous caste to receive a single vacancy. To make matters worse, if we consider 46.7 lakh castes/subcastes as reported in SECC 2011, the number of vacancies required will be 46,73,034 and the UPSC will take more than 7,000 years to provide the first vacancy to the least populated caste.

Hence, the idea of proportional representation at the level of individual castes proves to be regressive, as it disproportionately excludes the least populous castes from accessing the benefits of reservation.

IN 8 IITS AND 7 IIMS, OVER 80% FACULTY ARE FROM GENERAL CATEGORY

In at least two Indian Institutes of Technology (IITs) and three Indian Institutes of Management (IIMs), the share of faculty belonging to the General Category exceeds the 90% mark. In six other IITs and four other IIMs, the share is 80-90%. These conclusions are based on Right to Information (RTI) replies received from these institutions individually on various days in September 2024.

The Centre mandates reservation of 27% in faculty positions for candidates of Other Backward Classes (OBC), 15% for those belonging to Scheduled Castes (SC), and 7.5% for those belonging to Scheduled Tribes (ST) in both the IITs and IIMs as a part of its policy which covers nearly all Central educational institutions.

In IIM Indore, 106 of the 109 posts (97.2%) are held by faculty belonging to the General Category. There are no faculty belonging to the SC or ST reserved categories in IIM Indore, according to the RTI reply received on September 20. In IIM Udaipur, more than 90% of the faculty belong to the General Category. In IIM Lucknow, 95% of the faculty belong to the General Category. In six of the IIMs analysed, there is no faculty member who belongs to the ST category. In IIM Bangalore, where there were protests demanding proper implementation of reservations in faculty recruitment, over 85% of the faculty belong to the General Category.

In IIT Mumbai and IIT Kharagpur, 90% of the over 700 faculty positions are held by people from the General Category. In the Mandi, Gandhinagar, Kanpur, Guwahati, and Delhi IITs, 80-90% of the faculty belong to the General Category.

Overall, in the 13 IIMs for which relevant data could be ascertained through RTI requests, 82.8% of faculty members are from the General category, 5% from the SC category, 1% from the ST category, 9.6% from the OBCs and the rest split across Economically Weaker Sections (EWS) and the quota for the physically challenged. Chart 1 shows the category-wise share of faculty members in select IIMs which shared data.

Overall, in the 21 IITs for which data were shared, 80% faculty are from the General Category, 6% from the SC category, 1.6% from the ST category, 11.2% from the OBC category, and the rest split across the EWS and the quota for the physically challenged. Chart 2 shows the category-wise share of faculty in select IITs which shared data.

While the overall figures show a smaller share than what is mandated, not all IITs and IIMs are the same. In IIT Patna, for instance, 38% of the faculty are OBC, followed by 22% who are SCs, and



13% who are STs; 12% are from the General Category. In the IITs in Bhilai and Indore too, around 50% of the faculty are from the General Category.

Similarly, among the IIMs, 51% of the faculty in IIM Jammu are from the General Category, 19% are SC, 5% are ST, 23% are OBC and 2% belong to the EWS category.

For the RTI requests, only some IITs and IIMs had given the sanctioned strength and vacancy across various posts. Among the seven IIMs which had shared vacancy data, 256 vacancies were listed. Of those, 88 were for the OBC category, the highest among all categories, followed by 54 from SCs. There were 30 unfilled posts among STs too.

Among the 11 IITs which had shared vacancy data, 1,557 vacancies were listed. Of those 415 were for the OBC category and 234 were for the SCs. There were 129 unfilled posts among STs too.

AI CHALLENGE IN CLASSROOM

- A law student challenged a university's decision to fail him for using AI-generated material in an examination. The university later passed the student, and the Punjab and Haryana High Court disposed of the petition.
- The case highlights ethical and academic challenges posed by generative AI (GenAI) in education and research. Institutions are grappling with balancing GenAI's benefits, such as enriched learning, and its potential misuse.
- Many institutions continue traditional evaluation methods, ignoring the growing impact of GenAI. Some institutions rely heavily on AI detection tools, which often have false positive rates and limited reliability when human modifications are involved.
- AI detection tools work on probabilistic assessments and are more prone to errors when AI-generated content is edited. Decisions on academic malpractice should rely more on subject-area experts than solely on machine-generated reports.
- Institutions must establish clear guidelines on permissible AI assistance, distinguishing between acceptable uses (e.g., language correction) and misuse. Regular dialogues within institutions can help create discipline-specific policies.
- Supplementing written submissions with oral examinations can ensure a more holistic candidate evaluation. Faculty workload planning must account for the increased effort required for such assessments.
- Students and researchers should disclose the AI tools used and their purposes. Maintaining records of drafts, such as version histories in word processors, can provide transparency in authorship.
- Bodies like UGC and AICTE should facilitate these transformations by setting standards and supporting institutions in their implementation.
- The "publish-or-perish" culture in academia promotes quantity over quality, incentivizing potential misuse of AI tools. There is a need to explore alternative scientific communication and evaluation methods that prioritize quality.



- Reforms in incentive structures, academic assessment methods, and institutional policies are necessary to balance the opportunities and challenges posed by GenAI. Institutions must integrate GenAI into academia responsibly while maintaining the integrity of education and research.

Do You Know:

- The response from many Indian institutions to this crisis has, unfortunately, been far from satisfactory. A substantial chunk of institutions continues to proceed with traditional modes of evaluation, as if nothing has changed. Some institutions that are concerned about excellence in education and research have gone to the other extreme to rely heavily on technology. Many indiscreetly use AI detection tools like Turnitin AI Detector to penalise students and researchers.
- As numerous scientific studies have pointed out, false positive rates are a matter of concern with respect to most AI detection tools. These tools operate on probabilistic assessments and their reliability substantially goes down when human intervention modifies an AI-generated draft.
- A constructive starting point for addressing the current GenAI crisis could be opening dialogues within institutions on what constitutes permissible AI assistance, and what is not. This clarity is important, as AI tools are increasingly getting integrated to widely used word processors – use of AI tools for language correction, for example. Without clear guidelines, students and researchers may inadvertently commit mistakes. Institution-level dialogues can lead to both general and discipline-specific guidelines.
- It is also important for policy makers to revisit the incentive structures within academia and research, particularly the relentless focus on publications that promotes a publish-or-perish culture.

EXPRESS INVESTIGATION OF MANUAL SCAVENGING: THE APATHY MUST END

Since 1993, India has had a law to ban manual scavenging. Since 2013, employers are required by law to provide 44 types of protective gear to labourers engaged in cleaning septic tanks and sewers. Yet, according to the Union Ministry of Social Justice and Empowerment's data, 443 workers died between 2018 and 2023, while undertaking this hazardous task. This, by all accounts, is a conservative estimate. Several independent surveys have talked about the continued reluctance on the part of state governments to admit that the practice prevails under their watch. Unable to provide safety equipment, municipalities live in denial. Employers are rarely held accountable when manual labourers succumb to the perils of their jobs. An investigation by this newspaper has revealed only one conviction for 75 sewer deaths in Delhi in the past 15 years. From the police being unable to trace the culprits to the investigating officers not cooperating with the judiciary or failing to appear before the courts, it reveals the apathy of law-enforcing agencies. That several sewer deaths happened at high-profile locations at the national capital, including prominent malls, hospitals and hotels only shows that the abdication is unabashed and pervasive.

The Manual Scavengers and Their Rehabilitation Act, which came into force in 2013, asks state governments and municipalities to identify workers who clean sewers and provide them with alternative employment options. A year later, the Supreme Court also asked states to abolish manual scavenging and rehabilitate the workers. However, local bodies outsource sewer cleaning to private contractors, who do not maintain proper rolls of manual scavengers. Investigations often come to a dead end because the police cannot find written orders from contractors asking



workers to enter sewers. Located at the margins of society, the families of the deceased do not have the resources to fight lengthy legal battles.

Government initiatives to end manual scavenging have fallen short of their objectives because they do not adequately account for the social conditions that force people to plumb toxic cesspools. Civil society groups have, for long, argued that fixing the problem is difficult without acknowledging that it operates at the intersections of caste, economic inequalities and the deficits of the country's sewerage networks — most septic tanks are not amenable to new technology and machines are too big to operate in the narrow bylanes of dense urban areas. The failings, as this newspaper's investigation shows, are at multiple levels. A government that counts the Swachh Bharat Mission among its successes needs to do more for the safety and well-being of the workers at the frontlines of its cleanliness projects.

INDIA'S 'ONE NATION, ONE SUBSCRIPTION' PLAN

The story so far:

The Union Cabinet approved the Indian government's 'One Nation, One Subscription' (ONOS) scheme on November 25. The ONOS promises to provide equitable access to scholarly journals in all public institutions.

What does the ONOS entail?

First mooted around 2018-2019, the scheme's ambitious rollout comes with a substantial financial outlay of ₹6,000 crore over three years (2025-2027), to be paid to 30 major international journal publishers. For perspective, the Indian public and its academic institutions collectively spend around ₹1,500 crore every year on journal subscriptions. This is a rough estimate and probably includes the cost of subscription to databases as well; if so, the current total public expense to access journals will be well lower than ₹2,000 crore per year.

At the outset, ONOS's promise to offer equitable access to research articles, irrespective of an institution's prestige or financial capacity, which seems like a step towards democratising knowledge. But a closer examination reveals complexities that call for deeper analysis.

Is ONOS swimming against the tide?

The central question is: why is India investing heavily in a subscription-based model at a time when the global research ecosystem is increasingly embracing Open-Access (OA) publishing?

In the subscription model, a journal receives manuscripts from scientists (about their studies, etc.), evaluates them through peer review, and accepts (or rejects) them. Once a paper is accepted, the journal publishes it and makes money by charging people and institutions to access it. OA refers to papers that are published to be freely accessible. There are different kinds of OA. A common type is called gold OA, where the journal makes money by charging authors an article processing charge (APC) to publish papers in the journal. The APC for a single paper has been known to be thousands of dollars. For example, Nature Communications charges \$6,790 per paper. Scientific knowledge, as a public good, should ideally be accessible to all, especially when taxpayers fund it. The COVID-19 pandemic showed why it is important to have immediate and unrestricted access to research, not just for scientists but also for the people at large: to combat misinformation and drive informed decision-making.



Today, more than 53% of all scientific papers worldwide are open access in some way, according to data from Clarivate's Web Of Science platform. This is a significant increase since 2018-2019, when ONOS was first conceptualised, and raises questions about ONOS's financial prudence. If more than half of the research articles are freely accessible, should India not be paying significantly less for subscriptions than before? ONOS risks draining taxpayer money to achieve an obsolete good.

Some international developments further complicate the picture. The U.S. Office of Science and Technology Policy has mandated that from 2026, all publicly funded research articles must be freely accessible without any delay. Similarly, Horizon Europe, the European Union's flagship funding program, requires peer-reviewed publications resulting from its funding be made freely available online. Considering these moves, in another year a significant fraction of research produced worldwide is likely to be freely accessible to everyone.

This timeline raises questions about ONOS's relevance beyond 2025.

What are the challenges of commercial publishing?

The global scholarly publishing system is dominated by a handful of commercial publishers based in Western countries, and they have long been criticised for excessive subscription fees, inefficiencies resulting in delays in publishing articles, and resistance to innovation.

The scholarly publishing industry is built on publicly funded research. Researchers generate new knowledge, write their findings, and perform peer reviews — all without direct compensation from publishers. In the subscription model, these publishers charge exorbitant fees for access, creating a situation where public institutions must pay to access work they have already supported. Publisher profit margins often exceed 30%, revealing the exploitation implicit to scholarly publishing systems.

Even the shift towards OA has been dominated by gold OA and its high APCs. Many prominent journals in a few disciplines, such as biological science, have transitioned to become fully OA. Indian researchers wishing to publish in these journals will have to pay APCs since the allocation for ONOS doesn't provide for this fee. Moreover, most subscription journals are now hybrid, so researchers — especially from the U.S. and the EU — are paying APCs to publish their articles to be OA in these journals.

India, with its immense pool of talent and resources, has the potential to reimagine this publishing ecosystem, fostering innovation in the workflow. Especially when most of the backend work in the publishing industry is outsourced to India, the infrastructure and knowhow definitely exist in the national ecosystem. But ONOS risks entrenching the status quo by reinforcing reliance on Western publishers.

What about copyright transfers?

Another significant issue with the subscription model is the need for researchers to surrender their copyrights to publishers. This allows publishers to use their work without considering the authors' rights or consent. A recent controversy involving Taylor & Francis (T&F) and Microsoft exemplifies the extent of this problem. In early 2024, T&F had signed a deal allowing Microsoft to use its journal content to train artificial intelligence (AI) models. Since authors don't hold the copyright of their work, there is no need for permission from authors — yet they objected because



the use of their work to train AI models was going unpaid. There is an urgent need for policies that protect researchers' intellectual property.

There are ways to address copyright violation concerns. Harvard University pioneered a policy in 2008 that granted the university a non-exclusive, irrevocable right to disseminate the work of university researchers. Researchers retained the right to self-archive their work in OA repositories. Many institutes like the Massachusetts Institute of Technology and the University of Oxford followed suit. ONOS has the opportunity to emulate these models by incorporating a nationwide 'rights retention' policy, enabling Indian researchers to deposit their work in institutional repositories immediately after publication — a practice known as green open access.

India's own 2014 Open Access Policy requires researchers funded by the Departments of Biotechnology and of Science & Technology to make their work openly accessible — but its implementation has been lacklustre. The ONOS could have been the ideal platform to enforce this mandate, ensuring Indian research becomes globally accessible through open repositories immediately after publication.

Is digital content preserved?

Another issue is the long-term preservation of research articles, now that almost all major journals are published online. A recent study in the *Journal of Librarianship and Scholarly Communication* reported that 28% of articles with Data Object Identifiers (DOIs) — unique IDs to identify published papers — aren't preserved, exposing gaps in current practices. The discontinuation of *Heterocycles*, a journal published by the Japan Institute of Heterocyclic Chemistry, in 2023 left around 17,000 articles inaccessible, highlighting the risks of relying solely on publishers to preserve scientific knowledge. In this case access was eventually restored, but the delay illustrates the need for solutions like self-archiving through green OA.

Is self-reliance possible in publishing?

In an era where self-reliance is a national priority, it has been overlooked in scholarly publishing. While Indian researchers may continue publishing in journals like *Nature*, *Science*, *Cell*, etc., significant potential exists to elevate Indian journals to world-class standards.

India has the resources and expertise to build a robust indigenous publishing ecosystem. Preprinting and data sharing should also be considered as an integral part of the publishing workflow (preprinting refers to a paper being published online before it has been peer-reviewed). By investing in infrastructure, editorial processes, and global visibility for Indian journals, the country can reduce its dependence on Western publishers and attract high-quality submissions from across the world. This is not just about the money being drained from our ecosystem: it's also about establishing India as a leader in science and innovation.

What could ONOS have done?

ONOS can be lauded for its ambition to democratise research access, but it should have addressed deeper structural issues plaguing scholarly publishing. There should have been parallel efforts to allow authors to retain copyright, implement OA through institutional repositories, and, importantly, improve self-reliance in scholarly publishing.

Given the allocation ONOS has received from the Indian government, it certainly had the potential to set a precedent for equitable and innovative publishing by addressing all the issues in parallel — yet it chose to overlook them. Without addressing these challenges, ONOS risks becoming a



costly short-term fix. It is time to re-evaluate whether this initiative is a step forward or an expensive detour.

RS PASSES BILL TO STREAMLINE EXPLORATION OF OIL, GAS THROUGH VOICE VOTE

The Rajya Sabha on Tuesday passed through voice vote the Oilfields (Regulation and Development) Amendment Bill, 2024, to streamline oil and gas exploration business in India and delinked petroleum operations from mining operations. It also broadens the scope of “mineral oils” expanding it to include naturally occurring hydrocarbon, coal bed methane and shale gas/oil.

- Union Minister for Petroleum and Natural Gas Hardeep Puri moved the motion for the Bill and it was debated for nearly three hours before its passage in the upper House.

—In his remarks on the need for the Bill, Puri said that the oil and gas sector needs streamlining for ease of doing business, and to attract more investments in the sector to meet the country’s energy requirements.

—He pointed out that there was a large gap between the production of oil and natural gas domestically and what was consumed.

- The oil minister said that the amendments provide a win-win confidence to domestic operators and foreign investors and added that it would bring policy stability, speedy dispute resolution and sharing of infrastructure.

Do You Know:

- According to the PRS, the Oilfields (Regulation and Development) Amendment Bill, 2024 defines mineral oils to include petroleum and natural gas. The Bill expands the definition to include:

—any naturally occurring hydrocarbon,

—coal bed methane, and

—shale gas/oil. It clarifies that mineral oils will not include coal, lignite or helium.

- The Act provides for a mining lease. The lease provides for various activities such as exploration, prospecting, production, making merchantable, and disposal of mineral oils. Prospecting is the initial stage in the search for oil and gas fields, involving assessment of potential petroleum accumulations across large areas.

- The Bill replaces the mining lease with a petroleum lease, which also covers similar set of activities. Existing mining leases granted under the Act will continue to be valid.

- The Act empowers the central government to make Rules on several matters. These include:

(i) regulating the grant of leases,

(ii) terms and conditions of leases including the minimum and the maximum area and the period of lease,

(iii) conservation and development of mineral oils,

(iv) methods for producing oil, and



(v) manner of collection of royalties, fees, and taxes.

• The Bill retains these provisions. It adds that the central government may also make Rules on:

(i) merger and combination of petroleum leases,

(ii) sharing of production and processing facilities,

(iii) obligations of lessees towards protecting environment and reducing emissions,

(iv) alternative mechanisms for resolving disputes in relation to the grant of petroleum leases.

BHARATIYA VAYUYAN VIDHEYAK BILL GETS NOD IN RAJYA SABHA

Parliament on Thursday passed the Bharatiya Vayuyan Vidheyak Bill, 2024, which is expected to provide some relief to aviation personnel in their licensing processes.

The Rajya Sabha passed the Bill on Thursday. The Bill was introduced in the Lok Sabha on July 31 and was passed by the Lower House on August 9.

The most significant change in the Bill is that the radio telephone operator restricted certificate and licence testing process, which was hitherto conducted by the Department of Telecom for aviation personnel, including aircraft maintenance engineers, flight dispatchers, and pilots, has been moved to the Directorate General of Civil Aviation. This will ensure a single-window clearance process as aviation personnel can now secure all their certificates from one authority. Personnel taking exams, including trainee pilots, have alleged that there was rampant corruption in the conduct of the RTR exam under the DoT, with candidates required to cough up several lakhs in bribes.

The Bill also adds power to regulate the design of aircraft, as well as the places where they are being designed, in addition to retaining provisions for their manufacture, repair, and maintenance.

UPROAR IN HOUSE OVER HINDI NAMES FOR BILLS

Opposition MPs sharpened their attack against the Hindi and Sanskrit names of new laws in Parliament on Thursday, accusing the government of engaging in “Hindi imposition” and failing to meet Constitutional requirements.

The Centre defended the move as a reflection of Indian culture and legacy, noting that it does not violate any laws or the Constitution. The parliamentary fight on the issue, sparked by Tuesday’s debate on the Bharatiya Vayuyan Vidheyak — which can be translated as the Indian Aircraft Bill — continued for a third straight day.

YSRCP MP S. Niranjan Reddy said there was a constitutional requirement against using a Hindi title for a Bill whose content is in English. “We are now going to have the possibility of a constitutional court, a High Court or the Supreme Court, striking down this part saying that this part is unconstitutional because Article 348 (1B) requires authoritative text to be in English,” he said.

“The mandate of the people in 2024 was for diversity, dividend, and the federal principle but the government is persisting in the ‘Hindification’ of laws. This is Hindi imposition,” said Trinamool



Congress MP Sagarika Ghose, citing previous examples such as Bharatiya Nyaya Sanhita, which replaced the Indian Penal Code.

Dravida Munnetra Kazhagam MP Kanimozhi N.V.N. Somu echoed her complaint. “I would like the Union government to change the title of the Bill to Aircraft Bill, 2024. Don’t try to impose Hindi on people who don’t speak Hindi. I request the Union government to refrain from naming bills in Hindi and Sanskrit,” she said. Earlier in the debate on Tuesday, Congress MP Syed Naseer Hussain said he faced difficulties in pronouncing the name of the Bill and asked why there should be a Hindi name with English script. Noting that nearly 60% of India’s population is non-Hindi speaking, he accused the government of engaging in “exclusionary tactics”. A day later, CPI (M) MP John Brittas had made fun of the “fashion” of naming Bills in Hindi.

‘Colonial mindset’

On Thursday, BJP MP Ghanshyam Tiwari accused the Opposition MPs of exposing their own “colonial era mindset”.

. Fellow BJP MP Bhim Singh said it was no surprise that a party which could oppose Vande Mataram would also oppose the use of the word ‘vayuyan’. “The party which can oppose it when our government puts ‘Bharat’ instead of India on a board, why will such a party and its leaders not oppose ‘Vayuyan’?” he asked.

Civil Aviation Minister Kinjarapu Ram Mohan Naidu insisted there were no Constitutional or legal violations in the naming of the Bill. “I am a proud Telugu person. I am very proud of my upbringing. But even in Telugu, Bharat is Bharat and vayu is also a Telugu word. So Bharatiya Vayuyan Vidheyak is half Telugu for me. It is a mixture of all languages,” he said.

He added that a cultural cocoon had developed during colonialism; now, under the leadership of Prime Minister Narendra Modi, the Centre wants to break that cocoon, and let the butterfly emerge. “The name is a small indication of this. The text of the Bill is in English. There should not be any probl

Noting that vayuyan is a word in the classical Sanskrit language, he pointed out that the Centre has recently categorised five more languages as classical — Marathi, Assamese, Bengali, Pali and Prakrit — and is making a conscious effort to promote and protect all languages.

SHOULD GOVERNMENT DECIDE WHETHER CAP AND GOWN BELONG AT UNIVERSITY GRADUATIONS?

From the vantage point of the present, there is something faintly absurd about certain traditions of dressing that came as part of the baggage of colonialism — such as the wigs that members of the legal fraternity were once forced to wear. Time and context wore out any extra dignity that they conferred on the wearer, and they felt hot and uncomfortable to boot. A similar argument made against the graduation ceremony cap and gown by the UGC — which issued an advisory to the effect in 2015, with follow-ups in 2019 and January this year — has led to several central institutions easing out the outfit. As a report in this newspaper revealed, they have replaced it with “Indian attire” to boost the country’s handloom traditions, ostensibly as part of a decolonisation exercise.

But what place does the government have here? It’s not as if its education to-do list isn’t weighty enough. Among the several ongoing concerns — such as ensuring equity and access to learning



resources and infrastructure — the matter of what a ceremonial outfit should look like seems out of place. In any case, practical concerns regarding the synthetic fabrics used to make the gown and mortarboard, as well as a desire to promote “traditional” clothing, had led some institutions to ease out the uncomfortable gown and mortarboard even before the UGC put out its advisory — just as a sentimental attachment to another kind of tradition, one handed down during the Raj, made others retain the ceremonial wear.

The matter of clothing presents a peculiar problem, being deeply imbued with meaning not only at a personal level, but also at the level of community, institution and state. In 2019, at Lucknow’s Babasaheb Ambedkar University, the Dalit Students’ Union sought permission to wear formal Western attire, instead of the mandated Indian wear, as a tribute to B R Ambedkar. Clearly, what is seen as a “colonial relic” by some, represents empowerment and choice for others.

CBSE PROPOSAL FOR A TWO-TIER STUDY OF SCIENCE AND SOCIAL SCIENCE MUST GUARD AGAINST CREATION OF NEW HIERARCHIES

Of the many proposals pitched by the National Education Plan (NEP) 2020, a crucial one was the sweeping overhaul of the school curriculum to ensure that “experiential learning and critical thinking” take precedence over rote learning. To this end, it proposed a paring down of the syllabi to ensure better understanding and a move towards improving the quality of engagement between teachers and students. The Central Board of Secondary Education (CBSE) has since taken into account several of its suggestions in the framing of academic curricula and methods of evaluation. The study of Mathematics, for instance, was made two-pronged for students of Class X from 2019-20, allowing them to opt for the standard or basic module, depending on their inclination and proficiency. According to a report in this newspaper, the CBSE is now working on a similar proposal for Science and Social Science. Once approved by the Board’s governing body, students in Classes IX and X can opt for standard or advanced modules in these two subjects from the academic year 2026-27.

At a fundamental level, this proposal is hinged on the idea of catering to diverse learning needs. For students who might be less proficient in a subject, the choice allows them the leeway to focus on alternatives. Both Mathematics basic and standard, for instance, have the same syllabus. But the standard level assesses “higher mathematical abilities compared to basic level”. Standard Mathematics is also mandatory if the student wants to pursue it in Classes XI and XII. However, while the framework of the current proposal is yet to be finalised, eventually the choice runs the risk of becoming counterproductive — it forces students to make a critical selection at a time when they might not be fully cognisant of its repercussions or when they are still discovering their own skill sets and interests. This would only serve to exacerbate existing disparities — students from privileged backgrounds, with access to quality resources and coaching, would be more likely to opt for the advanced level, further widening the gap between them and their less fortunate peers at each successive level. This would undermine not just the principles of equity and inclusivity that the NEP proposes, but also provide succour to the coaching industry it aims to dismantle.

The beauty of a liberal education lies in its breadth. It allows students to explore various disciplines before making informed choices. Before its plan is formalised, the CBSE must ensure that new faultlines are not gouged through the creation of a fresh hierarchy among students in what is already an immensely competitive domain.



PSLV-C59 PLACES PROBA-3 SATELLITES INTO DESIGNATED ORBIT WITH PRECISION

After being rescheduled for a day as an anomaly was detected, the Indian Space Research Organisation (ISRO) on Thursday successfully launched the PROBA-3 (Project for Onboard Autonomy) mission of the European Space Agency aboard a Polar Satellite Launch Vehicle-C59 rocket. The vehicle took off with a powerful roar precisely at 4.04 p.m. from the first launch pad at the Satish Dhawan Space Centre, Sriharikota.

“The PSLV-C59/PROBA-3 mission is successfully accomplished. The spacecraft has been placed in the right orbit,” ISRO Chairman S. Somanath said. The agency said the mission had successfully achieved its launch objectives, deploying the satellites into their designated orbit with precision.

Josef Aschbacher, Director-General, ESA, said: “The latest member of ESA’s family of in-orbit demonstration missions, PROBA-3 comprises two spacecraft launched together which, once safely in orbit, will separate to begin performing precise formation flying... Almost instantaneously after separation, Yatharagga station in Australia started to receive the spacecraft’s signal. Telemetry is flowing to ESA’s mission control centre in Belgium.”

On its website, the ESA said: “A pair of spacecraft were launched together today from India with the potential to change the nature of future space missions. ESA’s twin PROBA-3 platforms will perform precise formation flying down to a single millimetre, as if they were one single giant spacecraft. To demonstrate their degree of control, the pair will produce artificial solar eclipses in orbit, giving prolonged views of the Sun’s ghostly surrounding atmosphere, the corona.”

The ESA said the two satellites stacked together separated from their upper stage about 18 minutes after launch. The pair will remain attached while initial commissioning takes place, overseen from mission control at the European Space Security and Education Centre in Redu, Belgium.

PROBA-3 mission manager Damien Galano said, “Today’s lift-off has been something all of us in ESA’s PROBA-3 team and our industrial and scientific partners have been looking forward to for a long time.”

Details shared by the ESA show that if PROBA-3’s initial commissioning phase goes to plan, then the spacecraft pair will be separated early in the New Year to begin their individual check-outs. The operational phase of the mission, including the first observations of the corona through active formation flying, should begin in about four months.

WHY LOW-INTENSITY CYCLONE FENGAL CAUSED LARGE-SCALE DESTRUCTION

Cyclone Fengal, which made landfall near Puducherry on November 30, was a low-intensity storm as it maintained a wind speed of about 75-95 kmph. However, the cyclone left a trail of destruction in its wake. At least 12 people died, mostly in Tamil Nadu, numerous properties were damaged, and standing crops were destroyed over large areas.

Why did Cyclone Fengal cause widespread destruction despite being a low-intensity storm?

First, what are the different categories of cyclones?

The India Meteorological Department (IMD) categorises cyclones based on the associated wind speeds. These categories are: low pressure (< 31 kmph), depression (31-49 kmph), deep



depression (50-61 kmph), cyclonic storm (62-88 kmph), severe cyclonic storm (89-117 kmph), very severe cyclonic storm (118-221 kmph), and super cyclone (> 222 kmph).

How did Fengal compare to past cyclones?

Over the years, Indian coasts have witnessed several severe storms which led to large-scale devastation. Associated maximum wind speeds went up to 260 kmph (Odisha super cyclone, October 1999), 215 kmph (Cyclone Phailin, May 2013), and 185 kmph (Cyclone Amphan, May 2020). Therefore, compared to many earlier storms, Cyclone Fengal was a low-intensity storm.

What was the impact of Fengal?

Fengal triggered exceptionally heavy rain and flooding in Tamil Nadu and Puducherry.

Krishnagiri and Villupuram in north Tamil Nadu, close to where Fengal made landfall, were among the worst affected areas between November 29 and December 1. Mailam village in Villupuram received 510 mm of rainfall in 24 hours. Puducherry received 490 mm of rainfall in a day, breaking the previous record of 211 mm set on October 31, 2004.

Air, rail and road transport took a hit, highways were inundated, and lakes and rivers overflowed.

Why was Fengal so destructive?

According to the IMD, this happened primarily due to the movement of Cyclone Fengal. From its genesis to landfall, Fengal moved at a slow pace. On occasions, it moved at speeds slower than 6 kmph while at sea. Fengal also remained stationary for nearly 12 hours soon after making landfall close to Puducherry. Maintaining its intensity as a cyclone, the storm caused heavy rainfall and rough windy conditions over the region.

Usually, after landfall, cyclones weaken as they hit obstructions and experience friction from buildings and trees. In the case of Fengal, as the storm stayed stationary, the destruction was far more pronounced, leading to numerous deaths.

Notably, during recent cyclones (such as Dana in October this year), which were more intense than Fengal, human casualties were either nil or limited to single digits.

PREPARING FOR WORSE

It is not uncommon for the southern peninsula to experience heavy or very heavy rainfall during the northeast monsoon, which is also important for Sri Lanka and Maldives. But when Cyclone Fengal crossed the coast, close to Puducherry, on the night of November 30, neither Tamil Nadu nor Puducherry expected the magnitude of devastation that occurred. In a letter to Prime Minister Narendra Modi, Tamil Nadu Chief Minister M.K. Stalin said nearly seven million families and 15 million individuals have been affected. Sixteen people, including four in Puducherry, lost their lives. A landslide in Tiruvannamalai claimed seven lives including five children. Unusually heavy rainfall (40 cm-50 cm) was recorded in many places in Puducherry and the northern and northwestern parts of Tamil Nadu on a single day. An initial estimate puts over 2.21 lakh hectares of farmland including 10,000 hectares in Puducherry to be under water. The cyclonic storm later weakened and crossed coastal Karnataka, adjoining east central Arabian Sea. Though many southern parts received rain, Puducherry and several districts in Tamil Nadu bore the brunt. What worsened the plight of people in some districts was the flood in the otherwise-dry South Pennai river; on Monday, it had a flow of 2.4 lakh cusecs. Mr. Stalin has sought an immediate release of

3RD FLOOR AND 4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



₹2,000 crore from the Centre. The Puducherry Chief Minister, N. Rangasamy, has announced assistance of ₹210 crore.

It is time that the authorities concerned prepared themselves to face extreme weather events, given the rising frequency of very high rainfall. Last year, Kayalpattinam in Thoothukudi received 95 cm, whereas, this time, northern and northwestern districts faced a similar experience. A 2022 monograph by the India Meteorological Department concluded that, on an average, four depressions or cyclonic storms could be expected to affect the southern peninsula every season. The authorities should intensify their concrete and tangible long-term steps beyond the routine ways of providing relief and rehabilitation. Even though Chennai was not hit badly this time, the State government must make public the report of the Advisory Committee for Mitigation and Management of Flood Risk in the Chennai Metropolitan Area, led by former civil servant V. Thiruppugazh. Other measures such as a strengthening of bunds, regular removal of silt from water courses and a relentless drive against encroachment of water bodies must be carried out. Only such steps will be purposeful to the people; taking pride about age-old irrigation management is not enough.

IMD: SECOND WARMEST NOVEMBER SINCE 1901

India experienced its second warmest November in 123 years, the India Meteorological Department (IMD) said on Monday.

This warming trend has continued since the post-monsoon season in October, and could contribute to making 2024 the warmest year ever on record, globally.

- The average monthly maximum temperature recorded over the country was 29.37 degrees Celsius, 0.62 degrees above normal. The average monthly minimum temperatures, too, were high last month, with a deviation of 1.05 degrees above the normal mark of 15.86 degrees.
- According to meteorologists, there were two main reasons for the above normal temperatures in India : the lack of strong western disturbances affecting the plains of northwest India, and lack of cyclonic disturbances (low pressure systems or likewise) — both of which kept the rainfall activity at its lowest across the country.
- In November, there were three western disturbances — the east-ward propagating wind streams that cause snow or rain along its path — that passed over the region.
- There were only two low pressure systems that developed in the Bay of Bengal, of which one intensified into Cyclone Fengal. Whereas, climatologically, November is one of the most favourable months in the post-monsoon season for the development of cyclonic circulations like low pressures or more intense systems that cause rainfall along its path of movement.
- Northwest India received 2.4mm, which was minus 79.9 per cent from normal. Likewise, south peninsular India, some areas which benefit from the northeast monsoon, suffered a rainfall deficit of 37.9 per cent
- Importantly, the IMD chief noted that the declining rainfall during November was becoming a well-established phenomenon over India over the past two decades. IMD's rainfall data 2001 – 2024 suggested that the country has received normal or above rainfall during November only during six out of 24 years.



Do You Know:

- India experienced its second warmest year in 122 years, the India Meteorological Department (IMD). The warmest year ever recorded during this period was 2016.
- The annual mean surface air temperature averaged over the country last year was 0.65 degrees Celsius (1981-2010 period) whereas the same was 0.71 degrees Celsius in 2016, IMD officials said. Globally also, 2023 is set to break all previous temperature records. 2023 was an El Nino year, which is associated with higher than normal temperatures and extremes.
- Seasonally also, the October to February months showed a significantly higher warming trend over the past 100 years. The post-monsoon period (October to December) had warmed by 1 degree Celsius whereas the winter season (January to February) had shown a jump in temperatures by 0.83 degrees Celsius, since 1901.

INDIA CONTINUES TO TOP ROAD ACCIDENT FATALITIES GLOBALLY WITH OVER 1.72L DEATHS IN 2023

Union Minister of Road Transport & Highways Nitin Gadkari Saturday said that over 4.80 lakh road accidents took place in the country last year that resulted in over 1.72 lakh people fatalities.

- When compared with the 2022 data on road accidents, the crashes have increased by 4.2% and there is an increase of 2.6% in fatalities. Over 4.61 lakh road accidents and over 1.68 lakh fatalities took place in 2022.
- The Ministry of Road Transport & Highways is yet to release the 2023 report on Road Crashes in India. While addressing an event on Road safety in Lucknow Gadkari said that out of the total deaths in the accident, around 10,000 deceased are minors.
- Gadkari further said that the most important thing in this is that the highest number of road accident deaths in the world occurs in India and out of this, the highest number of deaths occur in Uttar Pradesh.
- Gadkari said that these accidents are happening because people do not have respect and fear for the law.
- “There are many reasons for accidents, but the biggest reason is Human Behavior. This is also true that there are potholes on the roads at many places. There is a lack of underpasses and foot over bridges. We have identified the black spots in this road engineering problem and such spots are being rectified on the National Highway by spending about Rs 40,000 crore.” said the Minister.
- On an average, in 2023, India witnessed 1,317 road crashes and 474 fatalities every day or 55 crashes and 20 fatalities every hour.

Do You Know:

- According to the report titled ‘Road Accidents in India-2022’, 4,61,312 road accidents occurred in 2022, claiming the lives of 1,68,491 people and causing injuries to 4,43,366 people. The number of accidents has gone up by 11.9 per cent, casualties by 9.4 per cent and injuries by 15.3 per cent, the report reveals. As per the report, a majority of the accidents occurred on national highways (1,51,997).



- Here are some factors/causes that result in road accidents and fatalities in India:
- Lane Indiscipline: According to the Road Accidents in India report 2022- Driving on the wrong side was the second highest cause of total road accidents in 2022, accounting for 4.9 per cent of all accidents.
- Non-use of safety devices: Avoiding Safety Gears like seat belts and helmets. More than 80% of road accident deaths are due to head injuries
- Drunken driving: According to Road Accidents in India Report 2022- Drunken driving/consumption of alcohol & drugs, jumping of red light and use of mobile phones taken together accounted for 7.4 percent of total accidents and 8.3 percent of total deaths.
- Driving without licences: Easy access to driving licenses without a thorough assessment of skills and driving without them is a major contributing factor to the increase in road accidents.

SILICA SCARS

India's growth aspirations have spurred the national mining industry to extract more minerals for use in construction. One such mineral is silicon dioxide, or silica, an important component of sand and stone. Mine workers exposed to silica dust for many years have a heightened risk of developing silicosis, wherein microscopic silica particles are lodged in lung tissue, hampering their normal function. The risk of silicosis is age-agnostic and determined by exposure, and is chronic after onset. Thus it threatens millions of workers, many of them young. In 1999, the Indian Council of Medical Research reported that more than eight million people in the country were highly exposed to silica dust; this population could only have increased since the national government has opened new mines and expanded old ones. On November 29, the National Green Tribunal (NGT) directed the Central Pollution Control Board to draft new guidelines vis-à-vis "granting permission for [silica] mining and washing plants", and the Uttar Pradesh government and Pollution Control Board to set up health-care facilities in areas with silica mines. The NGT is well-intentioned but mine workers are desperate for action.

The Occupational Safety, Health and Working Conditions Code 2020 requires mine workers' employers to notify threats of bodily harm to workers and workers developing specific diseases, including silicosis. But operators often do not notify the Directorate General of Mines Safety, preventing the state from developing an actionable awareness of mine operators' workplace practices; nor have States of their own initiative strived to collect this data. The potential for special hospitals to ameliorate this situation is also unclear: the Code obligates qualified medical practitioners to notify silicosis cases to the Chief Inspector-cum-Facilitator, yet it already required operators to provide free annual health check-ups, which have failed to reveal silicosis cases. Health-care providers have even been known to misrecord silicosis as tuberculosis. The NGT also noted that "concerned authorities" are not living up to the law. The state's passivity is thus the principal roadblock to mine workers' welfare, which guidelines are unlikely to surmount. The passivity also flies in the face of climate justice, an idea India has ironically wielded in multilateral fora to demand concessions on emissions and adaptation financing. The nation's mineral resources are concentrated in 'resource frontier' States that have low literacy and health-care coverage, a disorganised labour force, and where mining provides crucial revenue. When the state diverts the concessions to suppliers of cheap silica, workers tolerate bad working conditions and delay seeking medical or legal recourse until the silicosis has become life-threatening.



NADDA LAUNCHES 100-DAY INTENSIFIED TB ELIMINATION CAMPAIGN FROM PANCHKULA

In a step to eliminate Tuberculosis in the country, Union Health Minister JP Nadda on Saturday launched a 100-day intensified nationwide campaign from Panchkula district of Haryana.

The campaign, focused on enhancing detection, reducing diagnostic delays and improving treatment outcomes, will be implemented in 347 districts of 33 states where the prevalence of the disease is higher.

- Nadda said the rate of decline of tuberculosis incidence in India has doubled since 2015 and is ahead of the global average.

Do You Know:

- According to the Global TB Report 2024, India saw a slight decline in the estimated number of tuberculosis cases and deaths in 2023, but it is nowhere near its elimination target. India had an estimated 28 lakh TB cases in 2023, accounting for 26% of the global cases. And, there were estimated 3.15 lakh TB-related deaths, accounting for 29% of the deaths globally.

- Tuberculosis is caused by an organism called mycobacterium tuberculosis, which mainly affects the lungs, but can also impact other parts of the body. TB spreads through the air when an infected individual coughs, sneezes, or speaks.

- Once diagnosed, the treatment depends on whether it is drug-resistant or simple tuberculosis. According to experts, when recovering from TB, it is critical to consume a well-balanced and nutritious diet to help strengthen the immune system.

- In December 2022, WHO recommended the use of the BPaLM/BPaL regimen for Drug-resistant tuberculosis (DR-TB) patients, which offers a much higher success rate of 89 per cent.

- Although the elimination of tuberculosis is one of the sustainable development targets to be achieved by 2030 by the world, India has set a target for 2025. The national strategic plan 2017-2025 sets the target for India to report no more than 44 new TB cases or 65 total cases per lakh population by 2025.

AMID KEY VICTORIES IN FIGHT AGAINST TB, STATES FACE ONE BATTLE: SHORTAGE OF DRUGS

Last month, the World Health Organisation highlighted two significant milestones in India's fight against TB: an 18% dip in cases over the past 10 years, more than double the global rate; and a 24% reduction in deaths in the same period, higher than the global average of 23%.

- India's TB treatment schedule has two stages: a two-three month Intensive Phase (IP) marked by a combination tablet of four antibiotics, and Continuation Phase (CP), where a patient gets another combination medicine with three antibiotics for four to seven months.

- These are called fixed-dose combination (FDC) drugs. Data for 2022, 2023 and 2024 shows a progressive dip in the supply of FDC drugs from the Centre. For 2023, data shows a 56.5 per cent decline in the supply of drugs for the first phase (IP) compared to 2022; and a 23 per cent drop for the second (CP) across the same period.



- Supplies have improved in fits and starts but this year, data available until June shows, there was a 23.04 per cent dip in supply for the first phase, compared to the first six months of 2023, and a 28.8 per cent dip in supply for the second phase across the same period.
- While treatment is free in government facilities, patients opting for the private sector may end up shelling out around Rs 10,000 for six months of IP and CP and Rs 20,000-30,000 per month for drug-resistant cases.
- Under the National TB Elimination Programme, the Centre is responsible for the procurement and supply of TB drugs, while states receive limited funds to make emergency purchases as a temporary measure.
- Ideally, stocks for three months are maintained at the district, state and national levels and for two months at the block level. Experts say buffer stocks are crucial because those who miss scheduled doses risk contributing to the growing threat of drug-resistant TB, which primarily results from an incomplete course of treatment.
- Among the states topping the charts in reported TB cases are: UP (6.3 lakh), Maharashtra (2.27 lakh), Bihar (1.86 lakh), Madhya Pradesh (1.84 lakh), and Rajasthan (1.65 lakh). Overall, India accounts for 26 per cent of global TB cases and 29 per cent of TB deaths.
- Records show that another key hurdle for the availability of drugs was the cancellation of at least nine tenders issued by the Central Medical Services Society (CMSS) — the agency that procured drugs for Government health programmes — between January 2023 and August 2024 due to “administrative reasons.”

Do You Know:

- India’s contribution to the global burden is 27%, which is down one percentage point from the previous year’s 28%. What is more important is that there has been an increase in reporting of TB cases. The estimated number of cases in a country is based on a mathematical model, and there is a gap between that and the number of people who actually get diagnosed and put on treatment in a country.

- The Global TB report 2023 shows that reporting of cases has improved in India, going beyond the pre-pandemic levels. This is despite the fact that India, along with Indonesia and the Philippines, accounted for 67 per cent decline in reporting of TB cases globally during the pandemic. India reported 24.2 lakh cases in 2022 similar to the 24.04 lakh cases reported during 2019.

The report also noted that India was the only country to have completed a National TB prevalence survey since 2019. “The survey was started in 2019, interrupted for several months in 2020 and then completed in 2021. Results from this survey were a key input to the estimates of TB incidence in India published in this report,” the WHO report said.

- It was during the “End TB Summit” in New Delhi in March 2018 that the Government announced a deadline of 2025 for elimination of the disease. According to the latest WHO data, India was estimated to have had 27 lakh TB cases in 2023, of which 25.1 lakh patients (85 per cent) were receiving medication — a significant achievement since more than 50 per cent of those in this category succumb to the infection without treatment.

- The treatment of Drug-Susceptible TB (DSTB) — mainly for newly diagnosed patients — involves six-nine months of antibiotics.



- The drugs involved are Rifampicin, Isoniazid, Pyrazinamide and Ethambutol in a single daily tablet for Intensive Phase; and Rifampicin, Isoniazid and Ethambutol in a single daily tablet for Continuation Phase. The duration and dosage of these tablets can vary, depending on age, infection level and treatment history.

HOW TUBERCULOSIS DESTABILISES THE MENTAL MOORINGS OF PATIENTS

In 2022, 2.42 million Indians were diagnosed with tuberculosis. A silent crisis, TB is associated with a deep stigma, and those affected have stories of being ostracised and mistreated by families, communities, and even the health system. All of this has a significant impact on the mental health of those fighting TB. In truth, TB and mental illness are co-epidemics.

Evidence suggests that people with mental health issues are more likely to develop TB. Also, TB-related stigma adversely impacts a TB-affected individual's mental health from diagnosis through treatment and its side effects. TB-related mental health issues also significantly diminish an individual's quality of life.

Why does this happen? TB is stigmatised due to the fear of contagiousness, association of the disease with poverty, and unhealthy behaviour. This leads to both social and self-stigma, which leads to mental health challenges. These mental health issues lead to general feelings of hopelessness, despair, and impaired decision-making skills, which can also lead the individual to lose hope in recovery, not be able to follow medical advice, discontinue treatment, etc.

Physical scars

TB treatment is long and comes with extreme side effects. This leads to several mental health issues that affect the individual but sometimes even families who are providing care. Those affected see changes in physical appearance, extreme side effects from rashes to psychotic episodes, and lose self-confidence. It comes as no surprise that the mental toll often parallels the physical damage. Up to 84% of patients with TB have concomitant depression.

It's important for policy and programmes to recognise that the association of TB and poor mental health is bidirectional. While the TB stigma, prolonged treatment, and adverse side effects can have deleterious effects on an individual's mental health, poor mental health can also predispose a person to TB. A weakened immune system known to be associated with mental stress and depression possibly contributes to vulnerability. In addition, addiction to tobacco, alcohol, and narcotics, all associated with mental health disorders, has been associated with a high incidence of TB, suggesting a causal association. The global burden of disease study estimates that in 2017, 197.3 million (95% UI 178.4–216.4) Indians had mental health disorders, making such persons a sizable TB high-risk population.

Standards of care in TB now mandate screening for diabetes and HIV infection among those diagnosed. Shouldn't we also screen for depression and other mental health issues? In a global survey of national TB programmes (NTP's) of 26 countries, it was found that only two NTPs included routine screening for any mental disorder, four assessed alcohol or drug use, and five had standard protocols for the co-management of disorders.

India needs to lead the way with a comprehensive framework and policy on TB and mental health. This should incorporate mental health screening as part of TB care. Studies have used simple questionnaires to screen all patients with TB at the time of diagnosis and these have yielded a good sensitivity. These questionnaires can be self-administered, or administered by community



health workers or DOTS providers. Offering psychological support during treatment should also be a standard of care, with the knowledge that treatment can be arduous and stressful.

Screening for mental stress

Offering mental health supportive services is needed not only from the perspective of the individual patient, but also from a perspective of arresting TB transmission. Studies have demonstrated that those with unaddressed mental health disorders are less likely to adhere to treatment, more likely to drop out of the treatment programme, and have a higher risk of poorer outcomes.

Once screened, we need to address the need for psychological support. While the challenges of limited personnel numbers remain, multiple studies have demonstrated the effectiveness of remote digital therapies such as cognitive behaviour therapy for mild depression. App-based solutions, augmented with artificial intelligence, have been promising. India could leverage smartphone penetration to deliver such services if they are not available locally. As is the case for most community-based mental health interventions, we need to move out of hospitals and deliver such services close to communities.

There is also an urgent need to engage with communities not just to be spokespersons but also work with those affected through support groups and informational support both to affected individuals and families. This has been done successfully in certain small experiments but now needs to be expanded at a national level to create community-based support systems and destigmatize mental health and TB. The community needs to be stakeholders at all levels in policy and programme design.

When care needs to be escalated, pathways for early referral to psychiatrists and prompt initiation of treatment need to be in place. This is likely to be challenging, considering the dearth of psychiatrists in the country. Given the magnitude of the burden of mental health disorders in the country, training more psychiatrists to serve an unmet need needs to be prioritised.

We cannot eliminate TB from India unless we comprehensively address the mental health care needs of TB-affected individuals. Addressing the intersection of TB and mental health demands a collaborative and comprehensive approach. Policymakers must focus on creating integrated policies that provide mental health (MH) support. They also need to allocate resources and prioritise MH services within TB programmes. We need to start by recognising that TB and mental health are commodities, and the integration of mental health care in TB care is needed at every step of the TB care cascade.

WHY MENTAL HEALTH PATIENTS CONTINUE TO STAY IN INSTITUTIONS AFTER REHAB?

Last year, the National Human Rights Commission stated that over 2,000 patients who were fit to be discharged continued to remain at 47 government mental healthcare institutions.

In 2022, Mumbai-based psychiatrist Harish Shetty filed a petition in the Bombay High Court, taking up the matter of a woman who had been a resident of the Regional Mental Hospital, Thane, for 12 years. His plea said that this was a violation of the provisions of the Mental Healthcare Act, 2017, and also violated the rights of the individual. He said families must be kept engaged throughout, and the process should ensure patients return home as soon as treatment is completed.



Most patients of mental healthcare institutions are brought in by families who do not have access to mental healthcare in their hometowns, are unable to care for their loved ones, or are found wandering. While some get treated and rejoin their families, others remain at institutions for years or even decades. Under the Mental Healthcare Act of 2017, a person cannot be admitted to a hospital/mental health institute for more than 90 days. This admission can be extended, or the patient can be readmitted for up to 90 days in cases of patients who still require care, but the State's Mental Health Review Board (MHRB) has to review these cases. But in practice, the law is often not implemented, say experts.

Mumbai-based psychiatrist Swarali Kondwilkar said institutions do contact families of patients when they have their details, but when patients from other cities/States are involved, this may be neglected. "The institution does not have the will to go the extra mile and find the family. Many families lack the resources to travel and find their relatives. In some of these cases, it is assumed that the patient is abandoned." Language is also a barrier in several cases. In some cases, the patients remain because they have nowhere to go.

Families are often overwhelmed by the process of seeking treatment and caregiving, and acceptance of a diagnosis of a mental illness does not come easily to many, said Padmavati Ramachandran, director, Schizophrenia Research Foundation, Chennai. "Stigma continues to persist against persons with mental illnesses. Families may be afraid to allow relatives to mingle. When this continues, the caregiver also starts withdrawing from social activities; the whole family is then affected and may feel that leaving the patient at an institute is their only choice."

WHEN A DNA ANALYSIS REVEALS A CLOSELY GUARDED FAMILY SECRET...

The Centre for DNA Fingerprinting and Diagnostics (CDFD) is a government laboratory in Hyderabad. It provides DNA-based investigative services to the police, the judiciary, and to hospitals that offer organ transplant procedures. Recently, the CDFD handled the case of a family in which the father offered to donate an organ to his ailing son. CDFD technicians generated DNA profiles of the donor, the patient, and also the patient's mother.

While the DNA profiles of the mother and the son were consistent with their claimed mother-son relationship, those of the father and his son were not. The DNA showed that the woman's husband was not the actual father of the patient but a close paternal relative, possibly a brother of the actual father. These findings didn't preclude the organ transplant procedure but by revealing the practice of levirate they created a potentially awkward situation for the family.

Levirate is the custom in some families in which a woman who is widowed or one whose husband is mentally or physically incapacitated has children fathered by her husband's brother. Understandably, the family would prefer to keep such knowledge private. The report from the CDFD was meant to tell doctors they could proceed with the transplant operation because the donor and the recipient belonged to the same family. But by explicitly revealing the woman's husband was not her son's father, it created the risk of an unwanted breach of the family's privacy.

What are DNA profiles?

Every cell in our body has a nucleus that contains two copies of each of the 23 chromosomes, numbered 1 to 23. This 1-23 lump is our genome. One chromosome of each pair is inherited via the mother's egg and the other via the father's sperm.



When we make our own reproductive cells — eggs or sperm — each egg or sperm receives only one chromosome from a pair, i.e., one genome set. When a sperm cell and an egg fuse, they create a cell with two genome sets. This cell, called the zygote, divides to produce all the other cells of the baby.

Every chromosome contains a single DNA molecule that runs from end to end. A DNA molecule has two strands. Each strand is a long, linear sequence of four chemicals: adenine (A), cytosine (C), guanine (G), and thymidine (T). The As on one strand form bonds with the Ts on the other, while Gs bond with the Cs. The As, Cs, Gs, and Ts on one strand are called the DNA's bases and the A-T and G-C combinations are the DNA's base-pairs.

The largest chromosome in humans, chromosome 1, has more than 240 million base-pairs; the shortest, chromosome 21, has more than 40 million. The 23 chromosomes together have 3.2 billion base-pairs.

At several locations, or loci, on each of the 23 chromosomes, some short DNA sequences are repeated multiple times. These loci are called simple tandem repeats (STRs). For example, one strand of an STR locus might have multiple repeats of GGCCA (GGCCAGGCCAGGCCA...). These are paired with complementary CCGGT repeats on the other strand (CCGGTCCGGTCCGGT...). The repeat number of STR loci can differ in the two chromosomes of a pair. For example, a particular chromosome derived from the father might have 30 repeats while the same one from the mother may have 35.

The DNA profile of a person is simply the number of times the simple sequences are repeated in the STR loci. This number can be found by first creating lots of copies of DNA from a sample (using the polymerase chain reaction, PCR), then segregating the DNA fragments by size using a technique called capillary gel electrophoresis. It is sensitive enough to both accurately and precisely establish the number of repeats in an STR.

For example, the table below shows the number of repeats of the father, the mother, and the son in the case illustrated above — i.e. their DNA profiles.

According to the table, the mother's versions of locus D18S51 had 14 and 15 repeats, while the son's versions had 15 and 17 repeats. But the father's versions of D18S51 had 14 and 14. The son received his 15-repeat version from his mother and the 17-repeat version from his father. But the woman's husband didn't have a 17-repeat variant, so this man couldn't be the actual father. Likewise, for three other STR loci, the son received paternal variants that were absent from the donor.

The son and the man still had identical Y-chromosome profiles, plus identical variants in 19 of the 23 non-Y STR loci. This indicated that the woman's husband is closely related to the biological father — possibly a brother. Thus the marriage is levirate.

Levirate marriages in India

Projit Bihari Mukharji, a historian of science at the University of Pennsylvania and Ashoka University in Haryana, ably discussed the practice of levirate marriage in India in his 2022 book 'Brown Skins, White Coats Race Science in India, 1920-66.'

Mukharji cited the pioneering anthropologist and writer Irawati Karve (1905-1970) when he wrote that she spoke "of the three debts that any Hindu man owed and upon the repayment of



which his ultimate liberation depended. These debts were respectively to the gods, the sages, and the ancestors.

Each of these ... required the making of regular offerings. These offerings could only be made by a son. Hence, the function of a son was the making of ancestral offerings, rather than the maintenance of a biological or genetic lineage.”

This pushed families to explore all possible ways, including levirate, to beget a son.

Mukharji added that families are reluctant “to divulge information... not simply... by a modern desire to avert scandal. Rather, it was because, within an older customary framework of kinship, ‘descent’ itself worked differently and to other ends. ... The refusal... to share sexual information was tacitly rooted in a more radical refusal to accept a narrowly biologised notion of inheritance.”

Unfortunately, in the end, DNA analysis appears to have allowed the “narrow biologised notion of inheritance” to win for no reason other than that DNA just doesn’t know when to shut up. And if this isn’t a problem enough, consider what it could mean for the laws we have — or don’t — to protect our genetic privacy.

NICOBARESE HAVE ANCESTRAL CONNECTION WITH AUSTROASIATIC POPULATIONS: STUDY

The Nicobarese tribe inhabiting the Nicobar group of islands in the eastern Indian Ocean are genetically close to the South and Southeast Asians, a new study finds.

- The Nicobar islands comprise seven large islands including Car Nicobar and Great Nicobar, and some islands such as Little Nicobar, Nancowry and Teressa with corals and sandy beaches.
- While previous studies had stated that the dispersal of the Austroasiatic population (languages commonly spoken in Southeast Asia and the Pacific) in South Asia began some 4,500 – 5,000 years ago and their migration spread many agricultural practices, knowledge of plants and domesticating animals, this is for the first time that such detailed genetic analyses of this tribe were conducted.
- The genomic analysis of 1,559 people from this tribe linked the Nicobarese people’s genetic proximity with the Austroasiatic language-speaking Htin Mal communities living along Thailand-Laos’s Nan province.
- “The Nicobarese have genetic lineage with the Southeast Asians. This is for the first time we have a detailed genetic proof,” said Gyaneshwar Chaubey, lead author of the study and anthropologist at the Banaras Hindu University.
- “The Nicobarese migrated into Nicobar islands some 4,500 – 5,000 years ago. Interestingly, both men and women migrated to the islands,” Chaubey said.
- What makes this ancient tribe significant is that they have, so far, lived and survived without admixtures and thereby been able to preserve their genomic origins, language and maintain a remarkable ethnic distinctness over thousands of years.
- In DNA, some regions mutate fast and show variations, whereas some other regions upon mutation stabilise and remain unchanged for even thousands of years. The latter kind of genomic



markers and the advanced technology helped researchers in unravelling the genomic past in this study.

Do You Know:

- In the numerous evolutionary studies and documentation since the stone-age era, humans are believed to have transitioned from being hunter-gatherers into those living in settlements practising food cultivation, agriculture and animal rearing. But researchers argued that the Nicobarese tribe had a different evolutionary history, especially with respect to their living.
- They said that the Nicobarese people and their livelihood practices have links dating back 5,000 years ago. Back then, the Southeast Asian community were extensively involved in farming and agriculture. As food was in grown and available in abundance, these communities thrived and their population exploded. There arrived a point when some from within the community were forced to expand their agri-practices into newer geographical territories, one of them being the Nicobar islands.

ON WORLD WILDLIFE DAY, MAKING A CLARION CALL TO PROTECT INDIA'S CRITICALLY ENDANGERED SPECIES

Despite possessing only 2.4% of the world's land area, India accounts for 7-8% of all recorded species, which includes 45,000 species of plants and 91,000 of animals. This rich biodiversity is one of the reasons that it has been historically identified as a megadiverse country.

World Wildlife Conservation Day (December 4) serves as an occasion to not only celebrate the country's rich biodiversity but also evaluate if enough is being done to protect the critically endangered species that find a home here.

India has 10 biogeographic zones and is home to 8.58% of the mammalian species documented so far, with the corresponding figures for avian species being 13.66%, for reptiles 7.91%, for amphibians 4.66%, for fish 11.72% and for plants 11.8%.

Four of the 34 globally identified biodiversity hotspots, namely the Himalayas, Indo-Burma, the Western Ghats-Sri Lanka and Sundaland, are located in India.

With only about 2.4% of the world's total land surface, India punches far above its weight in encompassing the breadth that evolution has to offer. However, the natural bounty is often at odds with India's economic trajectory.

As the most populous country in the world and with 65% of the population aged under 35, India's growth trajectory implies a hunger for natural resources: land, wood, timber, forest produce, precious metals, coal and more. This unfortunately conflicts with wildlife habitat, bringing several species — of the land and air — too close to comfort with human settlements.

Indian civilisation has absorbed a tolerance, even reverence for several wild animals as is evidenced in its religious mythology. The wildlife reserves and sanctuaries in India, set up to conserve certain endangered species, are unfenced, unlike the big game reserves in Africa and neither is hunting permissible in India as a licensed, recreational sport.



Risk of extinction

However this doesn't imply that India is a haven for wildlife. There are 73 "critically endangered" species in India as of 2022 — the most updated estimates made available by the Ministry of Environment, Forests and Climate Change. The International Union for Conservation of Nature (IUCN) classifies species as critically endangered when they are at the highest risk of extinction in the wild. The number of critically endangered species has risen from 47 in 2011, though this also due to improvements in data availability and monitoring and not entirely due to animals of a species getting decimated.

Of the nine species of mammals considered critically endangered, eight are endemic, which means that their habitat is limited to a small geographic area within India. These include the Kashmir stag or Hangul, Malabar large-spotted civet, Andaman Shrew, Jenkin's shrew, Nicobar shrew, Namdapha flying squirrel, large rock rat and Leafletted leaf-nosed bat.

While the carnivores of the cat family — lions, tigers, cheetahs — garner considerable attention because of their appeal to tourism, they are only three on the list of critically endangered animals.

Birds such as the Great Indian Bustard face threats from sources such as powerlines in Rajasthan and often fail to garner the attention they deserve for their conservation.

MADHYA PRADESH GETS ITS EIGHTH TIGER RESERVE IN RATAPANI

The Ratapani Wildlife Sanctuary in Madhya Pradesh was on Monday declared a tiger reserve following in-principle approval from the Ministry of Environment, Forest, and Climate Change through the National Tiger Conservation Authority.

- The Ratapani Wildlife Sanctuary in Madhya Pradesh was on Monday declared a tiger reserve following in-principle approval from the Ministry of Environment, Forest, and Climate Change through the National Tiger Conservation Authority.
- Officials said this will bring significant benefits. "Local communities will see economic opportunities grow with the promotion of ecotourism, which is expected to generate employment and improve livelihoods," said an official.
- Officials said the tiger reserve designation enables the state to receive funding from the NTCA, which will "ensure better management and conservation efforts for wildlife".
- The notification delineates the core and buffer areas, making this the eighth tiger reserve in the state. The core area spans 763.8 square kilometers, while the buffer area covers 507.6 square kilometers, making the total area of the Ratapani Tiger Reserve 1,271.4 square kilometers.

Do You Know:

- Sitting in the lap of the Vindhya hills, the sanctuary encompasses a World Heritage Site – the Bhimbetka Rock Shelters – and many historical and religious destinations. It is located in the Raisen district with a substantial cover of teak forests and is less than 50 kilometres away from Bhopal.
- The notification was issued under Section 38V of the Wildlife (Protection) Act, 1972, acknowledging the core area as a critical tiger habitat. This will cover nine revenue villages covering 26.947 square kilometers.



RS 800-CRORE BOOST TO 8 LESSER-KNOWN TOURIST SITES IN 6 NORTHEASTERN STATES

To ease overcrowding and over-tourism, eight lesser-known tourist spots in six northeastern states will be developed as iconic sites at a cost of Rs 800 crore approximately. The projects, spread across Meghalaya, Assam, Arunachal Pradesh, Manipur, Sikkim and Tripura, were approved by the Department of Expenditure (DoE) this week.

Funds have been released by the DoE — the first instalment being 66% of the total approved amount — directly to the states concerned; the Ministry of Tourism will monitor the progress, officials told The Indian Express. The states have been given a timeline of two years for completing the projects and the funds will be released before March 2026, they said.

The approved projects include border experience at Nathula in Sikkim (₹97.37 crore), 51 shakti peethas park at Gomti in Tripura (₹97.7 crore), Loktak lake experience in Manipur (₹89.48 crore), Umiyam Lake in Shillong (₹99.27 crore), Assam state zoo in Guwahati (₹97.12 crore) and Siang Eco-retreat in Arunachal's Pasighat (₹46.48 crore).

These are part of the 40 projects — worth over ₹3,295 crore, spanning 23 states — approved by the Centre with an aim to promote a more balanced distribution of tourists across the country, Union Tourism and Culture Minister Gajendra Singh Shekhawat said.

According to the directives of the DoE, the Ministry of Tourism has issued operational guidelines for Special Assistance to States/ UTs for Capital Investment (SASCI) for the development of iconic tourist centres, officials said.

The Ministry of Tourism circulated the SASCI guidelines to the state governments with a request to formulate and submit proposals for projects which are iconic in nature and can create impactful destinations. By the last date of submission, October 15, 2024, a total of 87 project proposals were received costing more than ₹8,000 crore, the officials said.

Thereafter, the Ministry of Tourism shortlisted 40 projects across 23 states for ₹3,295.76 crore which have now been sanctioned. Other selected destinations include Matsyagandha Lake, Saharsa (Bihar), proposed Town Square, Porvorim (Goa), Orchha (MP), among others.

The aim of this scheme is to infuse long-term interest-free loans for 50 years to states for comprehensively developing iconic tourist centres and branding and marketing them on a global scale, Shekhawat told reporters on the sidelines of the just concluded 12th International Tourism Mart in Kaziranga.

“By focusing on lesser-known destinations, the ministry hopes to enhance the overall tourism experience, boost local economies and ensure sustainable growth in the sector through a strategic approach to new project selection,” the ministry said. It is also encouraging state governments to explore public-private investment opportunities. The land for the projects will be provided by the states concerned.

Along China border

Meanwhile, speaking at the ITM, Arunachal Pradesh CM Pema Khandu said the state has seen a 205% growth in tourist footfall over the last decade. “There has been an increase in tourist numbers in villages bordering Tibet, for which the state government, the Centre and the Army are working together,” he said.



NAGALAND'S HORNBILL FESTIVAL, AND WHY THE CHURCH HAS FROWNED AT RELAXING RULES AROUND IT

The 25th edition of Nagaland's famed Hornbill Festival is now underway amidst a wide public debate on relaxing the 35-year-old liquor prohibition law for the duration of the festival.

Tourism Minister Temjen Imna Along said that the government has granted tourists and stall owners permission to use Indian-made Foreign Liquor (IMFL) within the festival venue, the Kisama Heritage Village.

This move has been decried by influential church bodies, who have long contested the effort to make alcohol, including traditional rice beer, publicly available at the state's largest gathering.

Lending the situation complexity is the state government's proposed review of the Nagaland Liquor Total Prohibition (NLTP) Act 1989.

Firstly, what is the Hornbill Festival?

The Hornbill Festival, organised by the Nagaland government, is the state's largest public event. Started in 2000 as an annual tradition, it aims to boost tourism by showcasing Naga heritage and culture, and thus act as a unifying force within the state. The festival acts as an umbrella of the major festivals celebrated by the 14 recognised Naga tribes in the state, each replete with its own traditions and practices.

The festival is the state's biggest tourist draw: In 2023, the 10-day festival witnessed a footfall of over 1.54 lakh, including 2,108 foreign tourists and 37,089 from different parts of India.

How does alcohol figure in the festival?

The Hornbill Festival holds a special place within the larger public debate on liquor prohibition in the state.

According to academic Theyiesinuo Kreditsu, "This is the only time in this dry state that Thutse or local rice beer is openly sold and liberally consumed with the consent of the government." In her paper, 'Prohibition and Naga Cultural Identity: Cultural Politics of Hornbill Festival, Nagaland', she has identified the constant tussle between the Church and the organisers as a struggle to define the "Naga ethnic identity vis-a-vis Christian identity."

In the past, the Nagaland government has succumbed to pressure and enforced alcohol bans during the festival.

While the inclusion of local rice beer is being debated presently, Tourism Minister Along has supported easing restrictions on IMFL to welcome tourists to the state.

The Nagaland Baptist Church Council (NBCC) – the apex body of Baptist Churches in the state disagrees. It said, "The tourists are not visiting our state because there is a provision for visitors to drink liquor in Nagaland" but to "experience our culture and our heritage and our tribal way of life."



What is the prohibition law in Nagaland?

Complete prohibition was officially introduced in Nagaland in 1989 through the NLTP, backed by the Church and the state's apex women's organisation, the Naga Mothers' Association (NMA).

The arrival of American Baptists to Nagaland in the 1870s introduced new moral codes to a state where brewing rice beer was widely practised. The consumption of alcohol was subsequently painted as sinful behaviour with strict penalties for converts. Ethnographer J.P. Mills wrote that from the 1890s onwards, alcohol was strictly forbidden and transgressors would be expelled from the community.

Today 87% of the state's population is Christian, a majority of whom are Baptists. However, the preparation and consumption of rice beer has continued to this day.

Why is the state mulling a repeal of the prohibition law?

The government initiated a discussion on the efficacy of the prohibition law as a matter of urgent public importance in the last state assembly session in August. Drawing attention to the "Health Hazards of Spurious Alcohol", the government's Advisor on Excise Moatoshi Longkumer said there was a case for regulating alcohol use instead of prohibition.

He said that the "intended objectives" of the Act had not been met and the state continues to witness large-scale liquor smuggling from neighbouring Assam. He also pointed to the prevalence of bootleggers and spurious alcohol in the state, as well as people resorting to narcotics.

The government could also be motivated to stem the loss of excise revenue due to this policy. While the Nagaland government is openly considering a rethink, the Church's opposition continues to loom large over such a move.

SHORT NEWS

NEW DEVELOPMENT BANK

— India has contributed nearly \$2 billion to the BRICS New Development Bank (NDB), and 20 externally aided projects, with loans amounting to \$4,867 million. It came as a response in the Lok Sabha session.

— NDB was established in 2015 by BRICS with an initial subscription of five hundred thousand shares totalling USD 50 billion from the founding members (Brazil, Russia, India, China, and South Africa). The headquarter is located in Shanghai.

BELGIUM

— Belgium has become first of its kind in the world to recognise sex workers' rights, offering them the same benefits as other workers, including maternity leave, pensions, health insurance, and sick leave.

— This landmark legislation, introduced after sex work was decriminalised in 2022, ensures sex workers have the same protections as other professions.



ALEPPO

- The Syrian military said that rebels had entered large parts of Aleppo city during an offensive in which dozens of soldiers had been killed, forcing the army to redeploy. This marked a major movement in the Syrian civil war that began in 2011.
- Syrian rebel forces are also trying to get control of Hama, a city south of Aleppo.
- The Syrian civil war began around the “Arab Spring” of 2010, dubbed so as many countries in the Middle East and North Africa saw uprisings against authoritarian governments that had been in power for decades. In some nations, such as Tunisia and Egypt, ruling governments were forced out. In most others, governments and militaries crushed the movements.
- Places in Syria that were in the news: Aleppo, Hama, Idlib, Latakia, Damascus, Saraqib, and Bab al-Hawa.

INTERNATIONAL COURT OF JUSTICE (ICJ)

- On December 2, the ICJ began hearings in a case that seeks its advisory opinion on the obligations of countries on climate change under existing international laws, and the legal consequences of those obligations.
- The ICJ is the principal judicial organ of the United Nations (UN). It was established in June 1945 by the Charter of the United Nations and began work in April 1946.
- The court is the successor to the Permanent Court of International Justice (PCIJ), which was brought into being through, and by, the League of Nations.
- The ICJ is based at the Peace Palace in The Hague. It is the only one of the six principal organs of the UN that is not located in New York City.
- All members of the UN are automatically parties to the ICJ statute, but this does not automatically give the ICJ jurisdiction over disputes involving them. The ICJ gets jurisdiction only if both parties consent to it.
- The judgment of the ICJ is final and technically binding on the parties to a case. However, the ICJ has no way to ensure compliance of its orders, and its authority is derived from the willingness of countries to abide by them.
- The ICJ has 15 judges who are elected to nine-year terms by the UN General Assembly and Security Council, which vote simultaneously but separately.

INTERNATIONAL DAY OF PERSONS WITH DISABILITIES (IDPD)

- December 3 is annually observed as the International Day of Persons with Disabilities (IDPD) by the United Nations since 1992.
- The theme for this year is “Amplifying the leadership of persons with disabilities for an inclusive and sustainable future.”
- In India, the Rights of Persons with Disabilities Act, 2016 was enacted to give effect to the United Nations Convention on the Rights of Persons with Disabilities.



NATIONAL PANCHAYAT AWARDS

- The Tripura government has bagged seven National Panchayat Awards. The awards will be given out at the National Panchayat Award Ceremony slated to be held on December 11 in New Delhi.
- The Amarapur RD block in Tripura's Gomati district has been ranked the best district panchayat and the best block panchayat under the Nanaji Deshmukh Sarvottam Panchayat Satat Vikas Puraskar.
- Gomati district will get Rs 5 crore and Amarapur RD block another Rs 1.75 crore as prize money for winning the award.

DECEMBER 21

- The United Nations General Assembly (UNGA) has adopted the resolution to declare December 21, observed as Winter Solstice, as World Meditation Day.
- In 2014, India took the lead in declaring June 21 as the International Day of Yoga.

RAJASTHAN TO INTRODUCE BILL AGAINST FORCEFUL RELIGIOUS CONVERSIONS

The ruling BJP government in Rajasthan has decided to introduce a bill in the upcoming Assembly session to stop religious conversion by force or fraud in the state. A decision in this regard was taken during the cabinet meeting chaired by Chief Minister Bhajan Lal Sharma on Saturday.

Arunachal Pradesh, Odisha, Madhya Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, and Uttarakhand have already implemented similar laws.

EPF BOARD OKAYS ETF REINVESTMENT NORMS, EMPLOYER AMNESTY SCHEME

A redemption policy for investments in exchange-traded funds and reinvestment of 50 per cent of those redemption proceeds into ETFs, along with an amnesty scheme for employers to voluntarily disclose and rectify past non-compliance without penalties was approved by the Central Board of Trustees of the EPFO in its 236th meeting Saturday.

PM KISAN SAMMAN NIDHI

- Over 60,000 ineligible persons, including income taxpayers, in Kerala have been pocketing central government's flagship Pradhan Mantri Kisan Samman Nidhi (PM-Kisan).
- The Government of India launched the PM-Kisan Yojana in 2018. Under this scheme, farmers receive Rs 6000 yearly in three instalments of Rs 2000 each every four months.
- It is a Central Sector scheme with 100% funding from the Government of India and the fund is transferred to the bank accounts of the beneficiaries.



NAFITHROMYCIN

- The government has announced the soft launch of Nafithromycin, India's first indigenously developed antibiotic designed to combat antimicrobial resistance (AMR).
- Nafithromycin is designed for the treatment of Community-Acquired Bacterial Pneumonia (CABP), a serious illness caused by drug-resistant bacteria that affects vulnerable populations.
- It has been developed with support from the Biotechnology Industry Research Assistance Council (BIRAC), which is a unit of the Department of Biotechnology.
- Nafithromycin is marketed as "Miqnaf" by the pharmaceutical company Wolkardt. It is 10 times more potent than Azithromycin, a safer, faster, and more tolerable solution for patients.

CAPTAIN AVHILASH RAWAT

- Captain Avhilash Rawat has received the 2024 International Maritime Organisation's (IMO) Award for Exceptional Bravery at Sea for the "extraordinary courage" shown in a Red Sea rescue mission earlier this year.

NAZCA LINES

- The Nazca Lines were discovered by chance in the mid-1920s. It took almost a century to discover some 430 of these geoglyphs. And then, in a span of under six months, artificial intelligence (AI) fuelled a spurt of 303 fresh discoveries.
- Geoglyphs are motifs created on the ground by manipulating surface stones, soil, or gravel. The ones in Nazca — the oldest among which are more than 2,000 years old — were built by removing rocks and earth to create "negative" images.
- The Nazca Lines of Peru is a UNESCO World Heritage Site known for its depictions of larger-than-life animals, plants, and imaginary beings.

KUMHRAR, PATNA

- The ASI has decided to uncover the Mauryan pillars at the archaeological site of Kumhrar, a little over five km from the Patna railway station.
- The ASI had excavated the 80-pillar assembly hall in two phases. The first excavation, in 1912-15, was done by American archeologist David Brainard Spooner, who found one pillar, a number of stone fragments and 80 pits, which, he concluded, were spots where the other pillars stood. The second excavation, in 1961-55, was by the K P Jayaswal Research Institute in Patna, found four more pillars.
- Historians believe that it was here, in this open-air hall, with its 80 pillars standing on a wooden floor and holding up a wooden ceiling, that Emperor Ashoka, who ruled between 268 and 280 BCE, called a decisive meeting of the third Buddhist Council to unify the faction-ridden Buddhist sangha.



AKAL TAKHT

- The former Punjab deputy Chief Minister and Shiromani Akali Dal (SAD) leader were found to be 'tankhaiya' or guilty of religious misconduct by Akal Takht. As punishment, he was directed to perform the duties of a 'sewadar', sitting outside the Golden Temple. On December 4, an assassination attempt was made on him while he was on guard duty at the Golden temple.
- The Akal Takht, which faces the Harmandir Sahib in the Golden Temple complex, was established by the sixth Sikh master Guru Hargobind in 1606 following the execution of his father, Guru Arjan Dev, by the Mughals.
- Guru Hargobind used this platform for governance, and is believed to have issued the first directive (Hukamnama) from here, urging Sikh congregations to contribute horses and weapons to the Panth.
- The Jathedar (head) of the Akal Takht, following the enactment of the Sikh Gurdwaras Act in 1925, is appointed by the Shiromani Gurdwara Parbandhak Committee (SGPC), a body formed in 1920 to manage Sikh shrines and free them from British-supported mahants.
- The SGPC is currently the apex governing body of all Sikh gurdwaras in the states of Punjab and Himachal Pradesh, and the Union Territory of Chandigarh.
- Any person who identifies as a Sikh can be summoned to the Akal Takht, tried, and sentenced.

ADHAI DIN KA JHONPRA

- An Ajmer court admitting a petition to survey the revered Dargah Sharif has renewed similar demands for the historic Adhai Din Ka Jhonpra which is an Archaeological Survey of India (ASI)-protected monument.
- The mosque was commissioned by Qutbuddin Aibak, a slave-turned-general in the Ghurid army, who established the Mamluk Dynasty to kickstart the Delhi Sultanate in 1206.
- It was commissioned by Qutabuddin after the Muhammad of Ghor defeated Prithviraj III (popularly known as Prithviraj Chauhan) in the Second Battle of Tarain.
- The central mihrab in the mosque contains an inscription indicating its completion in 1199, with the roof of a second dome from the north giving a date of 1200. This makes it the oldest surviving monument in Ajmer, and the second oldest completed mosque in North India after the Quwwat ul Islam mosque in Delhi.

TURNER PRIZE FOR ART

- Indian-origin Scottish artist Jasleen Kaur has won the prestigious Turner Prize 2024 for her exhibition, "Alter Altar", that reflects on plurality, personal and political themes.
- The prize is named after English painter JMW Turner (1775-1851), known for his paintings of sceneries, the ocean and dramatic depictions of light. Many of his works show red and yellow hues of sunsets in great detail.



— The Turner Prize was first awarded in 1984, founded by a group called the Patrons of New Art. It sought to “encourage wider interest in contemporary art and assist Tate in acquiring new works.”

— Malcolm Morley, the prize’s first recipient, however, criticised it for turning artists against each other like a “blood sport”.

— Today, £25,000 is awarded to the winner and £10,000 to the other shortlisted artists.

— The prize is awarded to a British artist working globally or an immigrant working in Britain. Before Kaur, the only other Indian-origin artist to have won the prize was sculptor Anish Kapoor in 1991.

LAKE-EFFECT SNOW:

It happens when warm, moist air rising from a body of water mixes with cold dry air overhead. Recently, parts of Michigan were battered by lake-effect snow.

ROCK BOLT TECHNOLOGY:

This is an Australian technique that involves removing loose landslide debris by soil nailing in soil and rock bolting in bedrock. It is successfully treating active landslide zones in the hilly areas of Uttarakhand.



DreamIAS



BUSINESS & ECONOMICS

BITCOIN BREACHES \$100K: WHAT IS BEHIND THE CRYPTOCURRENCY'S SURGE?

Bitcoin surges past \$100K: Bitcoin crossed \$100,000 for the first time on Wednesday (December 4), thanks to Donald Trump's reentry to the White House and the expectation that some of his administrative picks would show more regulatory lenience towards cryptocurrency than their predecessors.

Bitcoin is up 130% for the year so far, with the post US election rally accounting for a significant portion of its gains. It had last seen a sharp increase after Trump chose tech billionaire Elon Musk to lead the new Department of Government Efficiency (DOGE). The acronym refers to Musk's favourite cryptocurrency Dogecoin.

Investors had predicted bitcoin could hit that mark if Trump were to be elected, since his entire campaign featured pro-crypto messaging.

How did Bitcoin rise to a historic high?

One key Trump pick is Paul Atkins, to lead the Securities and Exchange Commission (SEC) that regulates cryptocurrency. Atkins is widely considered a cryptocurrency advocate. Bitcoin touched \$100,000 just hours after his name was announced.

Under the Joe Biden administration, the SEC head Gary Gensler had cracked down on the crypto industry. The SEC sued companies for fraud and money laundering and assessed billions of dollars in fines.

Trump, once a crypto sceptic, turned around in the run-up to the 2024 Presidential elections. His campaign featured positive messaging around cryptocurrencies, such as the announcement of bitcoin as a strategic reserve, and favourable energy policies for crypto miners. His 180-turn on crypto was widely viewed as a way to attract younger male voters.

Trump has also launched his own cryptocurrency business called World Liberty Financial.

What could be the impact in India?

In India, the crypto journey has been topsy-turvy. Investors might not share the same enthusiasm as their American counterparts owing to factors like a high taxation rate on incomes from cryptocurrencies, and the banking sectors' less-than-kind outlook towards the asset.

In 2018, the Central Board of Direct Taxes had submitted a draft scheme to the finance ministry for banning virtual currencies. A month later, the RBI restrained banks from dealing in cryptocurrencies, a decision that had to be reversed by the Supreme Court in 2020.

Despite this, the banking regulator has been vocal about its problems with crypto-assets, having identified them as "a macro-economic risk". In July 2022, underscoring that the RBI had sought a ban, Finance Minister Nirmala Sitharaman said in Parliament that "international collaboration" would be needed for "any effective regulation or ban" on cryptocurrency as the digital currency is borderless in nature.



The government had, in 2022, imposed a tax on “any income from transfer of any virtual digital asset” at a rate of 30 per cent, along with a 1 per cent tax deduction at source (TDS) on each transaction.

However, a paper that was prepared by the International Monetary Fund (IMF) and the Financial Stability Board (FSB), at the request of the Indian G20 Presidency last year, called for licensing crypto service providers, while suggesting that an outright ban might not work given the borderless nature of cryptocurrencies.

On account of the latest surge in cryptocurrencies, Bernstein in a recent note asked whether India can “afford to ignore Bitcoin”. The note further added that the crypto narrative in India “has been caught in this false premise of Central bank digital currencies (CBDC) and what the government calls private crypto.

“This framing is its own pitfall,” the note said.

The note emphasised that Indian investors had “missed the strong proposition” of bitcoin by framing it as private currency. It said the cryptocurrency could be a way for governments to build reserves.

“India has de-risked gold custody by moving almost 100 tonnes of gold back to India from the UK. Bitcoin is a way for governments to build ‘digital gold’ reserves, without the risk of censorship by nations that physically custody gold, in a world where international relations are fragile and dollar reserves are subject to US fiscal risks,” the Bernstein note added.

TRUMP THREAT TO BRICS OVER DITCHING THE DOLLAR: WHAT HE CAN DO, WHAT IT WILL MEAN FOR US, INDIA

Ever since the US chose to weaponize the global financial infrastructure by throwing Iran (in 2012) and Russia (in 2022) out of the Society for Worldwide Interbank Financial Telecommunication (SWIFT), key to international financial transactions, countries across the globe have been looking to reduce dependence on the US dollar as well as the US-led global financial system.

- Perceiving these growing attempts as a threat to the US dollar’s domination, US President-elect Donald Trump has threatened Brazil, Russia, India, China, and South Africa (BRICS nations) with 100 per cent tariffs if they create a new BRICS currency or back any other currency to replace the US dollar as the world’s reserve currency.
- Trump’s threat comes at a time when US sanctions on Russia resulted in Russian oil being redirected from Europe to Asia. In an effort to reduce reliance on the US dollar and to internationalise the Indian rupee, the Reserve Bank of India allowed invoicing and payments for international trade in Indian rupees in 2022, after sanctions were imposed on Russia amid the Ukraine war.

Do You Know:

- Foreign exchange market turnover (daily averages), as per the BIS Triennial Central Bank Survey 2022, shows the US dollar is the dominant vehicle currency, accounting for 88 per cent of the global forex turnover. The rupee accounted for 1.6 per cent. The survey stated that if rupee



turnover rises to equal the share of non-US, non-Euro currencies in global forex turnover of 4 per cent, it will be regarded as an international currency.

- India's trade with Russia in domestic currency remains low due to Indian banks' fear of US sanctions and an unbalanced trade relationship between the two countries. While there has been a multifold rise in India-Russia trade after the Ukraine war, it has been firmly in favour of Russia. India's exports to Russia stood at \$4.2 billion in FY24, but increasing oil imports from Moscow have widened the import bill to \$61 billion. As a result, Russia has a huge pile of rupee reserves that it has not been able to use to settle bilateral trade using domestic currency, and is instead using it to invest in Indian stocks and bonds.

- International trade experts said that while the US dollar dominates global trade—accounting for over 90 per cent of transactions—it is not the only currency used internationally. Other convertible currencies like the Japanese yen, the euro, and the British pound are also integral to global commerce, and the United States has not objected to their use. The proposed BRICS currency is simply an extension of these existing alternatives.

IN 3-YR PLI PUSH, PHONES, PHARMA, FOOD DOMINATE NEW JOBS CREATION

The Government's flagship Production-Linked Incentive (PLI) scheme to boost domestic manufacturing has been a mixed bag so far in terms of job creation. A stock taking of the PLI schemes based on data obtained under the Right to Information (RTI) Act reveals that sectors such as textiles and advanced chemical cells are yet to make a mark, some others such as mobile phones, food processing and pharma have done very well, and some like auto, IT hardware and specialty steel are slow to gain momentum.

- According to data obtained from various ministries by The Indian Express through separate Right to Information (RTI) applications, the PLI schemes have created 5.84 lakh direct jobs till June 2024, which is approximately 36 per cent of the total 16.2 lakh direct jobs targeted to be created over the next five years or so across the 14 sectors.

- Just three sectors, food processing, pharmaceuticals and mobile phones (large scale electronics manufacturing), accounted for over 75 per cent (or 4.47 lakh) of the total jobs created (5.84 lakh). The government had said that the PLI scheme for the food processing sector, to be implemented over six years (2021-22 to 2026-27), would create 2.5 lakh jobs; till June 2024, it created 2.45 lakh.

- According to the RTI replies, the PLI schemes for sectors such as food processing, telecom, white goods, bulk drugs, and pharmaceuticals, are on track to generate the number of jobs announced, or even exceed the target.

Do You Know:

- Under the PLI scheme, which aims to catalyse private investments and enhance manufacturing capacities, the government provides incentives to companies based on incremental sales. Since the scheme was first announced in April 2020, it covers as on date to 14 sectors: textiles, advanced chemical cell (ACC), solar modules, auto and auto components, IT hardware, specialty steel, mobile phones, telecom, medical devices, white goods, pharmaceuticals, food processing, drones, and drug intermediates and active pharmaceutical ingredients.



- Till March 2024, the PLI outlay for these 14 sectors added up to Rs 1.97 lakh crore, and the scheme attracted as many as 755 successful applicants including micro, small and medium enterprises (MSMEs), and private investments of Rs 1.23 lakh crore.

BANKING BILL DEBATE TURNS UNRULY AS OPPOSITION AND TREASURY SPAR OVER A BUSINESSMAN, TWO FORMER PMS

The debate on the Banking Laws (Amendment) Bill in the Lok Sabha took an unruly turn on Tuesday with the Treasury and the Opposition sparring over mentions of an under-probe businessman and two former PMs.

- The changes proposed through the Banking Laws (Amendment) Bill, 2024, will strengthen governance in the sector and enhance customer convenience, Finance Minister Nirmala Sitharaman said on Tuesday.
- Moving the bill for consideration and passing in the Lok Sabha, the Minister said a total of 19 amendments are being proposed to bring changes in the Reserve Bank of India Act, 1934; the Banking Regulation Act, 1949; the State Bank of India Act, 1955; the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970; and the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1980.
- With regard to cooperatives operating in the banking space, Sitharaman said the amendments in the Banking Regulations Act would apply only to cooperative banks, or the part of the cooperatives operating as banks.
- The bill proposes to increase the tenure of directors (excluding the chairman and whole-time director) in cooperative banks from 8 years to 10 years, so as to align with the Constitution (Ninety-Seventh Amendment) Act, 2011.
- Once passed, the bill would allow a director of a Central Cooperative Bank to serve on the board of a State Cooperative Bank.
- The bill also seeks to give greater freedom to banks in deciding the remuneration to be paid to statutory auditors.
- It also seeks to redefine the reporting dates for banks for regulatory compliance to the 15th and last day of every month instead of the second and fourth Fridays.

Do You Know:

- The bill proposes to allow a bank account holder to have up to four nominees in his/her account.
- The bill also seeks to transfer unclaimed dividends, shares, and interest or redemption of bonds to the Investor Education and Protection Fund (IEPF), allowing individuals to claim transfers or refunds from the fund, thus safeguarding investors' interests.
- As the banking sector has evolved over the years and with a view to improving bank governance and investor protection, it has become necessary to make certain amendments to five Acts, according to a statement of Objects and Reasons of the Bill.
- The proposed bill seeks to improve governance standards, provide consistency in reporting by banks to the Reserve Bank of India, ensure better protection for depositors and investors, improve



audit quality in public sector banks, bring customer convenience in respect of nominations, and provide an increase in the tenure of directors in co-operative banks.

- Another proposed change relates to redefining ‘substantial interest’ for directorships, which could increase to Rs 2 crore instead of the current limit of Rs 5 lakh, which was fixed almost six decades ago.

MONETARY POLICY COMMITTEE (MPC)

— The MPC of RBI has announced the bi-monthly monetary policy for FY25. They have kept the repo rate unchanged at 6.5 percent, maintaining their neutral stance. However, the RBI slashed the cash reserve ratio (CRR) by 50 basis points (bps) to 4 per cent from 4.5 per cent in a bid to boost liquidity in the financial system.

— Under Section 45ZB of the amended RBI Act, 1934, the central government is empowered to constitute a six-member Monetary Policy Committee (MPC) to determine the policy interest rate required to achieve the inflation target. The first such MPC was constituted on September 29, 2016.

— The MPC shall consist of the RBI Governor as its ex officio chairperson, the Deputy Governor in charge of monetary policy, an officer of the Bank to be nominated by the Central Board and three persons to be appointed by the central government.

— The CRR is the percentage of a bank’s total deposits that is required to maintain liquid cash with the RBI as a reserve.

— The interest rate that the RBI charges when commercial banks borrow money from it is called the repo rate. It is used by the banks to meet their short-term funding needs.

A WAKE-UP CALL

Even the most pessimistic economic forecasters did not anticipate the sharp downturn in economic momentum reflected in the Gross Domestic Product (GDP) estimates for the July-September quarter. From a five-quarter low of 6.7% in the first quarter (Q1), most independent economists expected GDP growth of 6.5% in Q2, citing slackening urban demand indicators such as moderating GST revenue growth, and weak consumer durables’ and non-durables’ sales. The Monetary Policy Committee (MPC) of the Reserve Bank of India (RBI), in its October review, pegged Q2 growth at 7%, while RBI officials projected a 6.8% uptick in an article soon after. That the actual number came in at just 5.4% — the slowest since the third quarter of 2022-23 — with the Gross Value-Added (GVA) in the economy rising at a marginally better 5.6%, is, therefore, a significant shock. From a robust 8.2% GDP uptick last year, expectations of another year of 7%-plus growth in 2024-25 now appear precariously poised if not overtly optimistic, with the first half clocking just 6% growth.

The RBI’s MPC, which meets again this week, would certainly have to reorient its 7.2% growth forecast for the year, and may find it tougher to keep its focus on reining in inflation amid recent calls from Ministers to cut interest rates to support flailing growth impulses and investments. With inflation at a 15-month high of 6.2% in October, the RBI, which is committed to wait for a durable decline in price rise before switching gears on rates, is unlikely to accede to these calls just yet. It may, at best, unveil measures to ease tight liquidity conditions. Mint Street czars have a tough tightrope walk ahead in the face of the growth slump. North Block officials have, however,

3RD FLOOR AND 4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



sought to downplay the recent streak of weaker economic indicators, and termed the Q2 growth print a 'one-off' number due to an urban demand slack that should dissipate in the months ahead. While rural demand is expected to perk up the economy in the second half of the year, along with a relative ramp-up in public capex that has suffered so far this year — thanks to a Q1 pause due to the general election and tepid Q2 spends amid an extended monsoon — it may be too complacent to assume that urban consumption will rebound on its own and interest rates are the only constraint for growth. Poor wage increases and persistent price rise have caught up on urban wallets, and cannot be wished away. The Centre must shed its 'all is well' approach, and ring in fiscal measures, including cuts on fuel taxes and high GST rates on some items, to ease living costs and revive demand.

THE RABI WARNING: WITH POSSIBLE WEATHER WOES, ONUS IS ON GOVERNMENT

Rabi (winter-spring) crops, especially wheat, have been vulnerable in recent times to mercury spikes in March, just when they are in the stage of final grain formation and filling. The last two years, however, have seen temperatures ruling well above average in October and November, during the time of sowing itself. Average minimum and mean temperatures over the country this October were the highest ever for the month, as per the records of the India Meteorological Department. November, too, registered the second and third highest maximum and mean temperatures respectively. All this has impacted overall rabi plantings, which were lagging behind till mid-November. There has been a recovery since, with the winter finally setting in. But that's unlikely to help mustard or potato, whose sowing window shuts by the first fortnight of November.

This raises concerns over the production of rabi crops, which require relatively low temperatures for proper germination and vegetative growth. While delayed sowing shouldn't affect yields in wheat and most other crops (barring the two mentioned earlier), that is, nevertheless, conditional upon an extended winter and no "Ides of March" heatwave causing premature ripening. The hope here is from a La Niña, which most global weather models are forecasting to develop by this month-end to persist through January-March. La Niña events usually bring copious rains and colder-than-normal winters to India. The IMD, on its part, is warning of above-normal minimum as well as maximum temperatures during the upcoming winter season (December-February) "over most parts of the country". It adds up to an uncertain picture. This was unlike till a couple of months ago, when a bumper rabi on top of a good kharif harvest seemed likely — thanks to surplus monsoon rains that helped fill up major dam reservoirs and recharge groundwater aquifers.

The uncertainty, with implications for already elevated retail food inflation (10.9 per cent year-on-year in October), is probably a major reason for the Reserve Bank of India's monetary policy committee deciding not to cut interest rates in its Friday meeting. There's little that the central bank can do, though, about food prices. The onus for supply management in this case, if any, lies on the government. It should not lose time in abolishing the 40 per cent import duty on wheat and probably halving the same on crude palm, soyabean and sunflower oil (from the current 20 per cent). Vegetable inflation may ease with the normal winter season arrivals, but such self-correction cannot be expected in cereals, edible oils and pulses. The government can and must act through tariff policy.



WINDFALL GAINS TAX ON OIL PRODUCTION, DIESEL-PETROL EXPORT REMOVED: THE IMPACT, EXPLAINED

The government on Monday (December 2) withdrew the windfall gains tax on domestic production of crude oil and export of diesel, petrol, and aviation turbine fuel (ATF), scrapping the levy that was introduced 30 months ago amid a surge in the prices of crude oil and key fuels in the international market in the wake of Russia's invasion of Ukraine.

Apprehensions about the availability of the fuels in the domestic market amid the global energy turmoil at the time also contributed to the decision to impose the levy.

But a lot has changed since then. After the initial shock and supply concerns due to the war in Ukraine, the global oil and fuel flows have shifted and stabilised. International crude oil and fuel prices are significantly lower and there is a robust supply of fuels in the domestic market. Primarily due to these reasons, the windfall gains tax was not generating significant revenue. In fact, the levy was already nil when the government decided to put this tax to rest.

While the levy on petrol exports had been zero since July 20, 2022, on diesel exports, it had been nil since March 1, 2024. On ATF exports, windfall gains tax was reduced to nil from January 2, 2024, while on domestic oil production, the levy was brought down to zero from September 18, 2024. Therefore, for all practical purposes, the tax was already dead. It has now been buried.

When it was first introduced on July 1, 2022, the windfall gains tax on domestic crude oil was Rs 23,250 per tonne, which translated to roughly \$40 per barrel. Crude oil prices were well over \$100 per barrel at the time. They are now under \$75 per barrel and it is unlikely that they will shoot up, unless there is another major supply shock. As for diesel exports, the initial levy was Rs 13 per litre. Exports of ATF and petrol initially attracted a levy of 6 rupees per litre.

What was the windfall gains tax and why was it imposed?

"Windfall gains tax" was a term used to describe cesses under the ambit of central excise imposed on fuel exports and domestic crude oil production, to tax super-normal profits of fuel exporters and oil producers. In case of domestic crude oil and ATF exports, the windfall gains tax was in the form of Special Additional Excise Duty (SAED), while on diesel and petrol, it was a combination of SAED and Additional Excise Duty (AED), the latter also known as Road and Infrastructure Cess (RIC).

The duties are reviewed every fortnight based on the movement in margins on fuels in the international market and global crude oil prices. In the first revision itself, the levy on petrol was reduced to nil and was not hiked since.

These levies were first imposed on July 1, 2022, due to the surge in global oil and fuel prices in the aftermath of Russia's invasion of Ukraine. As the price of crude oil produced in India is benchmarked to international prices, domestic oil prices also went through the roof. At the same time, margins on fuels were a lot more lucrative in other markets, incentivising refiners, particularly the private sector players, to export fuels. This had resulted in fuel supply disruptions in some parts of the country.

Apart from taking a share of windfall profits of oil producers and fuel exporters to partly soften the blow of duty cuts on domestic petrol and diesel sales, the government also wanted to ensure enough fuel supply to meet domestic demand through these taxes.



India was not alone in imposing a windfall gains tax. Several other countries had imposed taxes to tax super-normal profits of energy companies in the months following Russia's February 2022 invasion of Ukraine.

Scrapping the levy: Impact and signal

The country's oil industry was understood to have been against the windfall tax regime even when it was introduced. Those against the tax argued that it limited profitability of publicly listed companies, and created an environment that discouraged efforts to increase oil production in a country that depends on imports to meet over 85 per cent of its oil needs. The frequent review of the levies, it was argued, made the taxation unpredictable.

Lately, not much revenue was getting generated by the windfall gains tax. This is mainly due to significant softening in prices of crude oil and the three major fuels in the international market. The windfall gains tax mop-up was around Rs 25,000 crore in 2022-23 (FY23). It declined to around Rs 13,000 crore in FY24 and further to Rs 6,000 crore so far in FY25.

The provision to change the tax level, however, continued to be in place even as the levy itself was nil. With Monday's move, the government has effectively withdrawn those provisions as well. This may be seen as an assurance to the country's oil industry that the taxation regime will be predictable and stable.

The scrapping of the windfall gains tax may not have any notable impact on the financials of domestic oil producers like Oil and Natural Gas Corporation (ONGC) and Oil India (OIL), and major fuel exporters like Reliance Industries (RIL) and Nayara Energy (NEL). It does, however, have value as a signal of reliable and predictable taxation. It also signals that the Indian government is now confident in the view that a hard-to-manage surge in oil and fuel prices and supply shocks are unlikely going forward.

PRESSURE ON MICRO LOANS MAY STRESS SMALL FINANCE LENDERS, DENT CONSUMPTION FURTHER

Early signs of stress in India's microfinance institutions, small finance lenders, and unsecured personal loans are beginning to show up, primarily driven by escalating borrower indebtedness.

- Latest data reveals a surge in delinquencies during the first half of FY25, with multiple analysts predicting this trend to persist into the next half year, casting a shadow over the asset quality of underlying loans.
- As a result, small and micro loans face significant risks to their growth and profitability, sparking concerns about the sector's resilience in these challenging times, analysts and rating agencies said.
- Indicating the rising indebtedness, credit card outstanding rose to Rs 2.71 lakh crore by September 2024 from Rs 2.30 lakh crore in September last year.
- The Reserve Bank of India stepped in to check the rampant rise in the indebtedness and delinquencies in the personal loan segment with more restrictions last year, leading to a decline in the growth in the overall personal loan book of banks to 5 per cent as of September this year from 18 per cent a year ago.
- Microfinance institutions faced a significant rise in delinquencies during the first quarter of fiscal 2025, according to Crisil.



- Early-stage delinquencies (0+ and 30+ days past due) increased by 110 basis points and 55 basis points, respectively, compared to the preceding March quarter.
- Four key factors contributed to this decline in portfolio quality: lending to over-leveraged borrowers, debt-waiver campaigns, high field-staff attrition, and operational challenges due to elections and extreme weather.
- The regulator has taken suitable steps in this direction to maintain the desired balance and order in the portfolio.
- The small loan industry faces significant challenges beyond financial and operational risks, including high staff turnover and rising fraud, both of which disrupt client relationships and loan recovery.

Do You Know:

- The expectations of significant improvements in future earnings and social aspirations have led to a substantial increase in unsecured borrowings by new consumers, and this portfolio, particularly of NBFCs and microfinance institutions, has grown faster.

COC PERFORMANCE 'LACKING', SHOULD ENFORCE A CODE OF CONDUCT: RBI DY GOV RAO

The Insolvency and Bankruptcy Board of India (IBBI) should enforce a code of conduct for the Committee of Creditors (CoC), as their performance in insolvency proceedings has been “lacking in several aspects”, Reserve Bank of India (RBI) Deputy Governor M Rajeshwar Rao said Saturday.

- While the IBBI issued self-regulating guidelines in August to enhance the CoC’s professional competence, Rao emphasized the need for enforceable regulations, arguing that “when incentives are not perfectly aligned, deviations from best practices become the norm”.
- Rao also advocated for a market-driven compensation framework for resolution professionals (RPs) as opposed to a regulatory mandate.
- “The Insolvency and Bankruptcy Code (IBC) assigns a central role to the CoC in the corporate resolution process. However, this is an area where significant improvements are needed. There have been instances where the CoC’s performance has been found lacking in several aspects,” Rao said.
- A CoC typically consists of financial creditors in insolvency cases under the IBC, and may also include operational creditors with limited participation and voting rights.
- Rao highlighted several instances of subpar performance by the CoC, such as prioritizing individual creditors’ interests over collective interests, disputes over resolution plans due to concerns about undervaluation or viability, disagreements on distributing proceeds even after a plan’s approval, poor attendance at CoC meetings, and inadequate engagement, coordination, and information-sharing among members.
- In August this year, IBBI issued guidelines for the CoC to curb delays, enhance transparency, and improve value realization by requiring it to disclose any conflict of interest, and maintain integrity, confidentiality, and objectivity. However, the guidelines were self-regulatory in nature.



Do You Know:

- Introduced in 2016, IBC promised an overhaul of insolvency resolution with the aim to rescue and reorganise distressed companies through a time-bound process, prioritising their survival as going concern.
- Eight years on, while the IBC has had a few successes, it is marred by issues like high case backlog, lengthy delays in admission and resolution, and steep haircuts for creditors. In the recent past, various stakeholders, including RBI Governor Shaktikanta Das and the Parliament's Standing Committee on Finance, also flagged concerns and the need to rethink the IBC's design.

WHY ARE SME IPOS FLOURISHING AMID REGULATOR'S CONCERNS OVER MISCONDUCT?

Market regulator Securities and Exchange Board of India (Sebi) on Tuesday (December 3) cancelled the SME (small and medium enterprises) public issue of Trafiksol ITS Technologies, whose issue was oversubscribed 345.65 times, and asked the company to refund the money to the investors for alleged misuse of funds through a 'shell entity'.

- Even as the Sebi contemplates tighter IPO norms for SMEs in the wake of a series of misdeeds, the SME IPO market is flourishing with huge oversubscriptions and listing at high premium. While many genuine SMEs have successfully raised money through IPOs, Sebi has raised concerns over the quality of some of the IPOs.
- In a consultation paper, Sebi has observed that diversion of issue proceeds to related parties, connected parties, shell companies and inflation of revenue by circular transactions through related parties, connected parties and shell companies. In some SME companies, the entity diverted money raised through the IPO and subsequent Rights Issue to shell companies controlled by the promoters.
- In another instance, a company booked fraudulent sales and purchases through circular transactions amongst related parties and connected parties. By doing so, such companies try to create a positive sentiment to induce investors to purchase their securities. SEBI has passed orders against such entities in the recent past.
- SME listed entities are typically promoter driven or family business companies with high concentration of shareholding among a few promoters, promoter group persons or entities. There is also limited presence of private equity investors and sophisticated investors, who act as a check on the promoter's influence, in such companies.
- In order to check misconduct, Sebi has now proposed doubling the minimum application value to Rs 2 lakh, restricting the offer for sale (OFS) limit to 20 per cent of the issue size, mandating the appointment of monitoring agencies to ensure that the money raised through an IPO was used appropriately and several other measures.

Do You Know:

- The Securities and Exchange Board of India was established as a statutory body in the year 1992 and the provisions of the Securities and Exchange Board of India Act, 1992 (15 of 1992) came into force on January 30, 1992.
- The basic functions of SEBI are to protect the interests of investors in securities. Also, it promotes and regulates the securities market.



- SEBI is a quasi-legislative and quasi-judicial body which can draft regulations, conduct inquiries, pass rulings and impose penalties.

EXPRESS VIEW ON CASH TRANSFERS: HIT AND MISS

From Lakshmir Bhandar in West Bengal and Ladli Behna in Madhya Pradesh to Maiya Samman in Jharkhand and Ladki Bahin Yojana in Maharashtra — all these women-targeted schemes, providing Rs 1,000 to Rs 1,500 per month to eligible beneficiaries, appear to have paid political dividends by helping reelect ruling parties in their respective states. According to Axis Bank, 14 states now have income transfer schemes that cover roughly a fifth of India's adult female population, with an annualised spend of Rs 2 lakh crore. Fiscal purists may balk at such transfers — even seen as a precursor to the Universal Basic Income outlined in the 2016-17 Economic Survey — but they may have eased the pain of inflation for those worst affected in these times. Nor can one underestimate the positive impact of an assured monthly payout on reducing insecurity and promoting independence in decision-making — according to some readings of the final tallies, women voters have signaled as much in the recent Maharashtra and Jharkhand Assembly polls.

That said, these schemes aren't without drawbacks. To start with, their effect on boosting incomes and consumption demand may not be as much as one would assume. Anecdotal evidence suggests that many Ladki Bahin beneficiaries in Maharashtra have responded to the Rs 1,500/month cash transfer by choosing to work less days/hours and using more of that freed-up time at home. The scheme may have not added to, as much as substituted for, income that would have been earned from tilling the fields and harvesting produce. On the other hand, the reduced supply of labour has pushed up production costs for farmers and small business owners, eating into their earnings and spending power. The multiplier effect of government transfers, in terms of putting more money into the hands of households and stimulating private consumption expenditure, therefore, may be quite limited. These payments should ideally be pegged at levels offering a modicum of protection against inflation, without undermining or crowding-out incentives to work.

No less serious a concern relates to cash transfers emerging as an alternative to building state capacity. Technology — be it Aadhaar-seeded bank accounts or point-of-sale machines — makes it possible today to transfer cash directly and make available free foodgrain to targeted beneficiaries at population scale sans much leakage. Governments, too, find it more expedient to deliver these than investing in public education, healthcare, irrigation or agricultural research and extension that take time to yield results. When voters also turn increasingly transactional and short-termist — seeing for themselves the deteriorating standards of government schools and hospitals and, therefore, not believing in the state's ability to do good beyond the immediate — that's when the culture of freebies ("revdi") becomes entrenched in the system. The cost of it is not just fiscal. India badly needs government policy aligned with long-term national, not near-term electoral, interests.

FARMERS IDS: FIRST TO HIT 25% MILESTONE, GUJARAT SET TO RECEIVE CENTRE'S INCENTIVES

Having achieved 25% of its target, Gujarat is set to become the first state to avail of the Centre's incentives for creating a Farmers' Registry. Agriculture Ministry sources said Gujarat officials have informed them that the state will be sending a formal proposal to get the funds under the the Scheme for Special Assistance to States for Capital Investment 2024-25 in the next few days.



- According to an Agriculture Ministry official, as of December 5, Gujarat generated Farmer IDs for 17.47 lakh farmers — a quarter of its target of 66.21 lakh farmers. It's the first state in the country to achieve the 25% target, the official added.
- A Farmer ID, also known as Kisan Pehchaan Patra, is an Aadhaar-based unique digital identity linked dynamically to a state's land records bearing information such as demographics, crops sown and ownership details. It will form the core of the Farmers' Registry, one of the three registries under the AgriStack component of the Centre's Digital Agriculture Mission for the creation of digital public infrastructure in the farm sector, which got the Union Cabinet's approval earlier this year.
- With Finance Minister Nirmala Sitharaman, in her Budget Speech on July 23, announcing that 6 crore farmers and their land will be brought into the farmer/ land registries in the current fiscal, the Centre earmarked Rs 5,000 crore as incentives for creating the Farmers' Registry in 2024-25 under the Scheme for Special Assistance to States for Capital Investment 2024-25.
- According to the guidelines, the funds for creating a State Farmers' Registry will be available on a 'first-come-first-served' basis, with states becoming eligible to receive incentives only after achieving at least 25% coverage. The incentives are proportional to each milestone: Rs 500 per farmer after crossing 25% of the generation target; Rs 750 after 50%; Rs 1,250 after 75%; and Rs 1,750 at 100%.
- With the creation of the Farmers' Registry, a farmer would be able to digitally identify and authenticate himself/herself to access benefits and services, obviating cumbersome paperwork and with little or no need to physically visit various offices or service providers, said a source.

Do You Know:

- The mission to create Digital Public Infrastructure in the agriculture sector is similar to the government's flagship e-governance initiatives in other sectors, which have over the years resulted in digital solutions such as the Aadhaar unique ID and more.
- Three major components of DPI are envisaged under the Digital Agriculture Mission: AgriStack, Krishi Decision Support System (DSS), and Soil Profile Maps. Each of these DPI components will provide solutions that will allow farmers to access and avail of various services.
- The mission also aims to create a tech-based ecosystem, the Digital General Crop Estimation Survey (DGCES), which will provide accurate estimates of agricultural production.
- The Mission was planned for launch in the financial year 2021-22, but the outbreak of the Covid-19 pandemic upset these plans, a source said. The government subsequently announced the building of Digital Public Infrastructure for agriculture in the Union Budgets of both 2023-24 and 2024-25.

THE PLATFORMS LIKE PRAGATI

As nations grapple with how to implement ambitious infrastructure agendas amid rising costs and complex regulatory environments, India has quietly pioneered an innovative solution. While much recent attention has focused on the country's technological advances in digital payments and identity systems, another digital transformation has been revolutionising how India manages its massive infrastructure projects.



- This week, Oxford University's Saïd Business School, in collaboration with the Gates Foundation, launched a case study examining India's PRAGATI platform — a digital initiative that has helped accelerate more than 340 major infrastructure projects worth some \$205 billion.
- PRAGATI (Pro-Active Governance and Timely Implementation) was launched in 2015 by Prime Minister Narendra Modi and combines leadership with video conferencing, drone feeds, and data management to enable oversight of critical infrastructure.
- The platform's impact has helped complete long-delayed projects like segments of National Highway 8 in Maharashtra, the Chenab Bridge in Jammu and Kashmir, which is now the world's highest rail bridge, and the Bogibeel Bridge in Assam, which had languished for more than a decade before being completed within three years of coming under review in PRAGATI.
- What makes PRAGATI noteworthy is the way it leverages the impact of active leadership from the top. Based on SWAGAT, a digital platform started by then Chief Minister Modi in Gujarat to address people's grievances, PRAGATI has enabled the prime minister to take a consistent, direct role in overseeing complex infrastructure projects.
- In PRAGATI meetings, he is joined by senior aides, the cabinet secretary, all chief secretaries of states, and secretaries of the central ministries in dedicated video conference links. At these gatherings, the prime minister asks detailed questions about problems and delays, sets specific deadlines, and proposes solutions.
- The value of this high-level involvement can't be overstated. In a large country with a complex federal structure, it communicates the importance of infrastructure development as a top national priority and injects a sense of urgency and accountability into the bureaucratic process. When officials know their decisions are trackable, they are much more motivated to move quickly to resolve bottlenecks.
- Consider the construction of the Bogibeel Bridge that runs across the wide Brahmaputra River, once viewed as "unbridgeable". When the project entered the PRAGATI system in 2015, a decade had passed with minimal construction. The platform's intervention prompted regular site visits by both state and central ministry officials and catalysed unprecedented cooperation between central and state agencies, leading to acceleration of work on what is now a lifeline for the remote region of Dhemaji.
- PRAGATI's success has inspired the creation of complementary digital platforms. PM Gati Shakti, launched in 2021, provides sophisticated geospatial planning tools that help optimise infrastructure design and reduce adverse environmental impact.
- PARIVESH has streamlined environmental clearances, leading to greater transparency and also reducing approval times, at times from 600 days earlier to just 70-75 days now. Together, these platforms form a digital ecosystem that is transforming how India approaches infrastructure development.
- The impact extends beyond physical infrastructure. PRAGATI has also accelerated social development programmes, from rural electrification to providing tap water connections to millions of households.
- This digital transformation in infrastructure governance offers valuable lessons for other nations seeking to build sustainable infrastructure for the future, particularly in the developing world.



- First, technology alone isn't enough — success requires sustained leadership from the top to drive implementation. Second, digital platforms must be designed to facilitate collaboration across different levels of government while respecting local autonomy. Third, combining various technological tools — from video conferencing to drone monitoring — creates powerful synergies for project oversight.
- The results speak for themselves. Studies by the Reserve Bank of India estimate that for every rupee spent on infrastructure, the country sees a 2.5 to 3.5-rupee gain in GDP.
- The platform's approach could be particularly valuable for initiatives like the African Union's Programme for Infrastructure Development in Africa (PIDA), which aims to close the continent's infrastructure gap through cross-border projects. PRAGATI's accomplishments in managing complex multi-state infrastructure developments offer a time-tested template for handling such collaborations.
- As countries across the Global South work to modernise their infrastructure and support rapidly growing populations and urbanisation, PRAGATI's combination of digital innovation and high-level coordination provides a valuable model for accelerating development while ensuring accountability and effective resource utilisation.

Do You Know:

- PM GatiShakti is a digital platform that connects 16 ministries — including Roads and Highways, Railways, Shipping, Petroleum and Gas, Power, Telecom, Shipping, and Aviation — with a view to ensuring holistic planning and execution of infrastructure projects.
- The portal offer 200 layers of geospatial data, including on existing infrastructure such as roads, highways, railways, and toll plazas, as well as geographic information about forests, rivers and district boundaries to aid in planning and obtaining clearances.
- Studies estimate that logistics costs in India are about 13-14% of GDP as against about 7-8% of GDP in developed economies. High logistics costs impact cost structures within the economy, and also make it more expensive for exporters to ship merchandise to buyers.

STUDY: DAY-TIME CHARGING OF EVS CAN CUT CARBON EMISSIONS BY 10%

While India records an impressive growth in the number of electric vehicles (EV), the climate benefit of EV usage are not being fully realised, primarily due to continued dependence on coal for power generation and night-time charging of EVs.

- A new study by the New Delhi-based Centre for Social and Economic Progress (CSEP) has found that a shift to day-time charging, when renewables like solar and wind contribute a significant proportion of power generation, could avoid an additional ten percent of emissions.
- "To put things into perspective, this means that day-time charging can unlock additional yearly emission reductions of 10 kg of CO₂ per vehicle in case of electric scooter, and about 106 kg for an electric sedan," Shyamasis Das, the lead researcher, said.
- Das's study finds that the climate benefits of EVs have been slightly overstated till now, mainly due to lack of disaggregated analysis taking into account different kinds of vehicles, variations in the carbon load of electricity generation, and timing of charging.



- The study says that while greater renewable integration in power generation would improve the climate benefits of EVs in due course, government intervention is needed to ensure a shift towards day-time charging of EVs in the short term.
- Study says that while electric vehicles still offer substantial climate benefits over conventional transport vehicles, these are not entirely clean. The carbon footprint of the electric vehicles comes mainly from the embedded emissions in the manufacturing process and the carbon load of the electricity used for charging these vehicles.

Do You Know:

- Presently, road transport contributes 12% of CO₂ emissions related to energy in India and plays a significant role in urban air pollution, as reported by the IEA.
- In response to these environmental challenges, Indian automotive manufacturers are making significant investments in electrification, along with the Government of India's subsidy schemes to boost electric vehicle (EV) adoption.

₹2.4 LAKH CRORE COLLECTED IN TOLL PLAZAS SINCE INCEPTION

A total of ₹2.4 lakh crore has been collected as user fees at toll plazas across India's national highways since the inception of toll collection, according to recent data presented in the Lok Sabha. This figure is based on the 758 toll plazas for which the overall data was available.

Plazas in Uttar Pradesh, followed by Rajasthan and Maharashtra have collected the most among States. Notably, over 98% of the toll payments made in recent months were done through the FASTag technology.

With ₹32,510 crore collected, Uttar Pradesh is at the top. The Delhi-NCR region collected the least tolls at ₹263 crore.

The NH48, which runs from Delhi to Chennai, is listed first with a collection of ₹24,490 crore followed by NH44 (Srinagar to Kanniyakumari), NH16 (Kolkata to Chennai), and NH27 (Porbandar to Silchar).

The Gharaunda toll plaza in Haryana collected ₹256 crore in the period, the most across the 1,040 tolls for which this data was available. The Shahjahanpur toll plaza in Rajasthan and the Bharthana in Gujarat, are second and third on the list.

CENTRE WORKING ON NATIONAL POLICY DOCUMENT ON FEMALE LABOUR FORCE PARTICIPATION

The Centre will soon bring out a national policy document on female labour force participation with a focus on providing an enabling atmosphere like a viable care economy structure.

An inter-ministerial team from the Ministries of Skill Development, Labour, Rural Development, and Women and Child Development is working on it, informed sources told The Hindu.

Care economy is the sector of economic activities related to the provision of care, both paid and unpaid, for the present and future populations. It includes direct care, such as feeding a baby, as well as indirect care, such as cooking and cleaning, health care, education, and other personal and domestic services.

The move comes amid a recent World Bank report which said women faced a sharp drop in their labour force participation post-marriage in India. According to the report, it is estimated that in India post-marriage, female employment rates drop by 12 percentage points, about one-third of the female pre-marital employment rate, even in the absence of children.

Core skilling package

One of the initiatives being explored is a core skilling package for caregivers for children, the sources said. The policy paper will also look at providing child care facilities for women in the informal sector such as for workers under the National Rural Employment Guarantee Scheme.

The Ministry of Women and Child Development already runs the 'Palna' scheme, or the National Programme on Anganwadi-cum-Crèche, which provides day-care facilities for children of working parents. A total of 1,000 Anganwadi creches have been made operational till now as part of this scheme, the sources said.



DreamIAS



LIFE & SCIENCE

WHEN A STORM PASSES OVER LAND

Q: What is landfall?

A: Once it's fully formed, a tropical cyclone (in the northern hemisphere) has a complex 3D structure. Two important parts of it are the eye and the eyewall. The eye is the centre around which the cyclone rotates. It consists of cold air descending from the cyclone's top with warm air rising in a spiral around it. The eyewall consists of high thunderstorms that bring rain, lightning, and powerful winds.

As long as the cyclone moves over water, it can draw more moisture from below to produce new clouds and rain events around it. But when the storm crosses over onto land, its moisture supply declines drastically, and the cyclone weakens. Landfall is the moment in a tropical cyclone's life when its eye moves over land.

Stormy weather brought by a cyclone is stronger around the eye, and landfall events can be deadly because they expose human settlements on land to strong winds and heavy rain. Their effects can be compounded by storm surges that flood coastal areas and prevent inland areas from draining normally.

If the air over land is drier, among other factors, a cyclone weakens quickly after landfall. Depending on environmental conditions, it may dissipate completely, or it could pass over land and re-emerge on the other side. In 2021, Cyclone Gulab made landfall over coastal Andhra Pradesh, weakened as it moved across peninsular India, and re-emerged four days later as Cyclone Shaheen in the Arabian Sea.

HOW IS SCIENCE AFFECTED WHEN COMPANIES FUND RESEARCH?

In May 2024, Google DeepMind released AlphaFold 3, a tool that could predict protein structures. It used an artificial intelligence (AI) model to predict how different proteins were shaped and how they might interact with each other and with DNA, RNA, and other biomolecules of merit. Nobel laureates John Jumper and Demis Hassabis built the new model based on DeepMind's previous versions of the tool, namely AlphaFold and AlphaFold 2. Both those models were released open source, i.e., with their associated programming scripts and inner workings open and transparent to all.

AlphaFold3 was different: its senior authors didn't release the full code when they published their findings in Nature. How exactly the model worked was unclear to scientists who wished to probe deeper. They also couldn't make full use of AlphaFold 3's new abilities because its protein-drug interactions simulator wasn't fully accessible.

Google had a reason to withhold information in the paper. A DeepMind spinoff company called Isomorphic Labs was using AlphaFold 3 to develop its own drugs.

"We have to strike a balance between making sure this is accessible and has an impact in the scientific community as well as not compromising Isomorphic's ability to pursue commercial drug discovery," Pushmeet Kohli, DeepMind's head of AI science and a study co-author, told Nature in a news article earlier this year. But many scientists weren't convinced, leading them to sign an



open letter saying publishing the paper without the code prevents scientific efforts to reproduce and verify the original findings.

A fundamental tension

The controversy brought a broader conundrum surrounding scientific research today, especially research with commercial potential. Commercialisation is driven by competition and profit, so the creators and/or owners invoke property and patent laws to protect their intellectual property (IP).

The fundamental tension here is that IP necessitates secrecy, whereas, historically, science isn't encouraged to stay behind closed doors. Science progresses when scientists are open and transparent about their work and when their methods and results are reproducible and falsifiable.

"If you make this fantastic discovery and you're the only person in the universe who can do it, nobody cares. It's not helpful for mankind," Benjamin Haibe-Kains, a professor using AI to study cancer at the University of Toronto, said. He openly advocates for scientists to be more open with their software and data when they publish papers based on AI. "How can you advance science if you keep everything closed source? Nobody can see your data. Nobody can see the algorithm. Nobody can see the model, right?"

"As a scientist, there is fundamentally a major conflict between doing things in secret versus advancing science. Those things are incompatible," he added.

Then again, hospitals, research institutes, and universities also need money to operate and hence bank on commercialisation for revenue. "Universities and research institutions are putting us [academics] in a very, very tricky spot," he said. "They actually want us to patent so that we can generate revenue and sustain this research enterprise."

Door half-closed or half-open?

How can scientists toe the line between guarding their trade secrets in the current economy and advocating for transparency and reproducibility?

One option Haibe-Kains suggested, especially for computational scientists, is to publish all the code and details of any algorithm they are working on — but hold on to a premium, ready-to-use version of the software that could be commercialised. With the help of software engineers in his lab, he works on bringing the software to a level that's accessible to a broader group of people, which he then sells.

"Most of the discoveries have been disclosed already; it's just the packaging that I'm selling, right?" Haibe-Kains explained. "That's the way we do it in the lab — we do everything open source at the beginning, and if there is commercial potential, we work on an enterprise version that's more robust and deployable. That added value we keep secret, and that's what we would sell as a product."

"I can do my mission as a scientist, but I can also commercialise and potentially generate revenue that way," he added.

Thomas Hemmerling, MD, a professor in the Department of Anesthesiology at the same university, expressed a belief that divulging some of the basic algorithms but holding back some specific



source code is a way to strike a balance between the “black box” that comes with full patent protection and scientific transparency.

He also agreed there is always a risk in such cases where someone else could commercialise the published work. But other scientists will at least be able to understand and potentially replicate the findings.

Decency and deals

Hemmerling and his team developed an anaesthesia robot in 2008 that they named “McSleepy” (after Patrick Dempsey’s character Derek “McDreamy” Shepherd, in the popular medical TV drama ‘Grey’s Anatomy’). The robot could autonomously administer drugs to induce general anaesthesia and monitor the effects. The scientists decided to explain the algorithms at work in the robot in detail in their paper.

“Because we described it quite well, certain parts were then put into other automated machines, but they referenced our method. So that’s then basically a matter of scientific integrity,” Hemmerling said. “If you use somebody else’s algorithm, you should at least quote them and say, ‘That’s based on that machine or on that technology or that finding’.”

But not all scientists have access to large amounts of public funding, which can affect their inclination to be fully open about any research that can be patented. Based on the researchers’ financial needs, Hemmerling said the closer they are to a commercial product, the fewer details they’d feel comfortable divulging in their paper.

Collaborations with smaller start-ups or large corporations help some researchers get more money for their science. “These [large corporations] will fund your research, so you can move the research forward, but on the other hand, they will obviously tighten your [research] much more into some kind of IP protection, probably more than you want to.”

That’s the dilemma in front of many researchers around the world.

Some scientists strike deals with the companies: they study and develop a product the way the company likes it. In exchange, the company gives their lab unrestricted funds to continue other avenues of research (in which the company has no say).

“All over the world, there’s very little governmental funding to do research,” Hemmerling said. “So researchers need to find creative ways to find funding.”

‘I think it’s human nature’

More government funding is a way to circumvent the conflict between patented and open science, according to Hemmerling. “At the end of the day, it gives you a different head start. Whenever I have governmental funding, it has secured me funding for a certain time. I don’t have to declare a conflict of interest. Science is just... science — you innovate, and you’re free to be creative; you’re free to develop anything you want. Whereas if you have company funding, it might limit you to developing certain areas because the company might have a conflicting interest.”

The government can also subsidise the costs of products made by companies such that the latter can still hold on to their IP even as the products are available for sale at a lower price. This is what happened with the COVID-19 vaccines made by Moderna and Pfizer.



But according to Haibe-Kains, even with more public funding, universities will still want to continue commercialising some research. “I think it’s human nature. If you think you’re doing amazing research and you see those industries generating billions of dollars in revenue, you cannot stop universities thinking, ‘Oh, maybe I should generate revenue on my own stuff,’ right?”

He believes additional funding will help academic researchers breathe a little easier and invest in doing science the right way: by being as open as possible. “It’s more a matter of creating the right paradigm so that there is a healthy environment for researchers to do the right thing,” Haibe Kains said. “But also, there is a path to commercialisation so that we can generate revenue.”

At the end of the day

For researchers working in a company, however, the primary objective is likelier to be to generate revenue, not necessarily to advance science, according to Haibe-Kains. Yet he also said it was unfair that sometimes big companies can blur the lines between industry and academia to their advantage, such as using academic tools like journals to advertise their science and also get away with withholding most of the data.

Thus, to him, the manner of AlphaFold 3’s release exposed a deep misalignment of incentives between researchers, journals, and the industry.

Responding to criticism from the academic community, senior authors of the AlphaFold 3 paper had said they would publish their code within six months and did so early in November.

Haibe-Kains said publishing the paper first and fixing it six months later by releasing the full code is still a problematic move.

“But look, at the end of the day, it’s a good thing they published the code out there.”

USING SOCIAL MEDIA IS INJURIOUS TO HEALTH. BUT THE YOUNG WILL ADAPT

Cigarettes and social media, it is now becoming clear, have quite a bit in common. Both are addictive, put out by huge corporations that make massive profits from them. The difference — perhaps fortunately — is that it has taken much less time to realise that the latter is “injurious” to health. Earlier this week, a committee of 50 experts asked the Spanish government to place caps on smartphone use by minors and have pop-up warnings for certain apps. In France, too, there have been calls for such action and in June, the US Surgeon General Vivek Murthy demanded that social media carry tobacco-like warning labels.

The disenchantment with social media has been remarkably quick. It took more than a century from when the first commercial cigarette-making machine was patented in 1844 in Mexico to the first packets carrying health warnings in the US in 1966. By contrast, the oldest social media site is the now-defunct Six Degrees, launched in 1997. It is arguably only with the advent of high-speed internet in the late 2000s that the beast we know today first bared its fangs. One reason for this is the political impact social media has had — as a campaign tool, it has been widely used and often, maligned globally but especially in the US. The more clear and present danger, though, is the impact it has on mental health, particularly of young people.

Behind the calls for warnings is a more fundamental question: How do you deal with addiction? As any smoker will attest to, once hooked, the warnings rarely act as a deterrent. However, studies have shown that they help in reducing the number of “new” addicts. There’s also another factor



that policymakers — most of them, at their youngest, are old millennials — may not understand about a generation born as “digital natives”. The young are not so restless about social media as their elders — and more adept at navigating its dangers.

AMAZON LAUNCHES NEW AI MODELS

Amazon introduced a range of artificial intelligence foundational models at its flagship annual event Amazon Web Services (AWS) re: Invent, called Nova, which will allow for text, image and video generation.

It marks Amazon’s biggest step towards into the Generative AI space and it is widely believed that it pits them directly against Microsoft, Google, Meta and Open AI, the creator of ChatGPT. Amazon CEO Andy Jassy announced the “Nova” models at the keynote address by AWS CEO Matt Garman on Tuesday morning. Mr. Jassy said that the Nova is a result of demand from developers who wanted “better latency”, “lower cost” and ability to fine-tune. These will help customers automate their services.

The AWS is providing a range of Nova models to cover the entire delta of utility and price range. Four of these models - micro, lite, pro and premier are text generating models. In addition to those, it also introduced image-generation model Nova Canvas and video generating model Nova Reel.

“Inside Amazon, we have about 1,000 generative AI applications in motion, and we have had a bird’s eye view of what application builders are still grappling with,” Rohit Prasad senior Vice President of Amazon Artificial General Intelligence said. “Our new Amazon Nova models are intended to help with these challenges for internal and external builders and provide compelling intelligence and content generation while also delivering meaningful progress on latency, cost-effectiveness, customisation, information grounding and agentic capabilities,” Mr. Prasad added.

There is a growing demand for video generation from a single image or text prompt. Many platforms including OpenAI already offer it. Amazon on Tuesday said its Nova Reel software allows users to make six-second videos that can be useful for companies to display their products on their website or marketplace. Videos of up to two minutes will be available in the coming months.

AWS is projecting the Amazon Nova creative generation models as tools to barriers for sellers and advertisers. Giving an example, on AWS blog, the company shared a video advertisement for a fictional boxed pasta brand. In the whimsical “Pasta City”, buildings are sculpted from towering tubes of cannelloni noodles, the neighbourhood is sprinkled with Italian spice landscaping and the streets are lined with marinara sauce. The 18-second video is being shown as a sampler of what advertisers can do with the tool.

AWS CEO Matt Garman also announced a host of new capabilities for Amazon Bedrock, one of its flagship products.

A TOAST TO SAKE

There is a Japanese proverb that roughly translates to “Parents’ words and chilled sake make an impression later.” The first might indeed hold true but not so much the second. For a drink that’s been around since the eighth century and speaks for Japan’s historical and cultural identity — it even found a brief mention in the third-century Chinese text, The Book of Wei, as the favoured funerary drink of the Japanese people — sake’s celebrity-hood needs little iteration. Now, with

3RD FLOOR AND 4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



Unesco putting it on its list of the “intangible cultural heritage of humanity”, alongside Brazilian white cheese, Caribbean cassava bread and Palestinian olive oil soap, nihonshu or Japanese alcohol’s moment of globalisation seems to have arrived.

Unlike the Serbian šljivovica — plum brandy — or the Georgian qvevri, recent additions to the intangible heritage list for which the subsequent boost to commerce has been vital, sake has followed a trajectory of its own. Its increasing popularity abroad has meant negotiating a precarious balance between maintaining authenticity and catering to a global palate. In Japan, however, the influx of international spirits, especially wine, has led to a decline in sake consumption. The Unesco honour comes as an opportunity for domestic revival.

As food continues to traverse geographical boundaries, it also points to the importance of safeguarding cultural traditions in a world intent on homogenising. Like washoku, the traditional Japanese cuisine that made it to the Unesco list in 2013, the preparation of sake, too, speaks of Japan’s deep connection with nature and craftsmanship. An intricate process involving rice, water, yeast, and koji mould, there was a time when sake was made solely by women. Its centrality in Japanese rituals, festivals and celebrations meant that it soon became an industry involving the community. In a country where loneliness is an epidemic and where “hikikomori” or voluntary isolation have become a practice, anything that brings the community together, either to brew sake or to raise a toast, deserves a shout-out.

SCIENTISTS IN NZ GATHER TO DECODE PUZZLE OF RAREST WHALE

It is the world’s rarest whale, with only seven of its kind ever spotted. Almost nothing is known about the enigmatic species. But on Monday a small group of scientists and cultural experts in New Zealand clustered around a near-perfectly preserved spade-toothed whale hoping to decode decades of mystery.

“I can’t tell you how extraordinary it is,” said Anton van Helden, senior marine science adviser for New Zealand’s conservation agency, who gave the spade-toothed whale its name to distinguish it from other beaked species.

Van Helden has studied beaked whales for 35 years, but Monday was the first time he has participated in a dissection of the spade-toothed variety. In fact, the careful study of the creature, which washed up dead on a New Zealand beach in July, is the first ever to take place.

None has ever been seen alive at sea.

The list of what scientists don’t know about spade-toothed whales is longer than what they do know. They don’t know where in the ocean the whales live, why they’ve never been spotted in the wild, or what their brains look like. All beaked whales have different stomach systems, and researchers don’t know how the spade-toothed kind processes its food.

Over the next week, researchers studying the 5-metre male at a research centre near Dunedin hope to find out.

“There may be parasites completely new to science that just live in this whale,” said van Helden, who thrilled at the chance of learning how the species produces sound and what it eats. “Who knows what we’ll discover?” Only six other spade-toothed whales have ever been found, but all those discovered intact were buried before DNA testing could verify their identification.



New Zealand is a whale-stranding hotspot, with more than 5,000 episodes recorded since 1840, according to the Department of Conservation. The first spade-toothed whale bones were found in 1872 on New Zealand's Pitt Island. Another discovery was made at an offshore island in the 1950s, and the bones of a third were found on Chile's Robinson Crusoe Island in 1986.

DNA sequencing in 2002 proved that all three specimens were of the same species and that it was distinct from other beaked whales. But researchers studying the mammal couldn't confirm whether the species was extinct until 2010, when two whole spade-toothed whales, both dead, washed up on a New Zealand beach.

On Monday, the seventh of its kind, surrounded by white-aproned scientists who were measuring and photographing, appeared relatively unblemished, giving no clue about its death. Researchers pointed out marks from cookiecutter sharks — normal, they said, and not the cause.

The dissection will be quiet, methodical, and slower than usual, because it is being undertaken in partnership with Maori, New Zealand's Indigenous people. To Maori, whales are a precious treasure, and the creature will be treated with the reverence afforded to an ancestor.

A CUT IN TIME

Despite a week of wrangling, an ambitious endeavour piloted by the United Nations Environment Programme to phase out plastic turned out to be a failure. The Global Plastics Treaty is the result of a resolution by member-countries of the United Nations, passed in 2022, to 'end plastic pollution, including in the marine environment.' Over the next two years, countries met five times, including the latest (billed as the final one), to create a broad framework agreement. The UN resolution of 2022 was deemed historic as it gave the impression that the world was unanimous that plastic pollution could only be addressed through globally coordinated action. However, it is the solution to the problem that has proven to be divisive. Of the nearly 170 countries gathered at the fifth round of meetings in Busan, roughly half — led by the European Union and supported by Pacific island-nations — were of the view that despite the usefulness of plastic and its significant role in enabling mass consumption through the modern era, its relative indestructibility was now an environmental hazard. It had begun to seep into the bodies of animals, both of the land and sea, and had progressed to be much more than an eyesore in the form of litter flowing out of overwhelmed municipal recycling systems.

The claim that better recycling and re-use will redeem the situation, these nations believe, is a pipe dream and, therefore, imposing gradual cuts on the source of plastic, virgin polymer, was the only effective route to ending plastic pollution. However, many of the large developing countries, and those with economies premised on the extraction of oil and petrochemical refining, balk at such a proposal. They view calls to cut plastic production as trade barriers masquerading as environmentalism. They view the framing of the plastic pollution problem as one that requires regulating production as something that goes beyond the intent of the 2022 resolution. While talks have stalled, it is likely that countries will reconvene next year — possibly with a fresh perspective — and get beyond the impasse more creatively. India has chosen to side with the countries that are averse to production cuts; yet, it must acknowledge that its capacity to recycle plastic is only about a third of the plastic that is annually introduced. The indispensability of plastic to the economy cannot be a permanent excuse to delay action on evaluating its health impacts on people in India, its ecology and marine environment. A planned exit is always better than finding oneself on the wrong side of history.



EXPERTS SAY A TWICE-YEARLY INJECTION THAT OFFERS 100% PROTECTION AGAINST HIV IS 'STUNNING'

Twice-yearly shots used to treat AIDS were 100% effective in preventing new infections in women, according to study results published Wednesday.

There were no infections in the young women and girls that got the shots in a study of about 5,000 in South Africa and Uganda, researchers reported. In a group given daily prevention pills, roughly 2% ended up catching HIV from infected sex partners.

The shots made by US drugmaker Gilead and sold as Sunlenca are approved in the US, Canada, Europe and elsewhere, but only as a treatment for HIV. The company said it is waiting for results of testing in men before seeking permission to use it to protect against infection.

The results in women were published Wednesday in the New England Journal of Medicine and discussed at an AIDS conference in Munich. Gilead paid for the study and some of the researchers are company employees. Because of the surprisingly encouraging results, the study was stopped early and all participants were offered the shots, also known as lenacapavir.

While there are other ways to prevent HIV infection, like condoms or daily pills, consistent use has been a problem in Africa. In the new study, only about 30% of participants given Gilead's Truvada or Descovy prevention pills actually took them — and that figure dropped over time.

Experts working to stop the spread of AIDS are excited about the Sunlenca shots but are concerned Gilead hasn't yet agreed on an affordable price for those who need them the most. The company said it would pursue a "voluntary licensing program," suggesting that only a select number of generic producers would be allowed to make them.

She said her organization urged Gilead to share Sunlenca's patent with a UN-backed program that negotiates broad contracts allowing generic drugmakers to make cheap versions of drugs for poorer countries worldwide. As an HIV treatment, the drug costs more than \$40,000 a year in the US, although what individuals pay varies.

Another HIV prevention shot, Apretude, which is given every two months, is approved in some countries, including in Africa. It sells for about \$180 per patient per year, which is still too pricey for most developing countries.

Byanyima said the people who need long-lasting protection the most include women and girls who are victims of domestic violence and gay men in countries where same-sex relationships are criminalized. According to UNAIDS, 46% of new HIV infections globally in 2022 were in women and girls, who were three times more likely to get HIV than males in Africa.

Byanyima compared the news about Sunlenca to the discovery decades ago of AIDS drugs that could turn HIV infection from a death sentence into a chronic illness. Back then, South African President Nelson Mandela suspended patents to allow wider access to the drugs; the price later dropped from about \$10,000 per patient per year to about \$50.

Olwethu Kemele, a health worker at the Desmond Tutu Health Foundation, predicted the shots could boost the number of people coming in for HIV prevention and slow the virus' spread. She said young women often hide the pills to avoid questions from boyfriends and family members. "It makes it hard for the girls to continue," she said.



In a report on the state of the global epidemic released this week, UNAIDS said that fewer people were infected with HIV in 2023 than at any point since the late 1980s. Globally, HIV infects about 1.3 million people every year and kills more than 600,000, mainly in Africa. While significant progress has been made in Africa, HIV infections are rising in Eastern Europe, Latin America and the Middle East.

In other research presented at the AIDS conference, Andrew Hill of the University of Liverpool and colleagues estimated that once production of Sunlenca is expanded to treat 10 million people, the price should fall to about \$40 per treatment. He said it was critical that health authorities get access to Sunlenca as soon as possible.

LOUD NOISE AND THE HEAVY TOLL ON EARS

The festival of Deepavali is behind us now. All our festivals bring us joy, and the festival of light is also accompanied by a great deal of sound. There are pleas for the use of green crackers to bring down harmful emissions such as sulfur dioxide, and to reduce the noise created when they are ignited. These have been mandated by the Supreme Court, with detailed specifications such as a ban on the manufacture and sale of firecrackers that are joined into long rows. But every passing year, their loud sounds continue to be heard in festival seasons.

Public attention is focused on the resultant air pollution, but of equal concern is the damage that very loud sounds can do to our hearing. Going beyond firecrackers, the year-round noise levels also get less attention than other forms of pollution. It is as if noise is more easily accepted as part of our surroundings, and acceptance is even easier when you are yourself creating the noise.

Sound travels in waves that carry energy. The more energy, the more intense the wave, and the louder the sound. The decibel scale is used to measure the loudness of sound. It is a logarithmic scale, so when the sound level is measured to have risen by 10 dB, the sound is ten times more intense. On the decibel scale, the threshold of human hearing is set at 0 dB. A whisper measures 30 dB, and normal speech is 60 dB. A loud firecracker, measured from 10 feet away, has an intensity of 140 dB. This can easily damage the hair cells in the cochlea of the ear, which receive vibrations from the eardrum and convert them to nerve signals. Damage to these hair cells makes them less sensitive to sound. As a result, louder sounds are required before a hair cell can respond and nerve impulses are sent to the brain. The hair cells can recover somewhat from moderately loud sounds. However, unlike our skin cells, these cells are incapable of regeneration. Repeated assaults can make recovery difficult, resulting in noise-induced hearing loss.

Loud bangs are a serious hazard for the sensitive ears of young children, because even moderate hearing loss can impair their ability to learn. The acoustic trauma of overexposure to noise often leads to tinnitus, a ringing in your ears. This 'sound' is a sign of anomalous electrical activity from damaged hair cells. The ringing usually subsides, but prolonged exposure to noise events can make it a permanent feature of your life. Of course, tinnitus can also be present in the elderly, arising from age-related wear-and-tear.

Occupational noise

Long exposures to moderate-intensity sound levels can lead to hearing loss as surely as loud bangs will. Road traffic in Indian cities has been measured to range from 60 to 102 dB in a day. A 2008 study in the Indian Journal of Occupational and Environmental Medicine on Hyderabad city traffic



policemen with five years of service has found varying degrees of hearing loss in all of them, as reported by Subroto Nandi and Sarang Dhatrak in their survey of occupational noise in India.

Preventive measures, such as the wearing of earplugs, help reduce the risk of hearing loss. Some professions, such as the construction industry, have been adopting these where required, but the practice needs to be more widespread. Perhaps, even before green crackers prevail, earplugs will someday be a common sight on festival nights.

IS YOUR VITAMIN D DIPPING BECAUSE OF POLLUTION, SMOG? HERE'S HOW TO INCREASE LEVELS IN LOW SUNLIGHT

Vitamin D, often called the “sunshine vitamin,” plays a vital role in maintaining our bone health, immune function and mood regulation. It is primarily produced in the skin through exposure to sunlight. However, during seasons with less sunlight, such as the winter months or in areas where sunlight is limited because of smog, getting enough vitamin D can become challenging. Planning your vitamin D intake during these times can protect you from deficiency.

Understanding Vitamin D

Vitamin D is unique because it functions both as a nutrient and a hormone. It helps the body absorb calcium and phosphorus, essential for strong bones and teeth. It also plays a role in immune function, muscle health and regulating inflammation. The body naturally produces vitamin D when the skin is exposed to ultraviolet B (UVB) rays from the sun, but this synthesis decreases in low-sunlight conditions.

Besides lack of adequate sunlight, people with darker skin, who have higher levels of melanin, cannot produce enough vitamin D from sunlight. Older adults, those with obesity, digestive disorders and kidney disease cannot process enough vitamin D.

How to increase your Vitamin D intake

Even during low sunlight, try to get outside. Although UVB rays are less intense in winter, short bursts of sunlight exposure, typically around 15-30 minutes, can still stimulate vitamin D production. Exposing your face, arms, or legs to sunlight during midday, when the sun is at its peak, is especially beneficial. However, the time needed depends on various factors, including skin tone and geographical location.

Focus on dietary sources like fatty fish like salmon, mackerel, tuna and sardines. Eggs from hens that have been exposed to sunlight are good sources of vitamin D. Try fortified milk, orange juice and cereals. Dairy products like cheese and yogurt contain small amounts of the vitamin. Some types of mushrooms exposed to ultraviolet light, such as maitake and shiitake, contain vitamin D.

When should you take supplements?

Only when you are unable to get enough vitamin D from sunlight or food sources. Vitamin D supplements are available in two forms: vitamin D2 (ergocalciferol) and vitamin D3 (cholecalciferol). Vitamin D3 is more effective in raising blood levels of vitamin D. Speak to your healthcare provider to determine the right dosage for your specific needs.

The general recommended daily intake for vitamin D varies, but it typically falls within the following ranges:

Adults: 600 to 800 IU (International Units) per day

Older Adults: 800 to 1000 IU per day

Children: 400 to 600 IU per day

Get your vitamin D levels checked, especially if you live in areas with limited sun exposure or have risk factors for deficiency. A simple blood test can measure your vitamin D status, and your doctor can recommend an appropriate supplementation plan based on the results.



DreamIAS